

NPR's API and Open Content

By Daniel Jacobson

National Public Radio



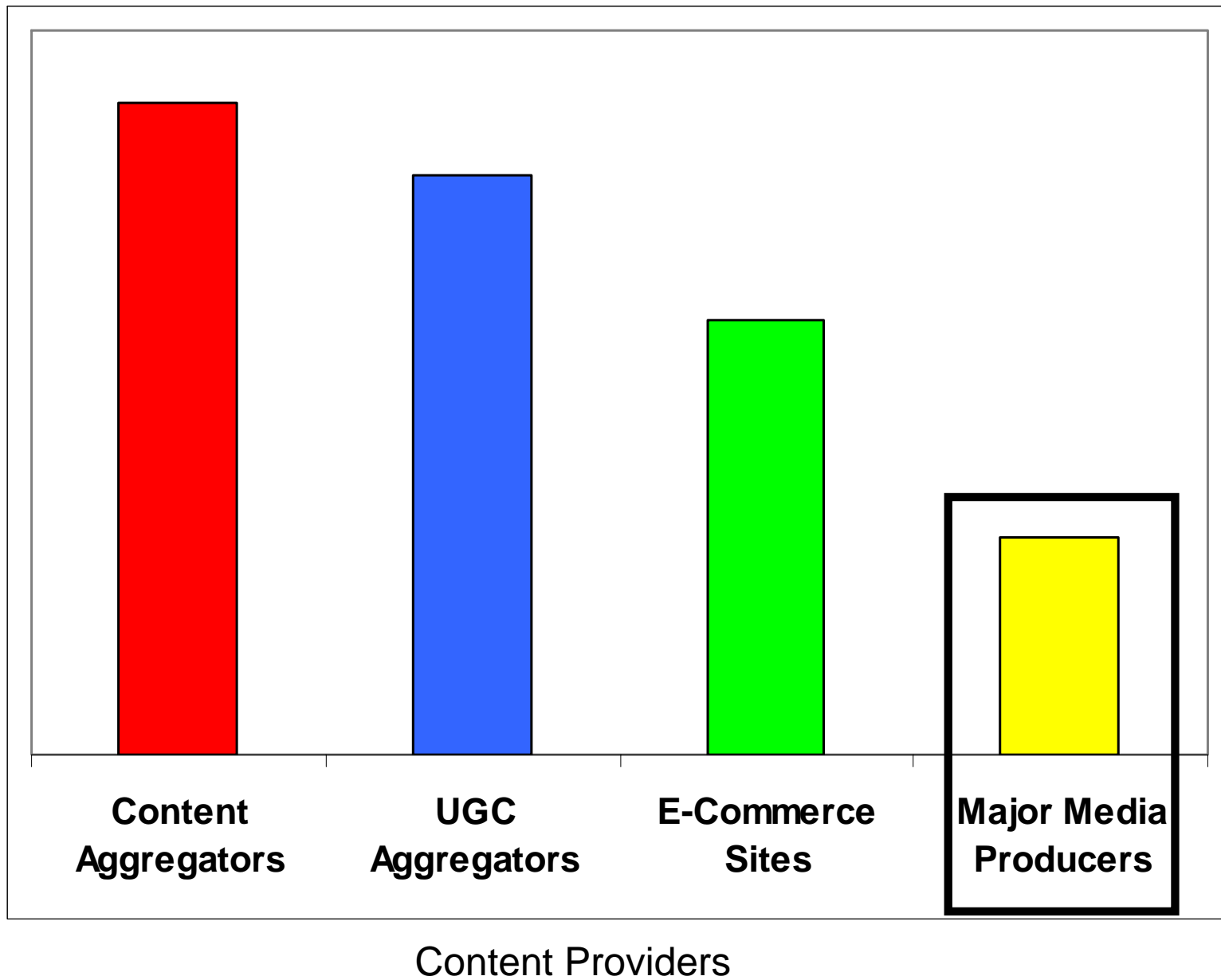
Who is NPR?

- NPR (National Public Radio)
 - Leading producer and distributor of radio programming
 - *All Things Considered, Morning Edition, Fresh Air, Car Talk*, etc.
 - Broadcasted on over 800 local radio stations nationwide
 - Over 26 million radio listeners nationwide

- NPR Digital Media
 - Website (NPR.org) with audio content from radio programs
 - Web-only content including blogs, slideshows, editorial columns
 - Manage about 250 produced podcasts, with over 600 in directory
 - Mobile sites
 - API and other syndication mechanisms

- NPR Digital Media Metrics
 - Nearly 45 million page views monthly to NPR.org
 - Over eight million unique visitors monthly to NPR.org
 - Over 15 million media streams served monthly
 - Nearly 15 million podcasts episodes downloaded monthly

Amount of
Content
Available
in APIs



What is Major Media Syndicating?

- ❑ Most offer RSS for very specific feeds
 - ❑ Some offer extended RSS or comparable
 - ❑ MediaRSS extensions
 - ❑ Podcast enclosures
 - ❑ Very few comprehensive APIs (seems to be changing)
-

Really Successful Syndication

- ❑ Gets some content out there
- ❑ Drives traffic back to the site
- ❑ A lot of traction in the marketplace

Really Stingy Syndication

- ❑ Doesn't have real meaty content
- ❑ Namespace extensions are limited
- ❑ Embraces lock-down model



YAHOO!

Google

- Graphic provided by Ted Leonsis

Target Audiences for NPR's API

- ❑ End-users, of course!
- ❑ NPR's Digital Media team
- ❑ NPR Member Stations
- ❑ NPR's business partners
- ❑ Content aggregators, like Yahoo! And Google

Measures of Success

- ❑ Business
 - ❑ Provide more content to stations
 - ❑ Improve connections with business partners
 - ❑ Enable internal scalability for NPR.org
 - ❑ Create possible revenue opportunities (small part of the equation)
- ❑ Audience
 - ❑ Distribution of content to existing users
 - ❑ Reach new users through widgets
 - ❑ Drive traffic back to NPR.org
 - ❑ Extend the NPR brand

Challenges in Building the API

- ❑ Legal Challenges
 - ❑ Identify and exclude rights-restricted content
 - ❑ Prepare Terms of Use
- ❑ Business Challenges and Opportunities
 - ❑ Enable flexible sponsorship functionality
 - ❑ Create levels of access for different targeted audiences
- ❑ Metrics
 - ❑ Identify users through registration
 - ❑ Track API requests and use of content through beacons

More Challenges in Building the API

- ❑ Stations
 - ❑ Ensure additional value for stations
- ❑ Monitoring
 - ❑ Establish a committee for monitoring improper use of content
 - ❑ Broaden the definition of proper use
- ❑ Technical
 - ❑ Handle increased access to the system
 - ❑ Create a registration system
 - ❑ Extend application architecture

Virtually everything that is on NPR.org is available in the API

- ❑ Over 13 years worth of NPR content
- ❑ About 250,000 unique stories
- ❑ About 400,000 unique audio files available
- ❑ Over 5,700 unique lists, with infinite combinations
 - ❑ Over 90 topics
 - ❑ Twelve programs
 - ❑ Nearly 4000 musical artists
 - ❑ Almost 400 NPR personalities
 - ❑ Over 700 editorial columns and series
 - ❑ Content from fourteen local member stations

Current Rights and Exclusions

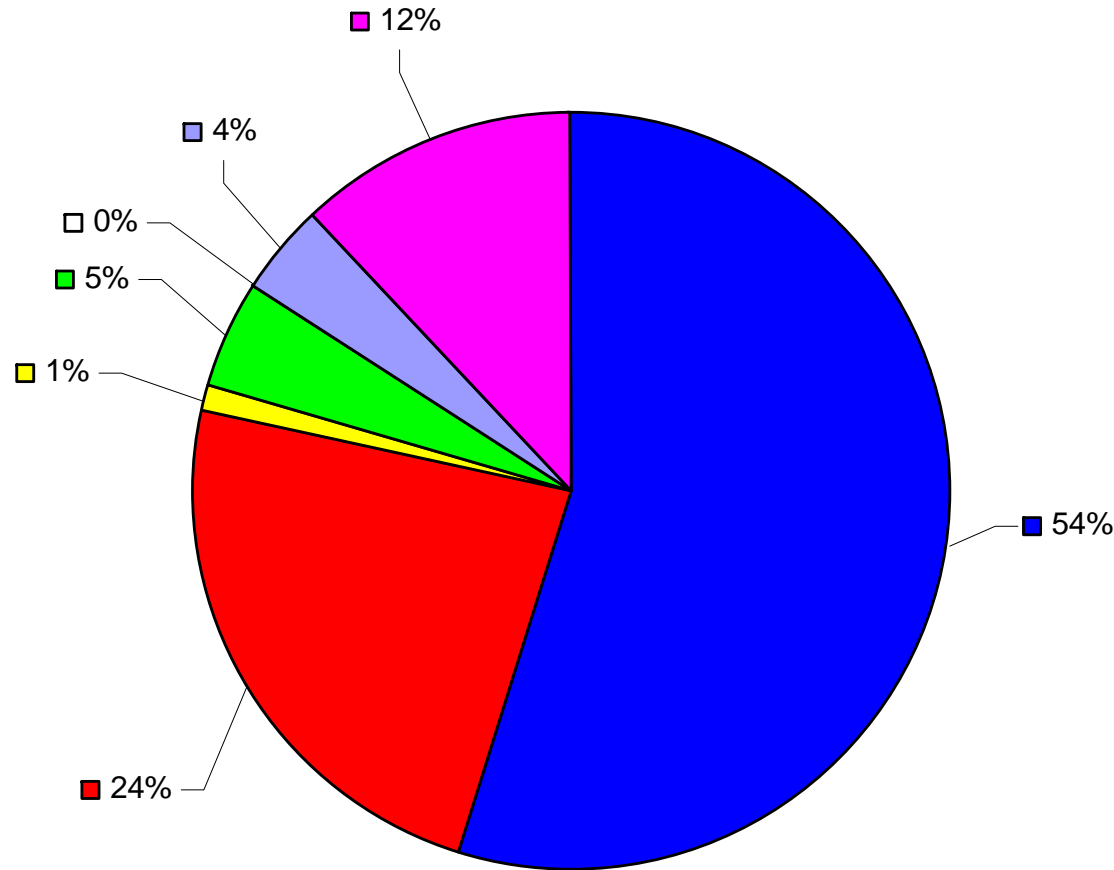
- ❑ Some NPR programming is excluded due to rights
 - ❑ *Car Talk, Fresh Air and This I Believe*
- ❑ Non-NPR Public Radio Programs are not available
 - ❑ *This American Life, MarketPlace, etc.*
- ❑ Some text, images and audio is not available due to rights
- ❑ Video and blogs are not offered... yet








Current Statistics on Usage *

- Nearly 1,000 registrants for the API
- Over 4.3 million requests to the API
- About 200,000 page views to NPR Tech Center

** Since July 15, 2008*

Distribution of Requested Output Formats



NPRML		2,347,080
RSS		1,012,850
MediaRSS		207,936
JSON		38,815
Atom		155
JavaScript Widget		159,987
HTML Widget		517,063

It's So Easy, Even Our CEO Can Do It

Dennis Haarsager's rolling environmental scan for electronic media.

"Somebody has to do something, and it's just incredibly pathetic that it has to be us." --Jerry Garcia



FILES

Digital Future Initiative Update on OMN, 12/05

Disruptive Innovation and Public Radio, 5/03

Disruptive Technologies and Public Radio Jobs, 9/03

DTV: Should we bet the farm on a digital-only strategy? 2/04

ELSA overview, 10/06

Thursday, 24 July 2008

[NPR API: The GillmorGang interview](#)

Steve Gillmor interviewed NPR digital media directors Zach Brand, Daniel Jacobson and me July 17th on NPR's release of its [Application Programming Interface](#) for his GillmorGang podcast. Although it's a little technical, it should give you a good overview of what it's doing. It's now been posted. Link: [GillmorGang](#).

Thursday, 24 July 2008 at 06:50 in [Innovation](#) | [Change](#) | [On-demand](#) | [VOB](#) | [Public Media](#) | [Radio](#) | [Web Content](#) | [Permalink](#) | [Comments \(0\)](#)

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NPR Stories

[What's The Future Of News?](#)

July 24, 2008 | NPR. The content won't change that much, just how it's delivered, predicts media critic James Ledbetter.

[Real](#) | [Windows](#) | [MP3](#) | [Play Now](#) | [Add to NPR.org Playlist](#)

[Apocalypse News?](#)

July 24, 2008 | NPR. Since the 1960s, Americans have lost respect for major institutions — both government and private — even as the nation seems to be better off than ever. In ways impossible to quantify, Americans have become down on America, allergic to much of what goes on in public

Updated, 3:45 p.m. Eastern: A longer version of this has been posted to the [Bryant Park Project blog](#).

--Dennis

Twitter: [@haarsager](#)

Tuesday, 22 July 2008 at 06:21 in [Public Media](#) | [Radio](#) | [Satellite Radio](#) | [Web Content](#) | [Permalink](#) | [Comments \(1\)](#)

Sunday, 20 July 2008

[Nokia N810 WiMAX Edition](#)

My favorite toy is [Nokia's N810](#), a diminutive WiFi- and Bluetooth-enabled Linux-based touchscreen tablet computer. It connects super-easily to hotspots, has a decent if unremarkable pair of speakers, and runs a wide variety of open source [Maemo](#) applications.

Of late, I've used it a few times with my Verizon EVDO USB card, a Cradlepoint Technology battery-operated wireless router, and my Jeep's sound system to create a mobile Internet radio (together, they're smaller than most portable radios). I've driven from downtown Washington, DC to both Dulles and BWI airports listening to my former station in Washington State without a dropout.

Now I see that Nokia has introduced in the U.S. a [WiMAX edition of the N810](#), and better yet it supports the [802.16e, the mobile flavor of WiMAX](#). It's intended for use on Sprint's Xohm network (Washington, DC will be, or perhaps already is, a test market). So since its range should be similar to EVDO when it's rolled out, one might be able to omit the mobile router. According to the [Xohm article in Wikipedia](#), the intent is to merge it with Clearwire. I was a Clearwire customer back in the Northwest and loved it. It uses an early flavor of WiMAX and I was able to get good WISP service five miles from the transmitter using only a small indoor antenna perched in a window.

Lastly, my Jeep's sound system already has a USB port on the front panel, and Cradlepoint's technology makes connecting 3G or 4G cards very easy, so adding EVDO or WiMAX capability to car radios is just a matter of software and should be a no-brainer. I've [written here previously](#) that I think a great path to that is marrying it with HD Radios using SMIL and listeners can be their own programmers. --Dennis

Sunday, 20 July 2008 at 06:26 in [HD Radio](#) | [Digital Radio](#) | [Radio](#) | [Technology](#) | [Permalink](#) | [Comments \(0\)](#)



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tjweiss on [Bryant Park Project - what we learned](#)

But enables tech savvy users to do more...

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SONG OF THE DAY npr
'Valley Hill' by Stereolab
Stereolab finds a new way to make inventive updates of the British and French pop of the '60s.
Jul 16, 2008

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..., 2008 | NPR: 'In the Halloween, we offer a piece of chillin'

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relaying your favorite npr headlines
Fuel Oil Spill Halts Some Traffic On Mississippi River
7-24-08 - A river barge collided with an oil tanker, sending more than 400,000 gallons of fuel oil into the Mississippi River and halting some river traffic. Mark Schleifstein, of the New Orleans Times-Picayune, says the spill is costing the Port of New Orleans \$100,000 per day.
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ROCK/POP/FOLK CLASSICAL JAZZ/BLUES
Mingus' Magnum Opus: 'Epitaph' Concert
Charles Mingus' monumental masterpiece "Epitaph" saw the light of day during his lifetime. But the jazz legend left his ambitious score to be discovered by generations. Hear the full piece, a 2 1/2-hour at the hands of the world's best musicians.
G. Love Is Your 'Superhero Brother'
For its 10th album, Superhero Brother, G. Love & Special Sauce pulls back from the numerous guest appearances
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Related NPR stories

What's this?

- Life Without Smell May Not Be Worth It
- Halloween Returns To Oil City, Pa.
- Alabama County On Brink Of Bankruptcy
- Taliban Kill Five In Brazen Kabul Attack
- Congo Crisis Deepens As Rebels Make Gains
- In South Florida, Democrats See An Opening
- Obama Adviser Explains Tax Plan, Rips Palin
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All Things Considered® with Tom Crann in St. Paul

Monday, October 2, 2006

MINNESOTA PUBLIC RADIO STORIES

5:20 P.M.



Big names battle in the 8th

Familiar names face off in the 8th District race this year. Long-time incumbent Democrat Jim Oberstar faces a challenge from Republican Rod Grams, the former TV news anchor who served both in the U.S. House and Senate.

5:23 P.M.

Heart attacks and the marathon

One of the runners in yesterday's Twin Cities Marathon collapsed and died from a heart attack. George Spears, 49, collapsed at the 6-mile-mark, near Lake Calhoun in Minneapolis. It was the second death in the 25-year-history of the Twin Cities Marathon. The marathon's medical director, Dr. Bill Roberts, says race participants don't need to prove they're physically fit, and it may not help if they did.

NATIONAL PUBLIC RADIO STORIES

Yom Kippur and Ramadan: A Holy Coincidence

Every three decades, for a period of a few years, Judaism's holiest day -- Yom Kippur -- falls during the Muslim holy month of Ramadan. Commentator Anisa Mehdi says that some of the faithful among Muslims and Jews are trying to make this alignment into more than just a coincidence.

Netflix Puts Bounty on Viewer Habits

Netflix, an online movie rental company, offers a \$1 million reward for new software that improves recommendations on what its users should watch next. James Bennett, vice president for recommendation systems at Netflix, explains.

Hastert Defends Leadership over Foley Allegations

Speaker of the House Dennis Hastert said today that none of the House leaders knew the messages Rep. Mark Foley (R-FL) was sending to underage boys were explicitly sexual. Hastert (R-IL) defended his leadership team's handling of the incident, which led Foley to resign last week and enter a treatment program for alcoholics.

Club Musicians, Owners at Odds Over Pensions

New York state is eliminating a food and beverage sales tax paid by jazz clubs

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October 2005 Go

IN THE SPOTLIGHT

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Events listings, tickets sales, history and news from the home of A Prairie Home Companion.

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Latest Newscast
(10/31/08)

Regional Headlines

- AG establishes wind power ethics code
- New breakthrough in study of "white nose" bat disease
- McHugh seeks ninth term in House
- Full audio: McHugh, Oot debate in Plattsburgh
- Senate challenger seemingly a no-show
- Paterson expects lawmakers to cut spending - after Election Day

Next News

Martha Foley and Todd Moe bring you all the news of the region weekdays at 8 am. Tune in for *The Eight O'Clock Hour*.

Jonathan Brown updates the regional news weekdays at 4:45 pm on *All Before Five*.

Election

Science & Technology

See also: | [Astronomy](#)

Show 10 50 stories headlines



ncpr New breakthrough in study of "white nose" bat disease 10/31/08

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Al Hicks inspects a bat for white nose syndrome. *(click image to enlarge)*

Researchers in New York state and around the country have made a major breakthrough in their study of "white nose syndrome." That's the mysterious ailment that's been killing thousands of bats - including endangered Indiana bats - in New York, Vermont, and around the Northeast. NPR's Dan Charles reported on the study - Brian Mann was in the cave with New York's top specialist, Al Hicks.

 [Permalink](#) |  [Email story](#)

- [Slide show of Brian's trip into an infected bat cave](#)
- [US Fish & Wildlife "White Nose" topic page](#)
- [NCPR's Environment Topic Page](#)
- [NPR report from correspondent Dan Charles](#)



Collecting live animals for study back in the laboratory. *(click image to enlarge)*

ncpr Natural Selections: Why is the sky blue? 10/30/08

 [Listen to audio](#) |  [Download audio](#) (5:04)



Martha Foley poses the classic child's question. According to Dr. Curt Stager, the answer lies in the composition of the atmosphere, and in the refractive qualities of different wavelengths of light.

 **Technology**

Cable Subscribers Increase Before Digital Transition

October 30, 2008 | NPR · Comcast Corp., the nation's largest cable service provider, announced Wednesday that earnings were up. The company says it lost some basic cable subscribers, but that the decline was offset by new digital subscribers. One non-profit group is urging Congress to investigate whether Comcast and other cable companies are trying to profit from the upcoming transition from analog broadcast TV to digital.

 [MP3](#)

Comcast Is Accused of Deceptive Business Practices

October 29, 2008 | NPR · Consumers Union, the nonprofit publisher of *Consumer Reports* says Comcast and other cable operators appear to be trying to profit from the upcoming transition from analog broadcast TV to digital, and that Comcast is forcing consumers to upgrade or accept fewer channels for the same price.

Internet Companies To Sign Conduct Code

October 29, 2008 | NPR · The "Global Network Initiative" is a code of conduct for Internet companies that do business in countries where governments censor or interfere in the Internet and media. Leslie Harris, president of the Center for Democracy and Technology, talks about the proposed principles that Google, Yahoo and Microsoft have signed off on.

 [MP3](#)

Can U.S. Go 'Green' Even When Oil Prices Drop?

October 28, 2008 | NPR · It seems like every time oil prices skyrocket in the U.S., Americans take steps toward energy independence, only to return to their profligate ways once prices recede. Here, a look at what it will take to get corporations and consumers onto a permanent path

Barack Obama

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McCain
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president

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dollars

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[Goosebumps And Guffaws In Stine's 'HorrorLand'](#)

Oct 31st, 2008 • Can a children's author strike gold twice? R.L. Stine's *Goosebumps* series sold more than 300 million copies in the 1990s. Now, he's hoping to revisit that success with *Goosebumps: 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



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NPRbackstory

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16 minutes ago from twitterfeed

(chase) Runaway Poodle Escapes Aiport Kennel <http://tinyurl.com/57ues9>
about 3 hours ago from twitterfeed

(halloween music) Songs For The Spooky Season <http://tinyurl.com/6dfpu4>
about 6 hours ago from twitterfeed

(all hallows eve) Second Graders Take On 'Macbeth,' Halloween
<http://tinyurl.com/5ofmsv> *about 7 hours ago from twitterfeed*

(ohio supreme court) Ohio Foster-Care System Under Scrutiny
<http://tinyurl.com/58zayd> *about 7 hours ago from twitterfeed*

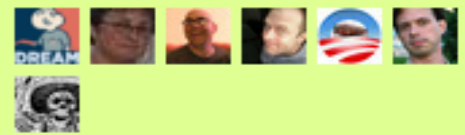
Name NPRbackstory
Web <http://keithhoppe...>
Bio An experimental mashup that unearths the NPR backstory on trending topics. Feedback earns a follow.

7 following 192 followers 1,498 updates

Updates

Favorites

Following



ColdFusion NPR API Pt. 2

without comments

I've dug a little deeper into the NPR API. I've added 3 new components. Feed.cfc represents the data returned from the api call. Story.cfc models the actual stories that make up the feed.

The 3rd object is a simple object that I extend to share some common methods to between my other components. I generally consider this bad practice and there are a lot of tools designed specifically to address this problem.

I did it for a couple of reasons. First, I wanted this to self-contained and stand alone. I wanted it to be as easy as possible to drop it into whatever project YOU have, with whatever tools YOU have set up and get it going. Second, I wanted to focus more on the real meat of the product without getting too hung up on the implementation details. Besides, I can always refactor!

Stay Tuned!

Example Usage:

```
<cfset your_key = "Go get one from http://www.npr.org/templates/reg/" />

<cfset npr_interface = CreateObject("component", "npr").init(
    key = your_key
) />

<cfset feed = npr.GetFeed(
    id = "1059"
) />

<cfset stories = feed.GetStories() />

<cfloop array="#stories#" index="i">
    <cfdump var="#i.GetXMLData()" />
</cfloop>
```

October 2008

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Future Enhancements for API

□ API Extensions

- Station finder API
- Posting to the API (primarily for stations and other partners)
- Full Story HTML Widget

□ Content and Format Improvements

- Other output formats, including NewsML and PBCore
- Blogs
- Video
- Other NPR programming (once rights are cleared)
- More content from Member stations and other external parties
- Geo information for stories

Questions?

Feel free to contact me directly:

Daniel Jacobson

djacobson@npr.org

To see the API:

<http://www.npr.org/api>

To follow the API development:

<http://www.npr.org/blogs/inside/api>

NPR's Approach to Reaching Them

Everything available on NPR.org is in API

Public users have some restrictions:

- ❑ Legally restricted content
- ❑ MP3 files are not downloadable
- ❑ Blogs and video content

Philosophy of NPR Digital Media

- ❑ **Build Content Management tools, not Web Publishing tools**
 - ❑ COPE (Create Once Publish Everywhere)
 - ❑ Separate Content from Display
 - ❑ Eliminate markup from content upon storage
- ❑ **Understand the Atom**
 - ❑ Story is the Atom of NPR
 - ❑ Story contains relationships to assets
 - ❑ Stories are grouped into lists
- ❑ **Know when to build and know when to buy/integrate**
 - ❑ Mission-Critical assets are centrally managed
 - ❑ For everything else, depends on cost-benefit analysis
 - ❑ When integrating, first option is open source tools

System Architecture for NPR.org and API

