

Feeding the Beast

Fostering a Culture of Sharing
#TPR6

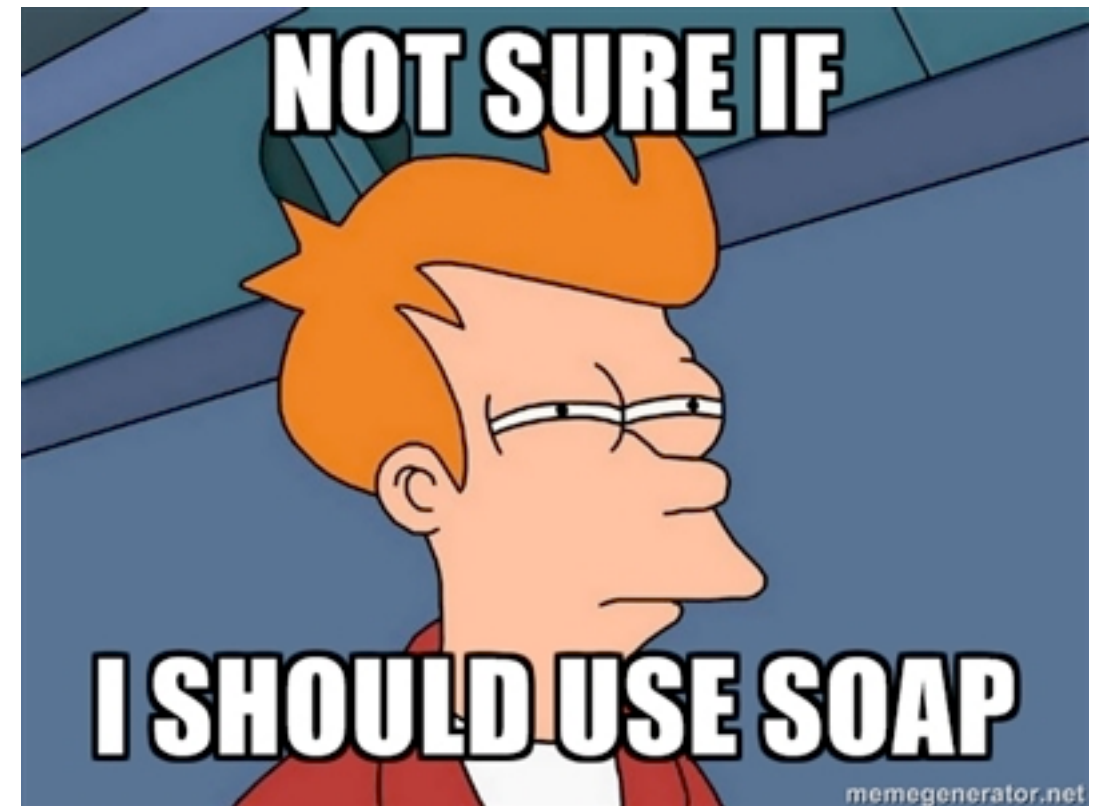
HighEdWeb 2011
October 24, 2011

Jeremy Friesen
Erik Runyon
University of Notre Dame

Application Programming Interface

An application programming interface (API) is a particular set of rules ('code') and specifications that software programs can follow to communicate with each other. It serves as an interface between different software programs and facilitates their interaction, similar to the way the user interface facilitates interaction between humans and computers.

Wikipedia



API - The Simple Definition

Any interface that allows for **easy** manipulation of data.



Photo credit: [flickr.com/photos/katerha](https://www.flickr.com/photos/katerha)

The Problem to Solve



Photo credit: [flickr.com/photos/marubozo/](https://www.flickr.com/photos/marubozo/)

Data Migration

Permanently Moving Content from One Source to Another

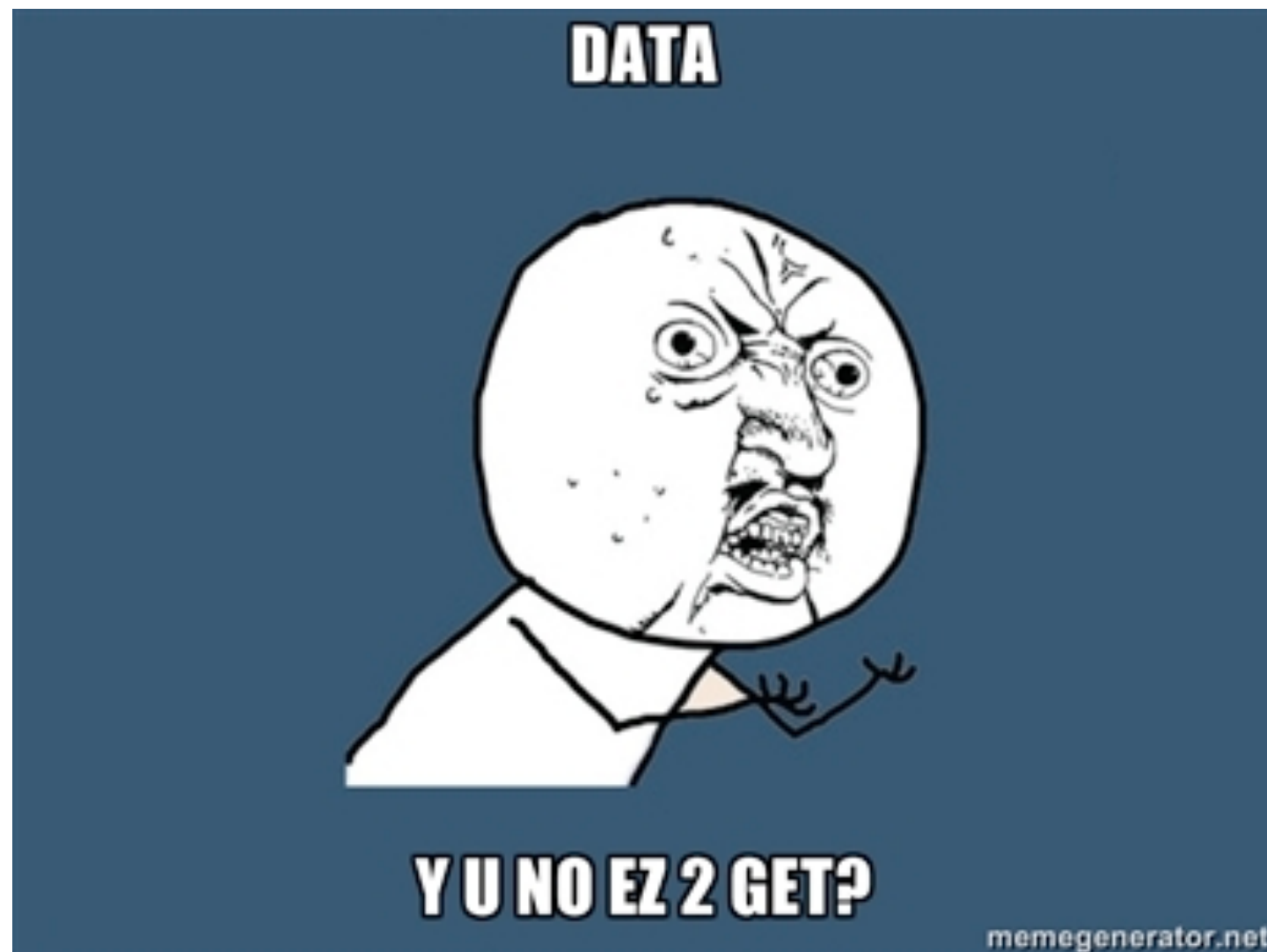
- ndpr.nd.edu loaded via github.com/jeremyf/ndpr-conversion
- vocation.nd.edu/blog/ loaded via github.com/jeremyf/vocation-conversion
- The General Solution [ALPHA]: github.com/jeremyf/conductor-importer



Photo Credit: [flickr.com/photos/spyndle](https://www.flickr.com/photos/spyndle)

Data Reusability

If you write software that is going to manage data, include interfaces to get that data out.



Fostering an API Culture

The screenshot shows the ND Developers website. At the top, a dark grey navigation bar contains links for 'ND Developers', 'My Account', 'Dashboard', and 'Notifications'. Below this, a blue navigation bar features links for 'Home', 'About', 'API's', 'Style Guides', 'Activity', 'Members', and 'Groups'. The main content area is divided into three columns. The left column, titled 'Recent Posts', features a post about an 'Emergency Code'. The middle column, titled 'Groups', lists five groups: PHP, Mobile Web, HTML/CSS, Javascript, and Ruby, each with a member count. The right column, titled 'Members', lists five members: rfox2, yyu1, Rick Johnson, Dan Brubaker Horst, and Derek D Owens, each with a registration date. A red circle highlights the 'ND Developers' logo and its tagline, 'A place to share ideas and documentation'. On the far right, a user profile for Erik Runyon is visible, with buttons for 'Edit Profile' and 'Change Avatar'.

ND Developers My Account Dashboard Notifications

ND Developers
A place to share ideas and documentation

Members Search






Home About API's Style Guides Activity Members Groups

Recent Posts

[Emergency Code Now Available](#)
[The Who, What and Why](#)





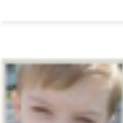
Groups


Newest | Active | Popular

-  **PHP**
3 members
-  **Mobile Web**
3 members
-  **HTML/CSS**
3 members
-  **Javascript**
3 members
-  **Ruby**
2 members

Members

Newest | Active | Popular

-  **rfox2**
registered 1 week, 5 days ago
-  **yyu1**
registered 12 months ago
-  **Rick Johnson**
registered 12 months ago
-  **Dan Brubaker Horst**
registered 12 months ago
-  **Derek D Owens**
registered 12 months ago

 **Erik Runyon**
Edit Profile Change Avatar

conductor.nd.edu - Homegrown CMS

Conductor accepts requests in several different formats and responds accordingly

- HTML - conductor.nd.edu/about/
- JSON - conductor.nd.edu/about.js
- JSONP - conductor.nd.edu/about.js?callback=foo
- XML - conductor.nd.edu/about.xml
- ICS - al.nd.edu/events.ics
- ATOM - newsinfo.nd.edu/news.atom

You are logged in as Jeremy Friesen. Feel free to conduct your business. [Request Help](#) [Logout](#)

Conductor

UNIVERSITY OF NOTRE DAME

- [Dashboard](#)
- [Sites](#)
- [Pages](#) (53)
- [Uploads](#) (148)
- [Events](#) (0)

Pages

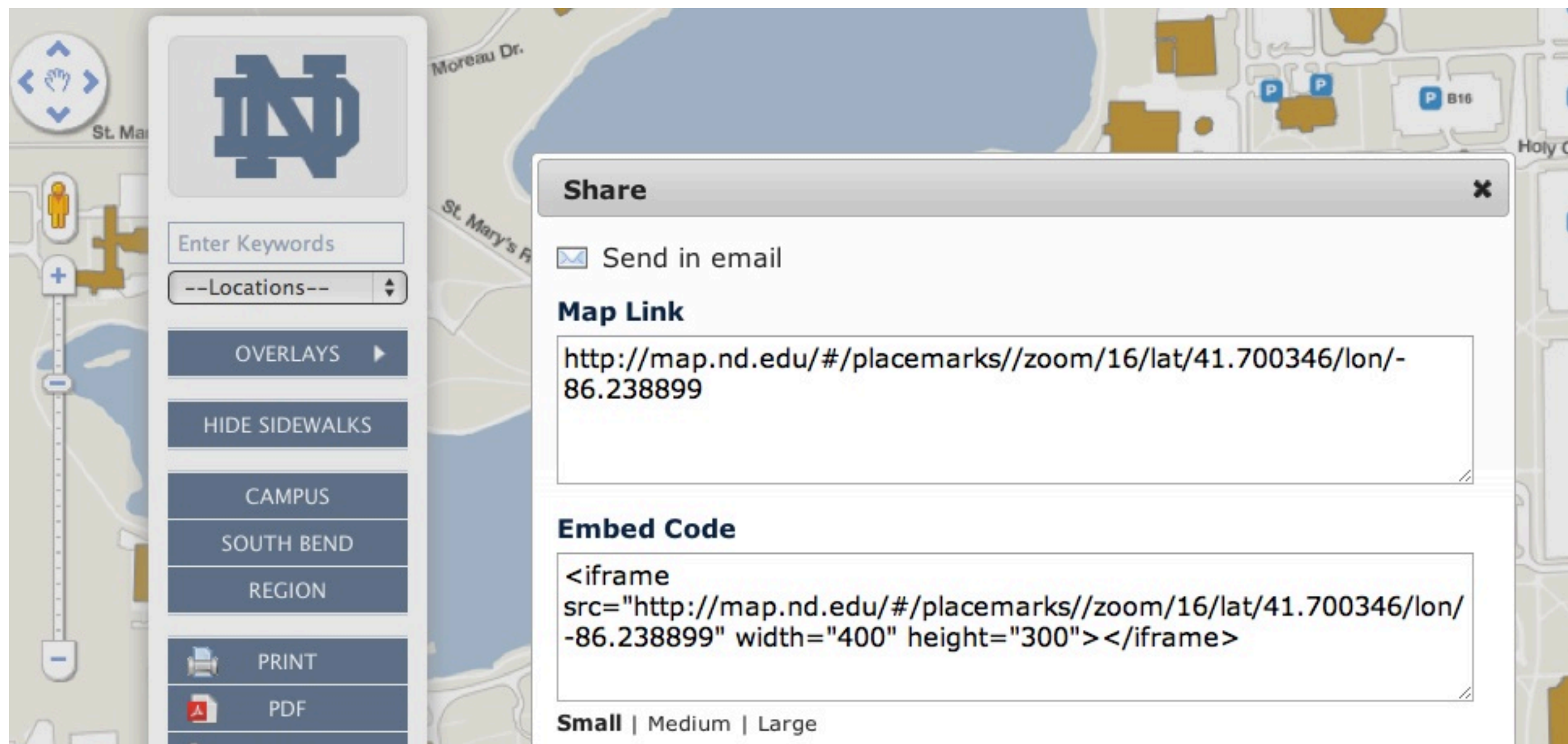
[Update Templates](#) [Add Top-Level Page](#)

Name	Last Updated	
Home	Erik Runyon 5 months	↕
▶ About Conductor	Cristin O'Connor about 1 month	↕
▶ Documentation and Resources	Kate Russell 5 months	↕
Training Sessions	Cristin O'Connor	↑

map.nd.edu - Homegrown Map

map.nd.edu accepts requests in several different formats and responds accordingly

- XML - map.nd.edu/placemarks/1086.xml
- KML - map.nd.edu/placemarks/1086.kml
- JSON - map.nd.edu/placemarks/1086.js
- JSONP - map.nd.edu/placemarks/1086.js?callback=foo



calendar.nd.edu (from Bedework.org)

Bedework is built on Java Struts. The FormBuilder is a Ruby on Rails subproject that accesses the internal Bedework Struts API.

Bedework Feed URL and Widget Builder


Raw event feed or an embeddable widget?

- ☒ Feed
- ☐ Widget

Data format?

- ☒ RSS
- ☐ JSON
- ☐ ICS (iCalendar)
- ☐ XML

Specify the number of days (from the current date) or provide a start date and an end date.

- ☒ 
Number of Days:
- ☐ Start Date: End Date:

Include everything or only those events from selected categories (Lectures, Arts Events, etc.)?

- ☒ Include everything
- ☐ Include selected categories only

search.nd.edu

We make use of the Google Search Appliance's API by processing the output XML in Conductor and ND Mobile.

```
<GSP VER="3.2">
  <TM>0.259296</TM>
  <Q>friesen</Q>
  <PARAM name="q" valu
  <PARAM name="btnG" v
  <PARAM name="client"
original_value="defa
  <PARAM name="output"
  <PARAM name="sort" v
  <PARAM name="entqr"
  <PARAM name="oe" val
  <PARAM name="ie" val
  <PARAM name="ud" val
  <PARAM name="site" v
original_value="defa
  <PARAM name="ip" val
original_value="10.4
  <PARAM name="access"
  <ENTOBRESULTS>
    <OBRES module_nam
```



UNIVERSITY OF
NOTRE DAME

[Advanced Search](#)
[Alerts](#)
[Search Tips](#)

Search

Results 1 - 10 of about 121 for **friesen**. Search

[Next>](#)

[Sort by d](#)

People search



[Jeremy Friesen](#) (Staff), Web Developer, Undefined -- [Details...](#)

[Le Roy Friesen](#) (Staff), OnCall Staff, Student Affairs -- [Details...](#)

[Jeremy Friesen | Web Developer of AgencyND](#)

Jeremy Friesen. Web Developer of AgencyND. ...

[blogs.nd.edu/jeremyfriesen/](#) - 68k - [Cached](#)

[Jeremy Friesen // Team // AgencyND // University of Notre ...](#)

... details.". Katherine Graham Development. Jeremy Friesen. Web Application Developer. Who is Jeremy Friesen? Part ...


m.nd.edu

More than any site, m.nd.edu highlights our use of other data sources.



emergency.nd.edu

NDAlert This is a TEST of ND Alert [Learn more](#)

 UNIVERSITY OF NOTRE DAME

[ABOUT ND](#) [ADMISSIONS](#) [ACADEMICS](#) [FAITH & SE](#)

UNIVERSITY of NOTRE DAME

emergency.ND.edu

This is a TEST of ND Alert
2011/10/9 6:16am EDT
This is a TEST of ND Alert, Notre Dame's emergency alert system
[Learn more at emergency.nd.edu »](#)

RESOURCES

- [Prospective Students](#)
- [Current Students](#)

NEWS



Notre Dame t
of Peace Cor

[Emergency Contacts](#)

[ND Alert](#)

[Resources](#)

[Business Continuity](#)

Recent Updates

- 2011/10/9 6:16am EDT

[Home](#) // [Emergency](#)

Notre Dame Emergency Inform

Emergency updates are available on [Facebook](#) and [Twitter](#).

This is a TEST of ND Alert

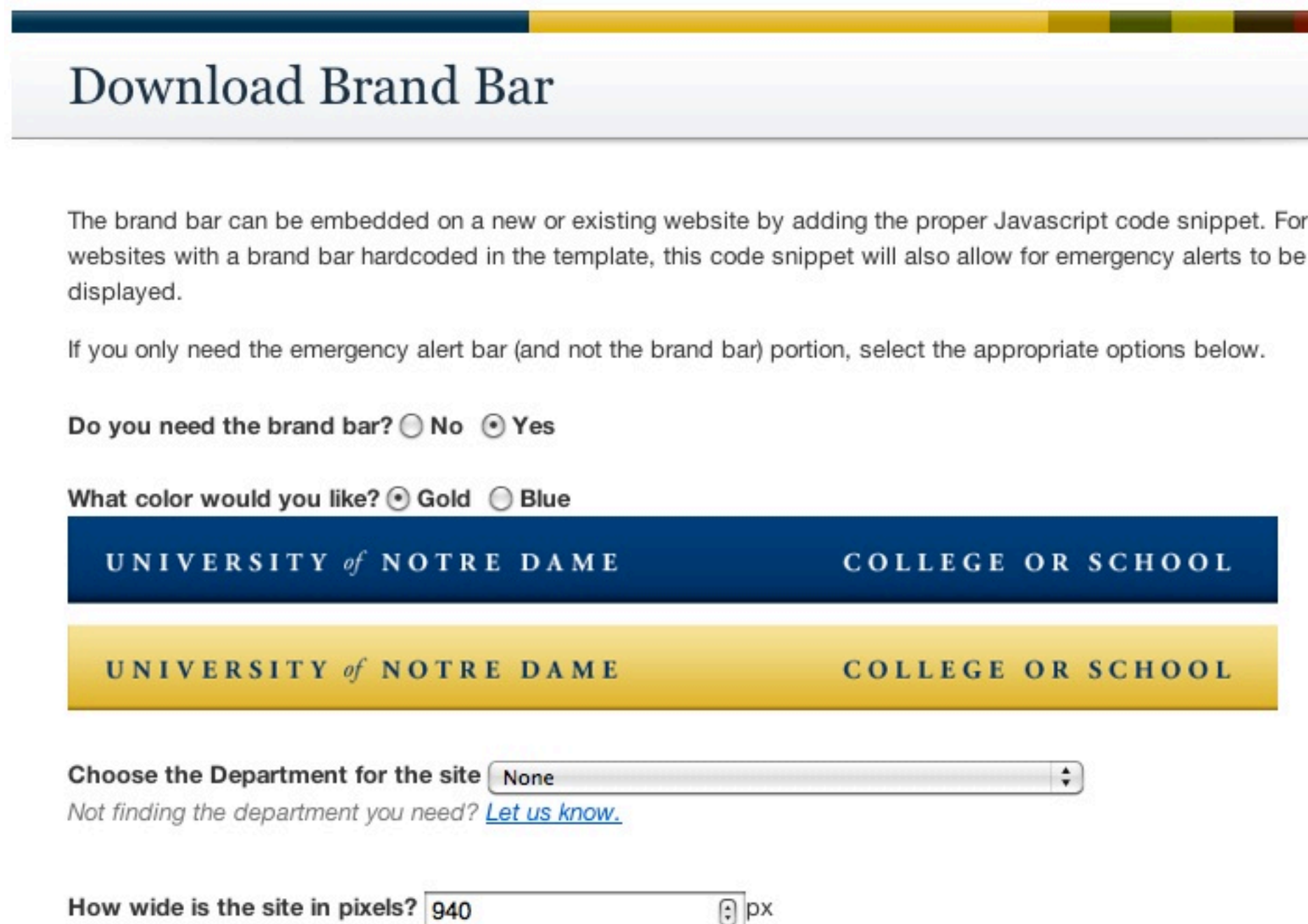
2011/10/9 6:16am EDT

This is a TEST of ND Alert, Notre Dame's emergency ale
information.

Reporting an emergency

Brand Bar from onmessage.nd.edu

Provide a simple means of adding the brand bar to all sites. And the script integrates with emergency.nd.edu.



The form is titled "Download Brand Bar" and is set against a background of a horizontal bar with segments of dark blue, gold, and olive green. The text explains that the brand bar can be embedded on a website by adding a Javascript code snippet, and that this snippet also allows for emergency alerts. It then asks if the user needs the brand bar (Yes is selected) and what color they prefer (Gold is selected). Two preview bars are shown: a dark blue one with "UNIVERSITY of NOTRE DAME" and "COLLEGE OR SCHOOL" in white, and a gold one with the same text in dark blue. Below these, there is a dropdown menu for "Choose the Department for the site" with "None" selected, and a link "Let us know." for users not finding their department. At the bottom, there is a text input field for "How wide is the site in pixels?" with "940" entered and a "px" unit indicator.

Download Brand Bar

The brand bar can be embedded on a new or existing website by adding the proper Javascript code snippet. For websites with a brand bar hardcoded in the template, this code snippet will also allow for emergency alerts to be displayed.

If you only need the emergency alert bar (and not the brand bar) portion, select the appropriate options below.

Do you need the brand bar? ☐ No ☒ Yes

What color would you like? ☒ Gold ☐ Blue

UNIVERSITY *of* NOTRE DAME

COLLEGE OR SCHOOL

UNIVERSITY *of* NOTRE DAME

COLLEGE OR SCHOOL

Choose the Department for the site

Not finding the department you need? [Let us know.](#)

How wide is the site in pixels? px

Conductor Atom Feeds

[Today@ND](#) is for internal Faculty and Staff news.

[insideND](#) is the default homepage of workstations.

Today@ND provides one of the feeds for insideND

UNIVERSITY of NOTRE DAME

OFFICE UNIVERSITY of NOTRE DAME

Today@ND

insideND

News Archive

Spotlight

Milestones

Features


NDWorks Archive


Campus News Feeds

Internal Communications

Contact Us

Today@ND is your source for faculty and staff news.

 [Subscribe to Today@ND](#)



News » Spotlight


Health screenings continue through Oct. 29

Carol C. Bradley • October 19 Posted In: [Spotlight](#)

Health screenings are available for faculty, staff and their spouses at various locations through Saturday, Oct. 29. Click [here for the complete schedule and information](#) on HealthQuotient, a confidential health risk assessment tool which will apply credit to your 2012 medical plan contribution.

Greenfields fall menu, salad and soup

Carol C. Bradley • October 17 Posted In: [Spotlight](#)



The [new fall menu](#) wrap and stuffed Greenfields for o [complete your W](#) coupon. [Read More](#)

ACADEMIC CALENDAR

CAMPUS MAP

DINING MENU

DIRECTORIES

GMAIL (STUDENTS)

WEBFILE

LIBRARY

NetID:

Password:

Login

Forget password? Trouble logging in? | Get your NetID

For security reasons, please remember to log out

“ To build a Notre Dame that is bigger and better than ever—a great


For Faculty & Staff

Health screening continue through Oct. 29

Health screenings are available for faculty, staff and their spouses at various locations through Saturday, Oct. 29. Click [here for the complete schedule and information](#) on HealthQuotient, a confidential health risk assessment tool which will apply credit to your 2012 medical plan contribution. Call askHR, 631-5900 today to schedule an appointment.

The West Ocean String Quartet with Maighread Ní Dhomhnaill

The West Ocean String Quartet with Maighread Ní Dhomhnaill performs at 7 p.m. Thursday, Oct. 20 in the Decio Mainstage Theatre.



Cherry-Pick Conductor Content

Site owners can opt to:

- Share their content with other sites
- Use content from other sites

Conductor
UNIVERSITY OF NOTRE DAME

Dashboard

Sites

Pages195

Uploads4679

Events1

News

Categories

Import News

Settings

Configuration

Import News

Title:

partial match on title

From:

(ie: may 28, 4/28/2008)

To:

(ie: may 29, 6/15/2008)

Source:

✓

ace.nd.edu

al.nd.edu

law.nd.edu

nanovic.nd.edu

today.nd.edu

View

Title	Author	Source Site	Publish
Football Friday Open House	Susan Good	law.nd.edu	Thu Oct
Recycle like a rockstar	Rachel Novick	today.nd.edu	Thu Oct
Notre Dame astrophysicist invited to Nobel Prize award ceremony	Paul Murphy	today.nd.edu	Thu Oct
Russian Scholar Alyssa Gillespie Wins Poetry Translation Prize	No Author	today.nd.edu	Thu Oct
Arts and Letters Students Explore the World of Business	Joanna Basile	al.nd.edu	Wed Oct
In Memoriam: Robert Riley	Carol C. Bradley	today.nd.edu	Wed Oct
IT Alert: Exchange email and calendaring unavailable Friday night	Carol C. Bradley	today.nd.edu	Wed Oct

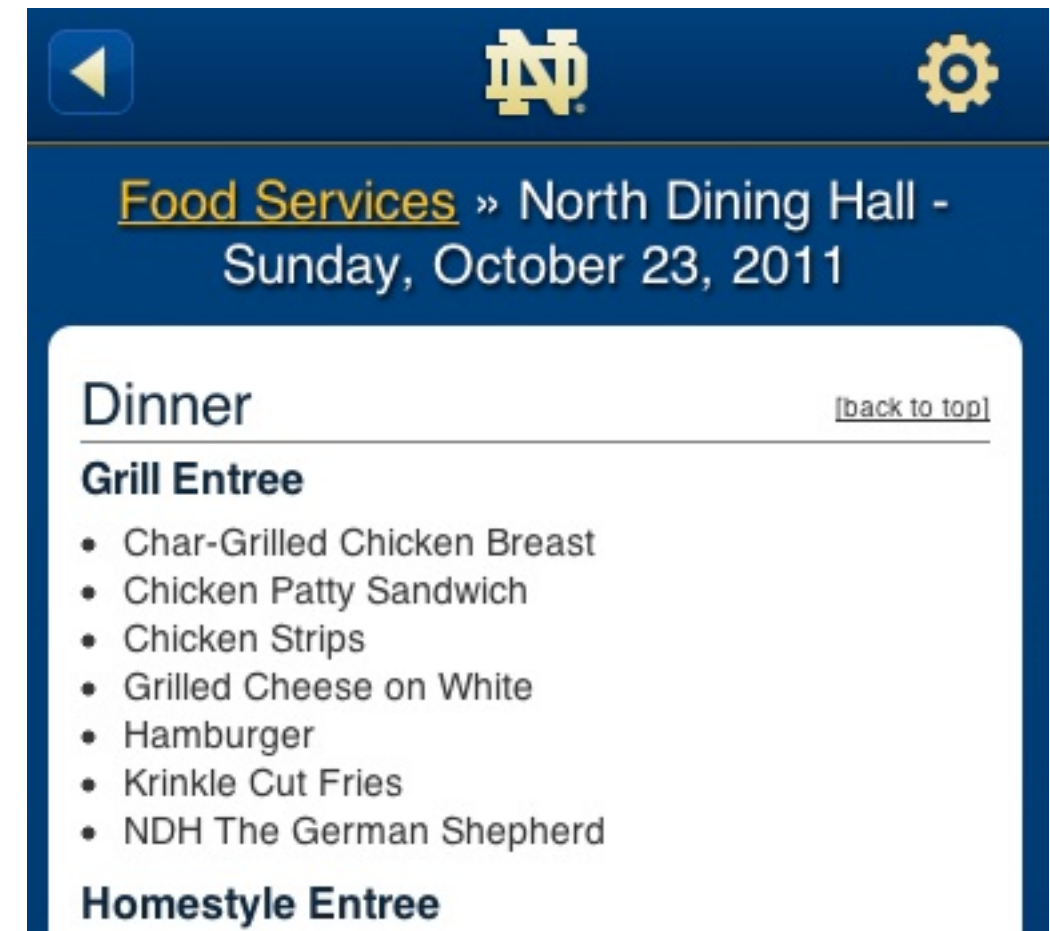
What others are doing on campus

Food Services

Food Services provides an XML feed of dining hall menus for upcoming two days.

ND Directory (in planning phase)

- Current app is broken and lacks an owner
- Directory Search containing people, locations and department/organizational data
- Include the lat/long and location id's to integrate with map.nd.edu
- Minimal requirements for an API: include more RESTful URLs, returning directory entry as json, xml, ldif, html
- Some user and community maintainable fields (with logging)
- Hours of operation where applicable
- Additional fields for items such as cv's and headshots for individuals



Tools at Our Disposal

- mechanize.rubyforge.org - Mechanize is a ruby library that makes automated web interaction easy.
- nokogiri.org - An HTML, XML, SAX, & Reader parser with the ability to search documents via XPath or CSS3 selectors... and much more.
- RubyOnRails.org - An open-source web framework that's optimized for programmer happiness and sustainable productivity.
- GitHub.com - Social Coding.
- HTTParty - Makes http fun! Also, makes consuming restful web services dead easy.
- RDoc.rubyforge.org - Documentation from Ruby Source Files
- buddypress.org - Social networking in a box.
- test-unit.rubyforge.org - a xUnit family unit testing framework for Ruby.
- jQuery - The Write Less, Do More, Javascript Library.
- Regular Expressions - More powerful than Gandalf, Merlin and Dumbledore combined.

In Closing

- Commit to the **openness** of your data
- Create **relationships** with other developers on campus
- **Encourage** others to commit to open data

Questions?

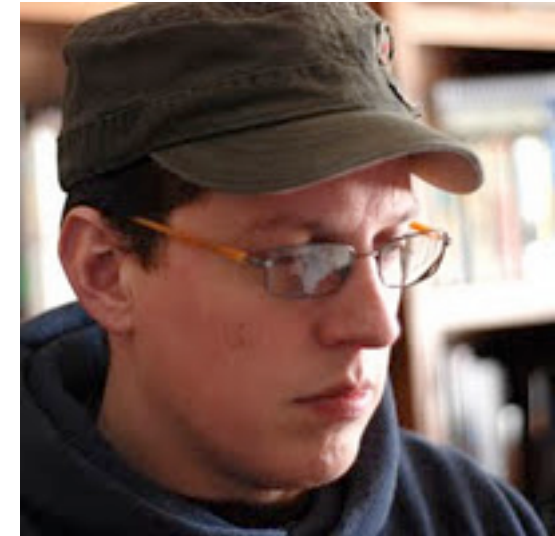
Contact

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Blog takeonrules.com



Erik Runyon

Email erunyon@nd.edu

Twitter [@erunyon](https://twitter.com/erunyon)

Blog weedygarden.net



Slides and Notes Available on Github

github.com/erunyon/HighEdWeb-2011

or if you'd prefer a shorter link to write down

bit.ly/hew2011