

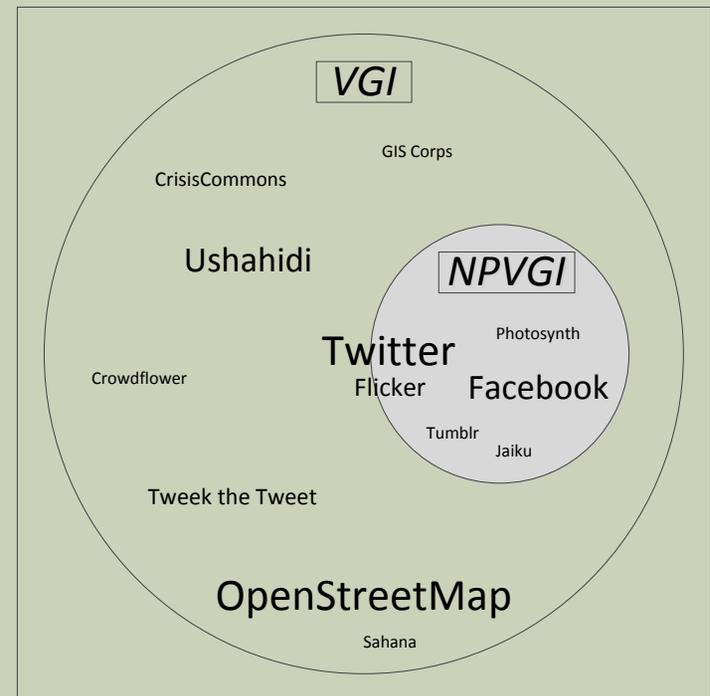
VGI 2012
MORNING PANEL

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PASSIVE VGI?

- User generated content that contains spatial and contextual information about an event, but was not generated for the purpose of creating maps or spatial data sets.
- What do we call this?
 - **Passive** (Haklay, 2010)
 - Indirect (Jiang and McGill, 2010)
 - ~~Non-Participatory~~



PASSIVE VGI FOR EMERGENCY RESPONSE



MY RESEARCH GOALS

- Improve upon the identification of the spatial location for Passive VGI
- Identify uncertainty in the Passive VGI collection process
- Assess credibility of Passive VGI
- Case Study
 - Electrical outages during Hurricane Irene (Aug 27,2011)
 - Location: Coastal North Carolina

QUESTION #1

1. Do you think the volume of VGI available in your area of research and/or practice is adequate or deficient? If deficient, what can be done to increase it?

- 174% increase in social networking use in 2011
- Significant growth in Facebook, Twitter, Google+, Tumblr in last year
- Global adoption of social networking & micro blogging

QUESTION #2

2. How easy is it to collect VGI for scientific experiments? What can be done to ensure that VGI is as useful as possible in science?

- Twitter

- Search and Streaming API (small time window)
- Historical
 - Library of Congress (TBD)
 - Topsy.com (free & fee)
 - Datasift.com (fee) – 2 years

- YouTube, Tumbler, Facebook

- API's

QUESTION #3

3. How valuable are developing standards and (software) tools for collecting VGI for the scientific community? What additional steps can be taken to develop and promote standards?

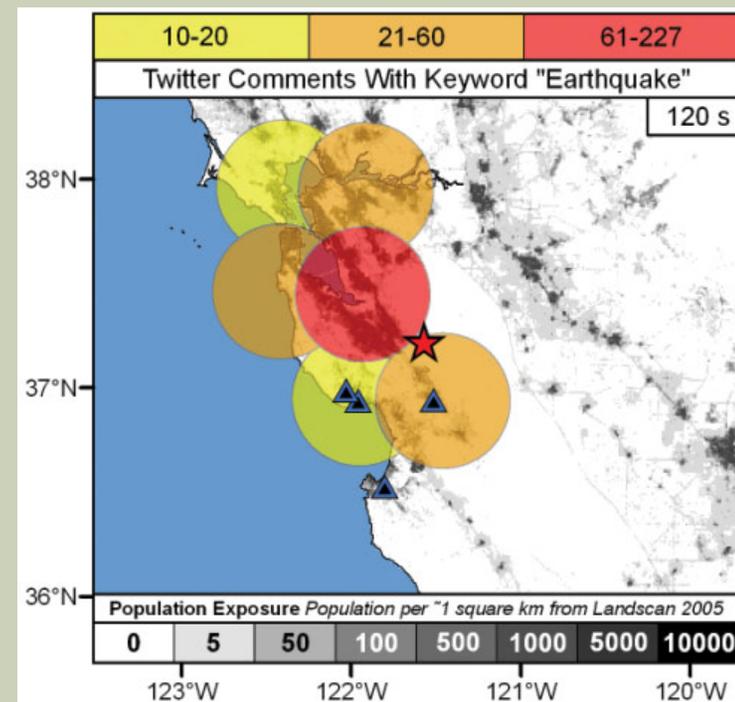
- Location, location, location
 - 1% of Tweets had geographic locations in 2011 (MacEachren et al., 2011)
 - Let's say 2% in 2012...that's 6.8 M out of 340 M all tweets
- How do you educate, monitor, and enforce standards on 140 M active users (Twitter) in a global community?

QUESTION #4

4. What's the relative role and utility of social cyber networks (such as Facebook) vs. crowdsourcing / citizen science based approaches?

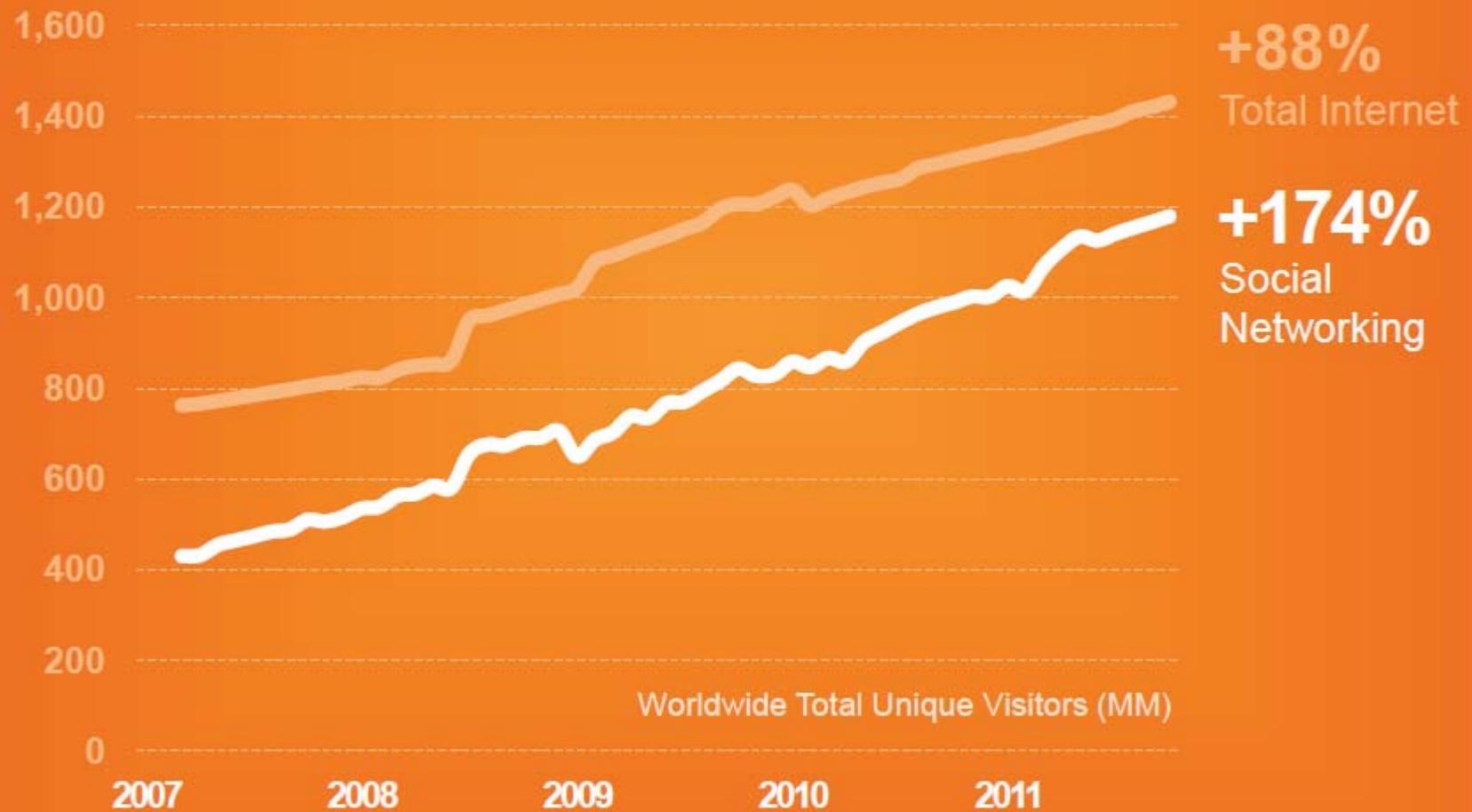
- Real to near-real time detection of events
- Validation of other sensor networks and VGI data
- Qualitative view of situation on the ground

Twitter Earthquake Detector (TED)

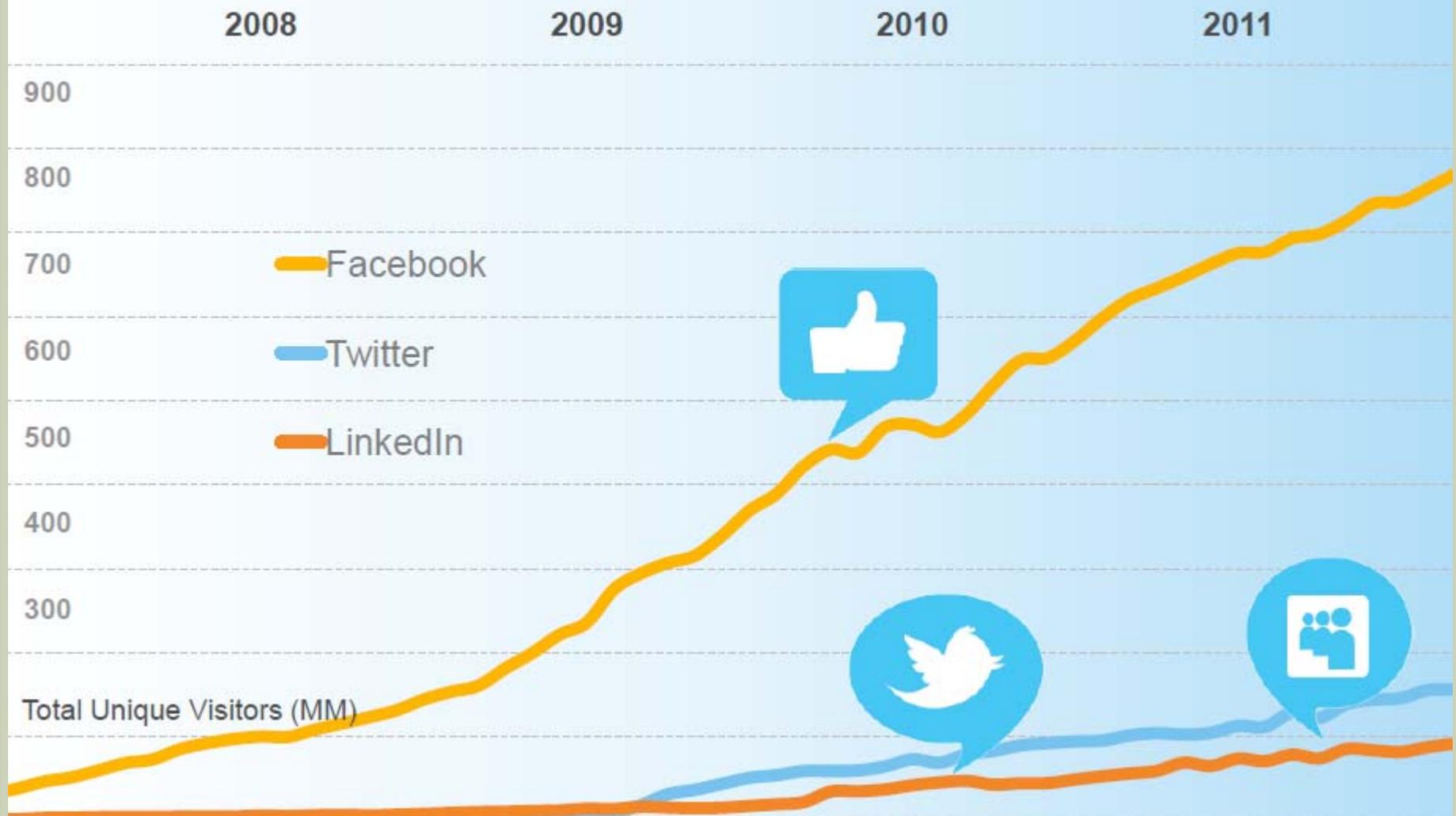


Source: <http://recovery.doi.gov/press/wp-content/uploads/2009/07/picture-54.jpg>

The Rise of the Global Social Networking Audience



The Growth of Today's Social Networking Leaders



PASSIVE SOCIAL NETWORKING VOLUME

■ Twitter

- 340,000,000 Tweets per day
- 140,000,000+ active users (<https://business.twitter.com/basics/what-is-twitter/>)

■ Facebook

- 750+ million users (<http://www.socialbakers.com/blog/244-facebook-at-750-million-users-yeah-thats-0-75-billion>)

■ Tumblr

- 15 billion monthly pageviews
- 120 million monthly unique visitors (<http://mashable.com/2012/01/23/tumblr-15-billion-pageviews/>)

PASSIVE SOCIAL NETWORKING VOLUME

■ YouTube

- Over 800 million unique users visit YouTube each month
- 72 hours of video are uploaded to YouTube every minute
(http://www.youtube.com/t/press_statistics)

■ LinkedIn

- 175m+ professionals around the world as of August 2, 2012
(<http://press.linkedin.com/about>)

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MacEachren, A.M., Jaiswal, A., Robinson, A.C., Pezanowski, S., Savelyev, A., Mitra, P., Zhang, X., Blanford, J., "SensePlace2: GeoTwitter analytics support for situational awareness," *Visual Analytics Science and Technology (VAST), 2011 IEEE Conference*, 23-28 Oct. 2011, pp.181-190.

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Jiang, M., McGill, W.L. 2010. Human-Centered Sensing for Crisis Response and Management Analysis Campaigns, *Proceedings of the 7th International ISCRAM Conference*, May 2010, Seattle, WA.