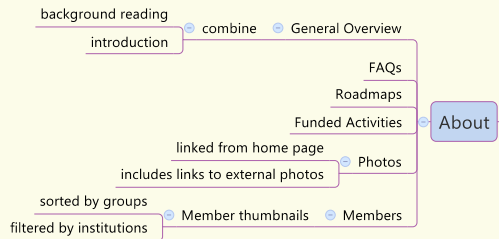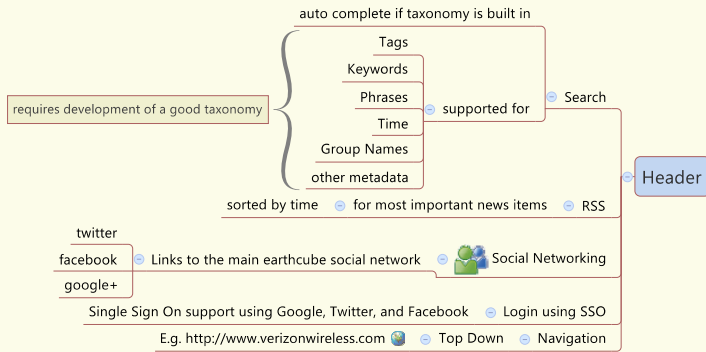# Social Media and EarthCube
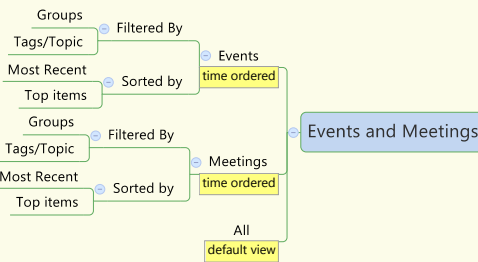
Indiana University for QuakeSim gcf@indiana.edu

- Comments on Ning web site:
  http://earthcube.ning.com/group/governance/forum/topics/analysis-of-earthcube-governance-web-site and PDF to download

- Social media/networking for research:
  http://earthcube.ning.com/group/governance/forum/topics/summary-of-social-media-networking-support-of-research and PDF to download plus interactive site

- http://www.infomall.org/earthcube/

- 2 relevant posters from Undergraduate research class
  http://www.infomall.org/I399-12/projects_2012.html

EarthCube

Heirarchical Architecture

Header

- **Search** — supported for
  - Tags
  - Keywords
  - Phrases
  - Time
  - Group Names
  - other metadata
  - auto complete if taxonomy is built in
  - requires development of a good taxonomy
- **RSS** — for most important news items — sorted by time
- **Social Networking** — Links to the main earthcube social network
  - twitter
  - facebook
  - google+
- **Login using SSO** — Single Sign On support using Google, Twitter, and Facebook
- **Navigation** — Top Down — E.g. http://www.verizonwireless.com

About

- **General Overview** — combine
  - background reading
  - introduction
- FAQs
- Roadmaps
- Funded Activities
- **Photos**
  - linked from home page
  - includes links to external photos
- **Members** — Member thumbnails
  - sorted by groups
  - filtered by institutions

Blog

- blog.earthcube.org — Separate site

Most important Information

Center most part of the site that includes a slideshow of the following items

- Latest News
- Latest Events
- Photos
- Funded Activities
- Expression of Interests — contains links to all EOIs

Events and Meetings

- **Events**
  - Filtered By
    - Groups
    - Tags/Topic
  - Sorted by
    - Most Recent
    - Top items
  - *time ordered*
- **Meetings**
  - Filtered By
    - Groups
    - Tags/Topic
  - Sorted by
    - Most Recent
    - Top items
  - *time ordered*
- **All** — *default view*

Latest Activity

- **Highlighted News from every group** — similar to how you can highlight a story in facebook timeline
- Filtered By
  - Groups
  - Tags/Topic
- Sorted by
  - Most Recent
  - Top items
- *time ordered*

Groups

- Education and Workforce Development
- Layered Architecture Concept Award
- Brokering Concept
- Data Discovery, Mining, Integration
- Semantics and Ontologies
- Earth System Model Concept
- Web Services Concept
- Interlop Concept
- Workflow

Governance

- **Introduction** — Basic Introduction about the governance group and their main responsibilities
- **Latest Activity News**
  - Upcoming Weekly Meetings
  - Upcoming Community Events
  - Comments or other lively dynamic discussions
  - contains tweets from #earthcubegov
  - *time ordered*
- **Roadmap** — link to the governance roadmap

Discussion Forums
time+tag ordered

- **Filtered by Categories**
  - Governance Research — *tag: research*
  - Working Group Agendas — *tag: agenda*
  - Meeting Minutes — *minutes*
  - Presentations — *presentations*
  - Logistics — *tag: logistics*
  - Minutes — *tag: minutes*
  - Plenary — *tag: plenary*
  - Focus Groups — *tag: focus*
- **All** — unfiltered — *sorted by most recent activity*

Resources & Important Links — Links to
- Vimeo site
- NSF Survey
- Videos
- Roadmap
- Other important documents

Events and Meetings
- **Events**
  - Filtered By
    - Groups
    - Tags/Topic
  - Sorted by
    - Most Recent
    - Top items
  - *time ordered*
- **Meetings**
  - Filtered By
    - Groups
    - Tags/Topic
  - Sorted by
    - Most Recent
    - Top items
  - *time ordered*
- **All** — containif the events and meetings taking place within 7 days — *default view*

June 2012

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Calendar Interface

About
- Contact
- Subscribing Listserv emails
- Members

SocialMedia^{Home}
for Researchers

Dropbox

facebook

Google+

Google Docs

skype

twitter

Social Media Support of Research (download PDF paper)
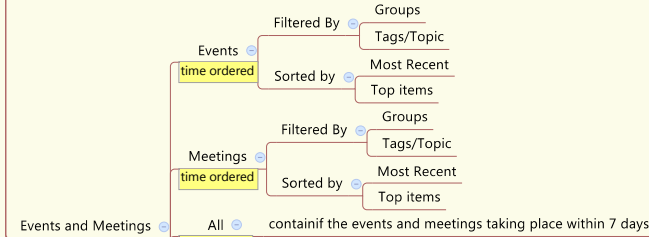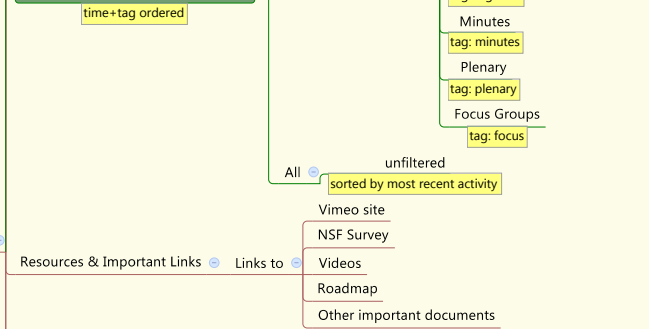

Research | Collaboration

Using Social Media to Enhance Research

Social Media has matured to the point that it now offers rich opportunities for researchers and scientists to engage swiftly and effectively with colleagues, collaborators, staff, funders, press, and the public. The very nature of Social Media is to foster immediate, accessible, fluid sharing of information resources, insights, opinions. Social Media Support for Research aims to facilitate scientific collaboration within the academic and scientific communities by encouraging clear, focused, effective engagement with Social Media. Explore the site by selecting from the Social Media options on the left and then using the slider above to review features.

Understanding the capabilities and applications of Google+ in contrast with Facebook

Undergraduates: Ricky Curtis, Jeff Pascus, Alex Sawa
Mentor: Minqi Luo

Abstract

The purpose of our research is to first examine how people currently use social networks in relation to what people actually want from their social network. Then we analyze how Google+ & Facebook currently meets these needs, or is capable of satisfying the end user's wants.

Objectives

Our ultimate goal is to evaluate the effectiveness of each social network in collaborative, professional and academic applications. Through this analysis we will be able to determine which of the two will become more dominant in the near future as well as where their applications will be most valuable.

Process & Methodology

How People User their social networks?
- Background research
- Initial surveys
- Interviews

During our primary research the results we were used to help design the interviews/surveys we conducted after.

How people want to use their social networks?
- Focused surveys
- Interviews
- Focus groups

Results

What do you do most on your social network?
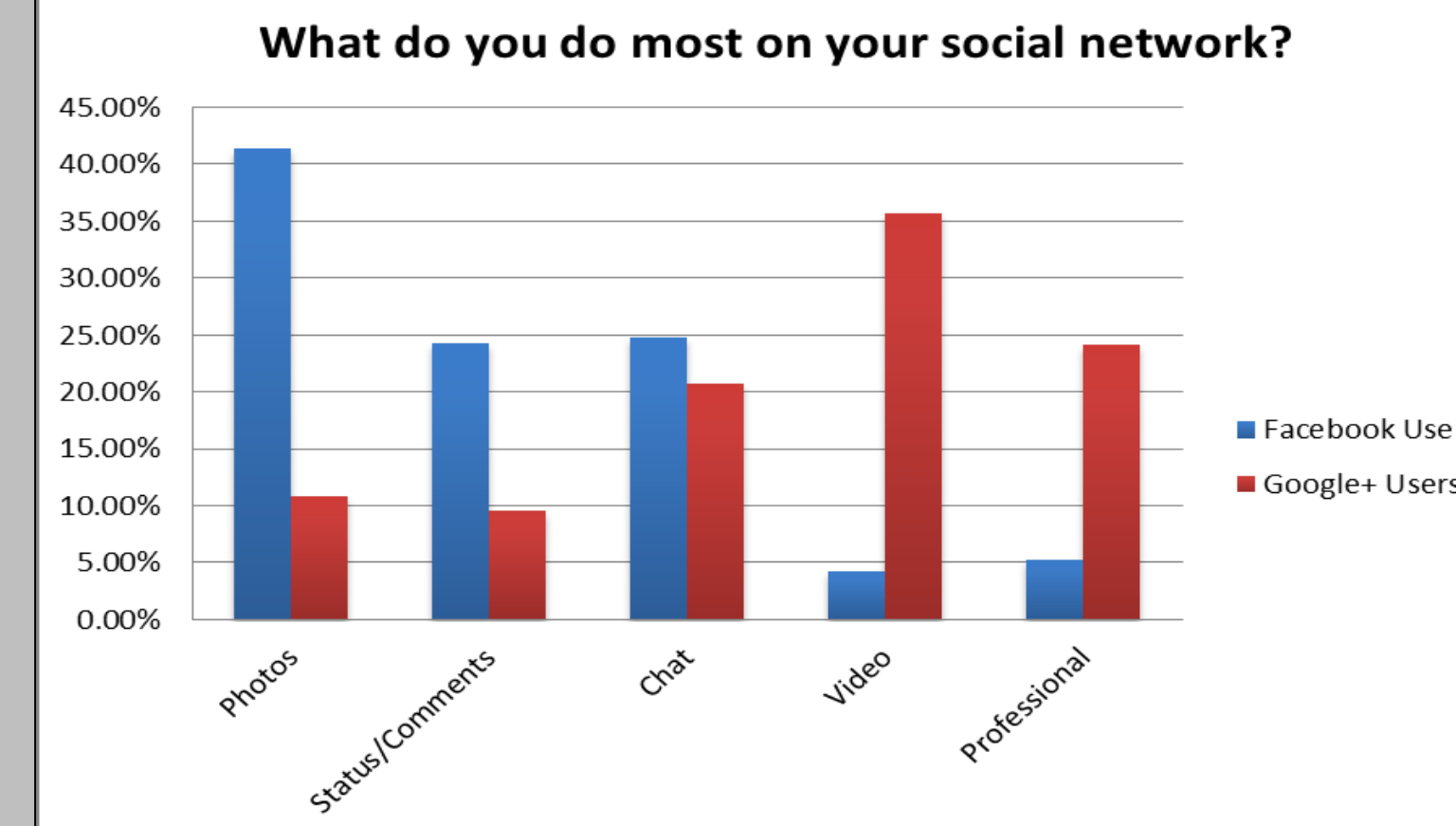
	What do you dislike most about your social network?
1	Too many ads/cluttered
2	Privacy/Security Issues
3	Lack of video integration
4	Lack of info filters
5	Not professional

Conclusions

Through our research, we've come to the conclusion that Google+ is a more effective collaboration tool and has a much higher potential than Facebook. Although Facebook has many more users, Google+ is setting a new precedent for the way groups can collaborate via social networks as well educational applications. As Google+ continues establishing itself in the social network market, more users will realize the value of their innovative approach to social networking consequently securing Google+'s position as a leader in social networking.

Future of Google+

Education
Google's strategy of integrating their other tools with Google+ makes education through a social network a realistic possibility. Google just released new apps which can be used during Hangouts. These apps can help give teachers the tools they need in order to facilitate an educational atmosphere online.

Professional Collaboration
Business meetings and processes are being dealt with online more and more frequently. There are other programs that seek to facilitate this online collaboration but Google is at the front of the pack and is free/easily accessible to everyone. Google also has the assets to meet a wide variety or needs. As more apps are created to facilitate collaboration the possibilities for professional uses are endless.

Social
Users who currently use Google+ spend a lot less time aimlessly browsing through profiles and pictures than Facebook users. Google+ has the abilities to do everything that Facebook does , however users are already familiar and well connected in Facebook so a switch which would also involve losing some friends is a difficulty Google must overcome.

#SocialQuake

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I399 – Indiana University

Introduction

Our research question was how many relevant tweets are needed to successfully sense that an earthquake has occurred? Is this process faster than how quickly scientific organizations release their findings?

Motivation

Earthquakes are a daily occurrence and regardless of strength on the Richter scale, can cause major crises across the globe. In the current media age, when an earthquake hits, many people turn to Twitter to send distress messages, give information about his/her current location, and inform users of the current situation. This social data is essential to collect, as it can be matched with scientific data, and help determine the severity of the earthquake. Scientific sensors can sometimes fail, while social data should be reliable to use as a metric.
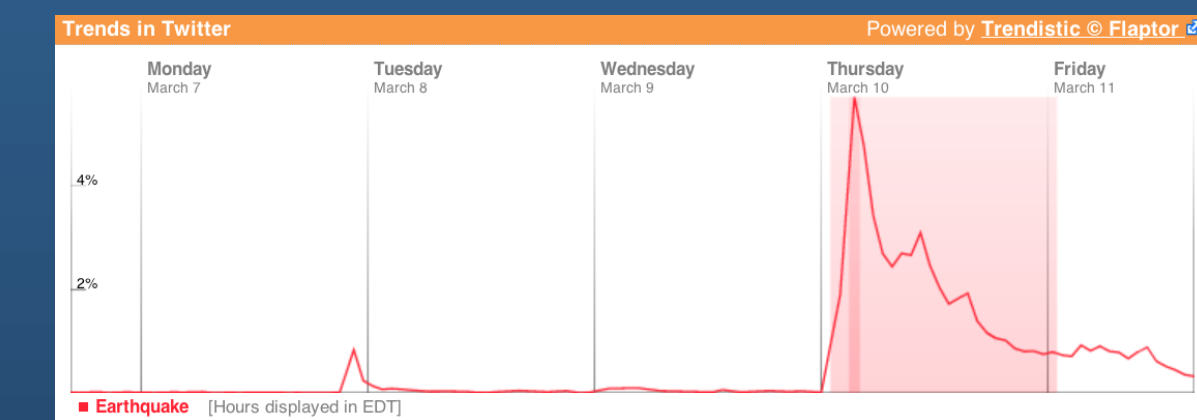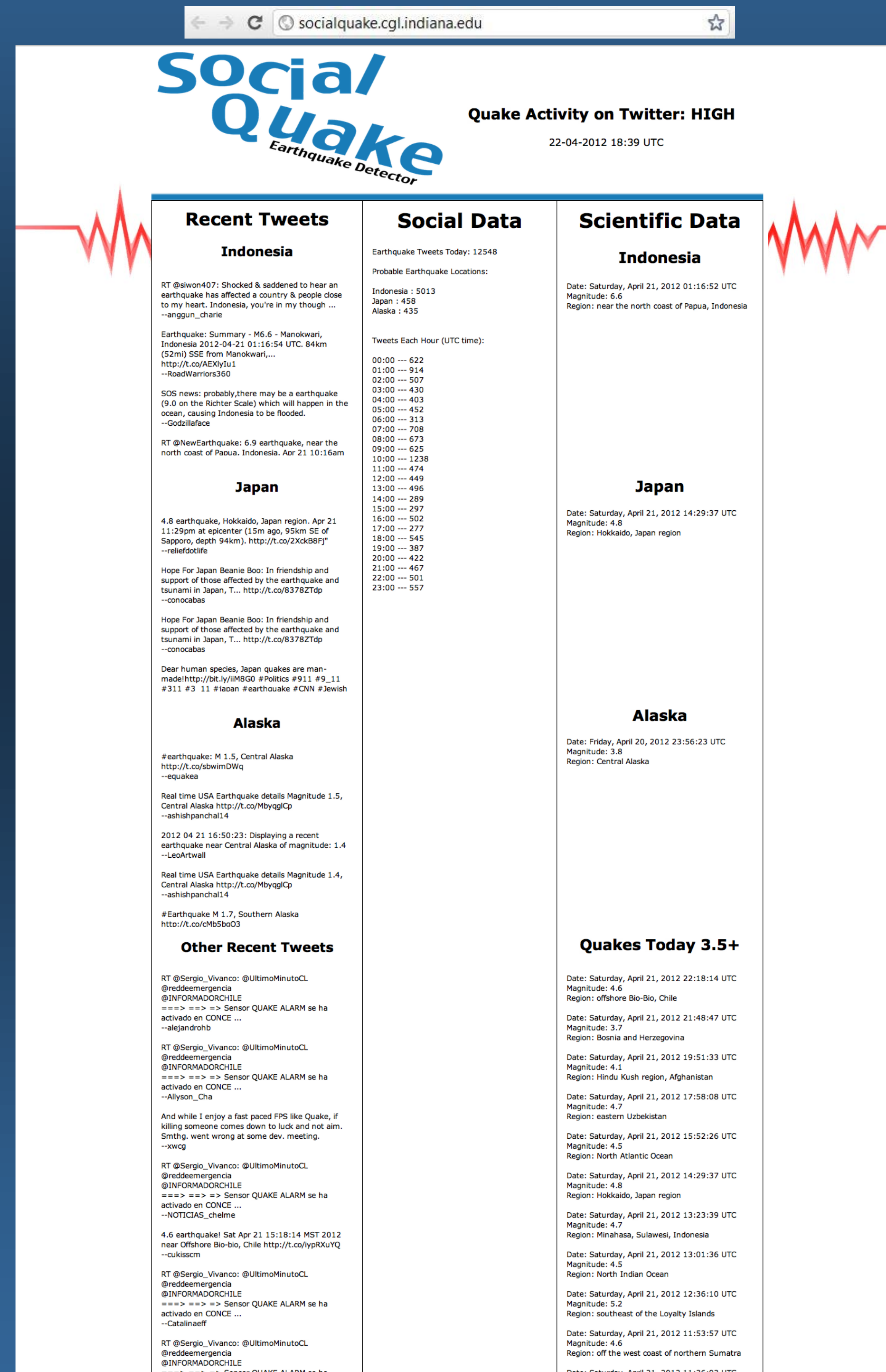
Methods and Data

Methods
- Tweetstream + Python + PHP
- Gathered common Tweets relating to earthquakes
- Filtered out unrelated earthquake words
- Created a counter to measure the amount of Tweets per hour and per day
- Analyzed tweets to find mentioned location
- Built a scale to define quake activity that is based on a grounded theory approach (Glaser Strauss 1967)

Data
- USGS CSV feed for daily earthquakes 2.5 and higher on the Richter scale
- Twitter for earthquake tweets
- (Past) Social Data
- (Present) Social Data
- Scientific Data

Social Quake Website:4 hours of data were estimated to give a consistent view of a 24 hour day

2011 Japanese Quake: Tweets went from below .01% to a peak of 5.68% within 3 hours

Results

- Ability to determine when and where an earthquake occurs through social data.
- Social data was able to report the location of an earthquake that confirmed scientific data, sometimes before scientific data from USGS was released

Conclusions and Future Work

Conclusions
- Created a functioning website that determines location and time of an earthquake, displays top 3 earthquakes each day, and displays relevant tweets for the data.
- Gathered informational earthquake tweets in one central location

Future Work
- Should look at the correlation between tweet mentions and the magnitude of the earthquake being talked about.
- At what point in strength on the Richter scale do people start to tweet about the earthquake in significant numbers?
- Should we not mention earthquakes in our scientific data if it doesn't meet that threshold?

Reference and Acknowledgements

- USGS.gov for the scientific data
- Trendistic.com for the past data
- Twitter for the social data
- Professor Fox
- Glaser Strauss 1967