

Social Media Impacts in Emergency Management



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Managed for DOE by Oak Ridge Associated Universities



Session Objectives

- Introduction
- Technology in 2001 – Web 1.0
- Technology in 2011 – Web 2.0
- Social Media Adoption in Emergency Management
- How could Social Media have changed 9/11?
- Using Social Media in Emergency Management



Is this the past?

- Use a computer to
surf the web
- Pick up the phone to
call someone



Is this the future?

- Pick up a phone to
surf the web



- Use a computer to
call someone



Technology in 2001

- Arthur C. Clarke would be disappointed
- Peer-to-peer technology, i.e., music swapping (Napster)
- Launch of satellite radio
- Advent of online journals, i.e., blogs



Web 1.0

- First stage of the world wide web linking web pages with hyperlinks
- One-way communication capability
- Phones weren't "smart"
- No Google search engine
- If you said you were going to "tweet" me, I'd probably press charges
- Organizations had control of its message
- Media partners



We've come a long way



Now – 6.8 billion people / 5 billion cell phones

2010 – 12.5 billion devices connected to the Internet

2015 – ~25 billion devices

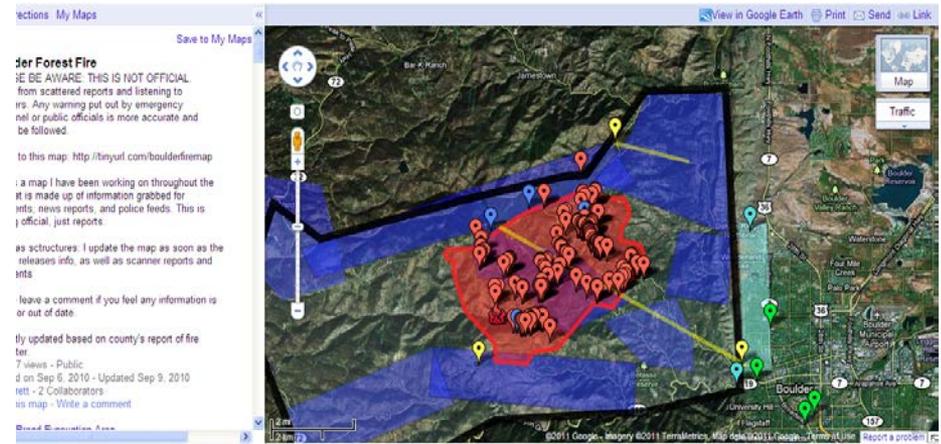
2020 – ~50 billion devices

“Retweet” & “sexting”
are now words in
Oxford English
Dictionary



Technology 2011

- Google
- Smartphones
- Geomapping / Geolocation tagging
- Video and Photo development/Sharing
- Live Streaming Video
- Integrated Public Alert and Warning System (IPAWS)



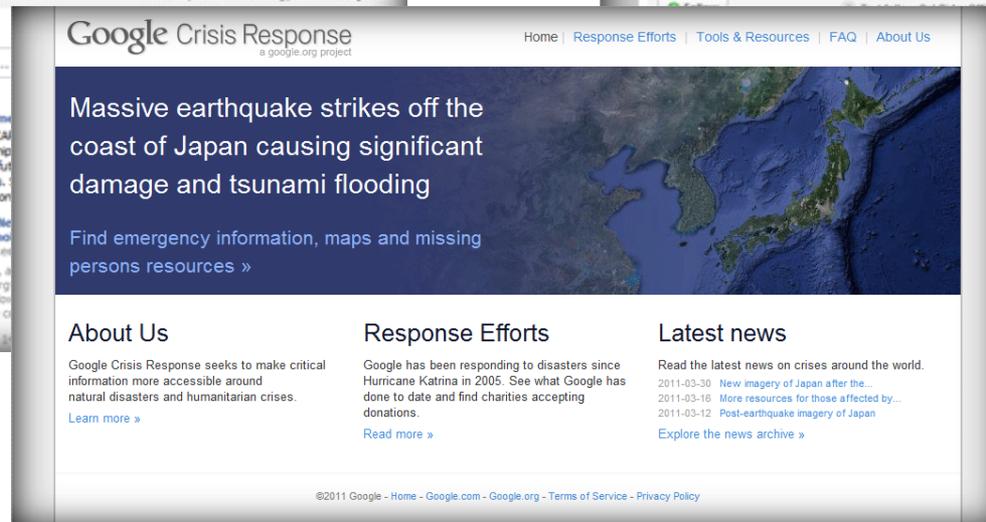
Google



Interact with your Public

Before or After Events

During Events



No longer ON the web... you are IN the web... it is immersive





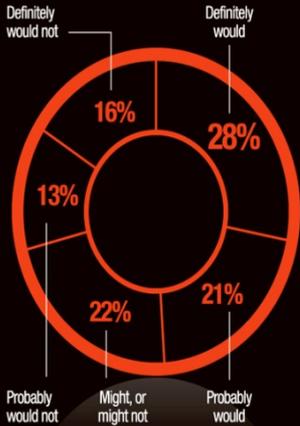
f 500

There are currently over 500 Emergency Management Group Pages on Facebook

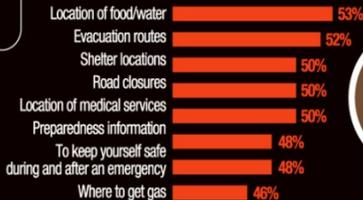
69%

agree that emergency response agencies should regularly motor their websites and social media sites do they can respond promptly

In an area-wide emergency, how likely would you be to use social media channels to let your friends and family know you are safe?



Would you sign up for alerts for these emergencies?



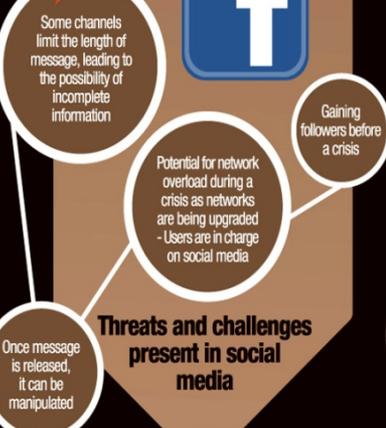
Benefits social media provides in emergency notification



INFOGRAPHIC WWW.BORISBENKO.COM

Social Media and Emergency Response

If someone you knew needed urgent help in an area-wide emergency, would you try to request help in any of the following ways?



Threats and challenges present in social media



Twitter users on the ground sent out vital information about the Mumbai Terrorist Attacks, including emergency phone numbers and the location of hospitals that needed blood donations

The Australian Country Fire Authority used Twitter to send out information on the fires, how to donate money and blood, and where to seek emergency help

Red River was cresting at record flood levels in ND and MN. 2,600 people were getting updates delivered on the Federal Emergency Management Agency's (FEMA) Twitter

The Food and Drug Administration (FDA) recalled salmonella-tainted pistachios products. 3,000 people found out through the agency's Twitter feed

Social Media Use in Emergencies



FEMA's tweets informs followers of the locations of Red Cross shelters and how to care for pets during the crisis

Dramatic scenes the US Airways plane that crashed into the Hudson River were first seen on social networking site Twitter

When a gunman opened fire in the Soldier Readiness Center of Fort Hood, TX, Twitter was able to provide news and updates to the public and Soldiers around the world

Emergency Management Groups on Facebook

- Information Systems for Crisis Response and Management (ISCRAM)
- Arkansas Tech University Department of Emergency Administration and Management
- Emergency Awareness at the University of Maryland
- FSU Emergency Management
- Michigan Emergency Management
- Mississippi Emergency Management Agency
- Braintree Emergency Management Agency
- Utah Emergency Management
- NWC Emergency Management

Emergency Agencies on Twitter

1,244,357
CDC Emergency

254,056
American Red Cross

112,604
FDArecalls

90,855
NIH

52,759
U. S. Army

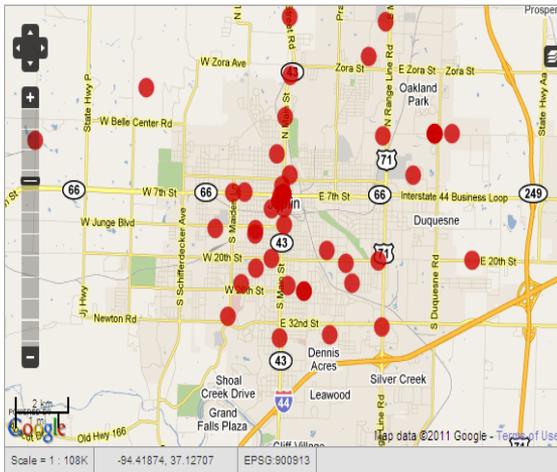
28,282
FEMA



It's not your emergency! ... it's the public's ...
People no longer just want to be victims or
witnesses ... they participate and have a sense of ownership.

A place to post tornado recovery needs, offers of help, and upcoming events related to the May 22 tornado in Joplin. If you have an emergency, please dial 9-1-1.

FILTERS → **REPORTS** NEWS PICTURES VIDEO ALL



↑ CATEGORY FILTER [HIDE]

ALL CATEGORIES

INFRASTRUCTURE PROBLEMS

SOLUTIONS

MEDICAL NEEDS

ITEMS NEEDED

ASSISTANCE NEEDED

SHELTERS AND VOLUNTEER CENTERS

UPCOMING EVENTS

“In an emergency, you must treat information as a commodity as important as the more traditional and tangible commodities like food, water, and shelter.” Jane Holl Lute, Deputy Secretary, Homeland Security

MO.gov @MoGov State of Missouri

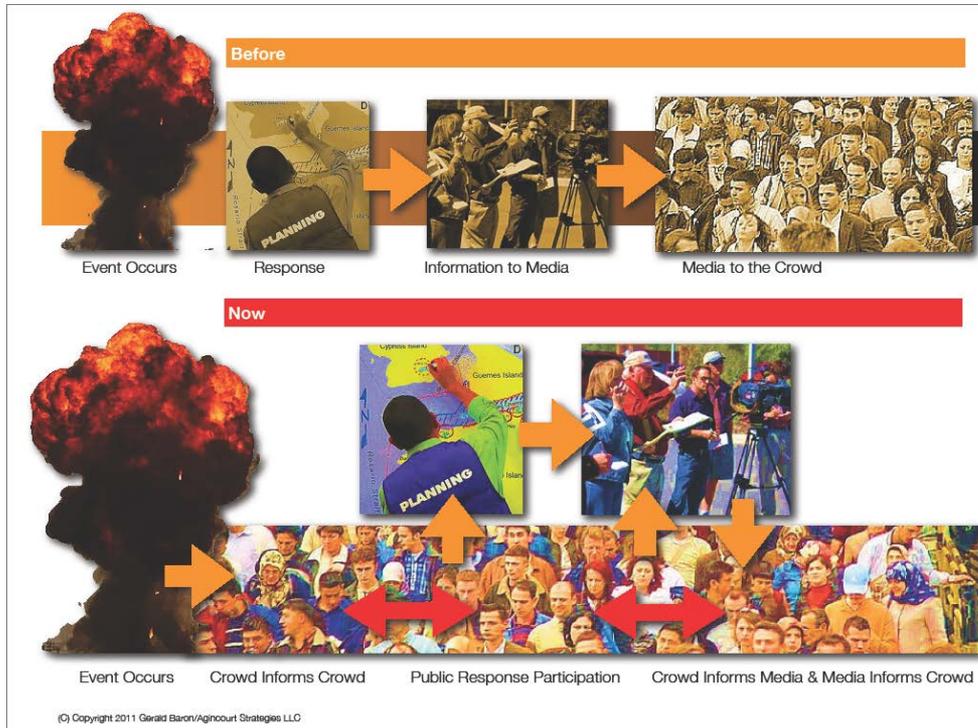
We're looking for photos showing damage & recovery efforts in #Joplin. Submit them to us on Twitter or on Flickr at <http://on.mo.gov/fnIKJP>



Social media playing major role in Joplin tornado recovery



The era of official agencies simply “pushing” out info is over! To be relevant, organizations also need to “pull” data in.



Friday, June 3, 2011

Social
Media
Monitoring



“The media landscape has changed drastically. We no longer have a reporter assigned to our specific beat where we are regularly in touch; now everyone is a reporter and a journalist because of social media.” Davina Gruenstein, Public Relations Director, Puget Sound Energy

Social Media in Emergencies

- Internet resilience
- Text messaging
- Expand reach

"I am just in the stream of information now."

Jeff Phillips, Emergency Management Coordinator, Los Ranchos de Albuquerque, N.M.

Social Media Sparked, Accelerated Egypt's Revolutionary Fire

By Sam Gustin



February 11, 2011 | 2:56 pm | Categories: People, Politics, Social Media

Follow @samgustin · 2,009 followers



Anti-government with joy and tears march on his pal

If three decades o both a spark and

Oslo Bombing Captured on Twitter & YouTube [PHOTOS]

4 days ago by Christina Warren



A massive vehicle bomb went off in ce several government buildings.

ABC News cites a Norwegian news s buildings including the prime minister



NNSS

@NNSANevada Las Vegas, NV
The NNSANevada Site Office supports US nuclear security programs at the Nevada Test Site.
<http://www.nv.energy.gov>



Text follow NNSANevada to your carrier's shortcode

Tweets Favorites Following Followers Lists



NNSANevada NNSS
If you are having trouble viewing the #SWEIS video on Facebook, you can also view it at... <http://fb.me/1263t4eev>
8 minutes ago



NNSANevada NNSS
The Draft Site-Wide Environmental Impact Statement #SWEIS for the Nevada National Security Site and Off-Site...
<http://fb.me/Qg0fedPH>
22 hours ago



- #DCQuake and #Irene
- Tweets about the earthquake reached NYC before aftershocks
- Cell phone service unreliable
- Twitter and SMS



DC Quake Devastation

Social Media travels faster than seismic waves

Fukushima live on Twitter - One Minute Internet



How Could Social Media Have Changed 9/11?

- Established credibility and awareness
- Every citizen as a sensor
 - [Crowdsourcing](#)
 - [Reporting suspicious activity](#)
- Response notifications
 - Evacuation Routes
 - Locations of Shelter
 - Protective Actions
 - Comprehensive, interactive maps
- Recovery information source

"The 21st century information chain has totally reversed the traditional chain of command."

James Graybeal, Deputy Chief of Staff for Communications and Director of Public Affairs, NORAD/USNORTHCOM



What happened 10 years ago

7:59 a.m.	AA11 departs with 92 passengers (hijacked @ 8:14)	(Timeline)
8:14 a.m.	UA175 departs with 65 passengers (hijacked @ 8:45)	
8:19 a.m.	AA11 alerts ground control of their hijacking	
8:20 a.m.	AA77 departs with 58 passengers (hijacked @ 8:54)	
8:24 a.m.	Hijacker accidentally contacts ATC instead of aircraft main cabin	
8:37 a.m.	ATC contacts Northeast Air Defense (NEADS) about hijacking	
8:42 a.m.	UA93 departs with 45 passengers (hijacked @ 9:28)	
8:46 a.m.	AA11 crashes into the North Tower at WTC	
9:03 a.m.	UA175 crashes into the South Tower at WTC	
9:10 a.m.	FAA shuts down all NY airports	
9:12 a.m.	AA77 passenger calls home to alert of hijacking	
9:37 a.m.	AA77 crashes into The Pentagon	
9:42 a.m.	All in/outbound domestic flights are grounded by FAA	
10:03 a.m.	UA93 crashes in a Pennsylvania forest after passengers confront hijackers	
12:16 p.m.	Last commercial flight above the continent	



Could social media have helped?

Social media could have played a profound role in September 11, 2001 by:

- assisting in the response
- recording the memory of the day
- providing evidence in the investigation

if only it had existed



* Source Teqnolog blog



Could social media have helped?

- 7:59 a.m. AA11 departs with 92 passengers (hijacked @ 8:14)
- 8:14 a.m. UA175 departs with 65 passengers (hijacked @ 8:45)
- 8:14 a.m. AA11 passenger(s) send FB status / tweets of the hijacking via Wi-Fi
- 8:19 a.m. AA11 alerts multiple federal agencies of the hijacking via Inflight 911
- 8:20 a.m. AA77 departs with 58 passengers (hijacked @ 8:54)
- 8:24 a.m. Hijacker call to traffic control is tweeted and picked up by media
- 8:26 a.m. Media, family, & friends circulate status updates on FB and Twitter
- 8:42 a.m. UA93 departs with 45 passengers (hijacked @ 9:28)
- 8:45 a.m. UA175 passenger updates FB on an iPad regarding their hijacking
- 8:46 a.m. AA11 crashes into the North Tower at WTC
- 8:50 a.m. IPAWS utilized to alert the nation
- 8:55 a.m. UA175 passengers secretly look at FB updates - confront hijackers?
- 8:55 a.m. FAA confirms terrorist situation and grounds further traffic?
- 9:03 a.m. UA175 crashes into the South Tower at WTC or something else?
- 9:37 a.m. AA77 crashes into The Pentagon or something else?

...



Geronimo-E KIA

Interesting Statistics:

- “September 11th” searches up 1,009%
- “US Flag” searches up 717%
- Osama bin Laden-related searches up 100,000%
- 66% of searches for “who is Osama bin Laden?” were by those aged 13-17
- 25% of searches overall for Osama bin Laden came from those under 24 years old

At the news event's peak, Twitter said that users were sending off 5,106 tweets per second.



@keithurbahn

Keith Urbahn

So I'm told by a reputable person they have killed Osama Bin Laden. Hot damn.

10 hours ago via [Twitter for BlackBerry](#) ☆ Favorite ↻ Retweet ↩ Reply



ReallyVirtual Sohaib Athar

Helicopter hovering above Abbottabad at 1AM (is a rare event).

1 May



ReallyVirtual Sohaib Athar

Go away helicopter - before I take out my giant swatter :-/

1 May



ReallyVirtual Sohaib Athar

A huge window shaking bang here in Abbottabad Cantt. I hope its not the start of something nasty :-S

1 May

The bin Laden story resulted in a peak of more than 4.1 million page views per second on the news websites supported and tracked by content delivery network



Using Social Media in Emergency Management

- Listen before speaking
- Define Goals and Purpose
- Define Strategy
- Develop a Marketing Plan (marketing preparedness messages to the public is not easy!)
- [Don't just take our word for it](#)



Thank you - Questions?



Jeffrey Leifel & Holly Hardin

