

Assessment of Social Media Usage during Hurricane Sandy and the Development of a Twitter-based, Web Application for Real-time Communication of Storm-related Information

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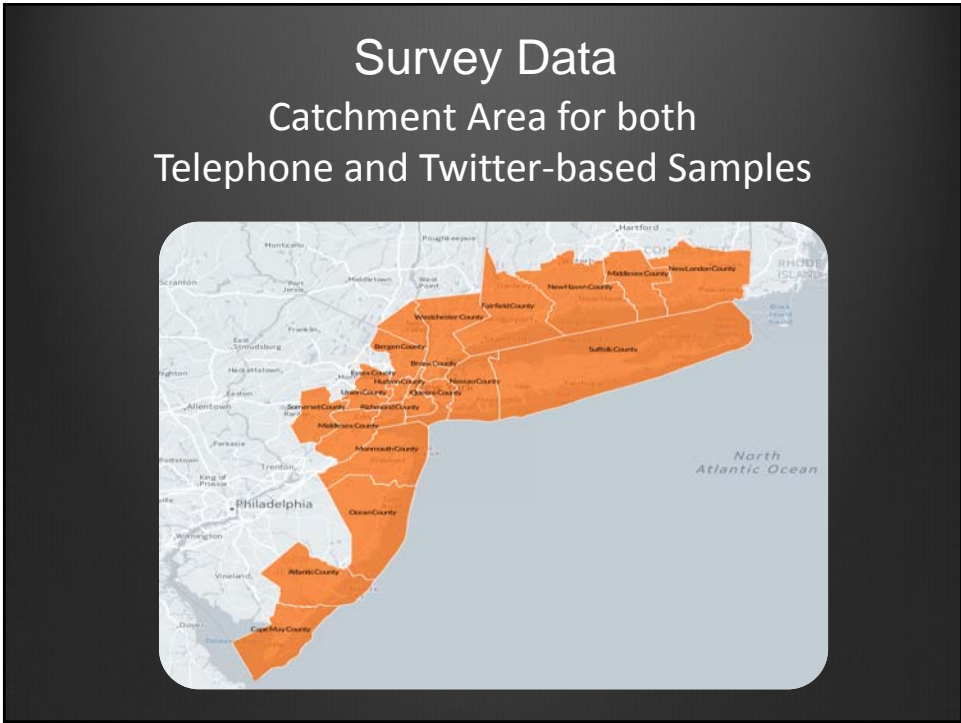
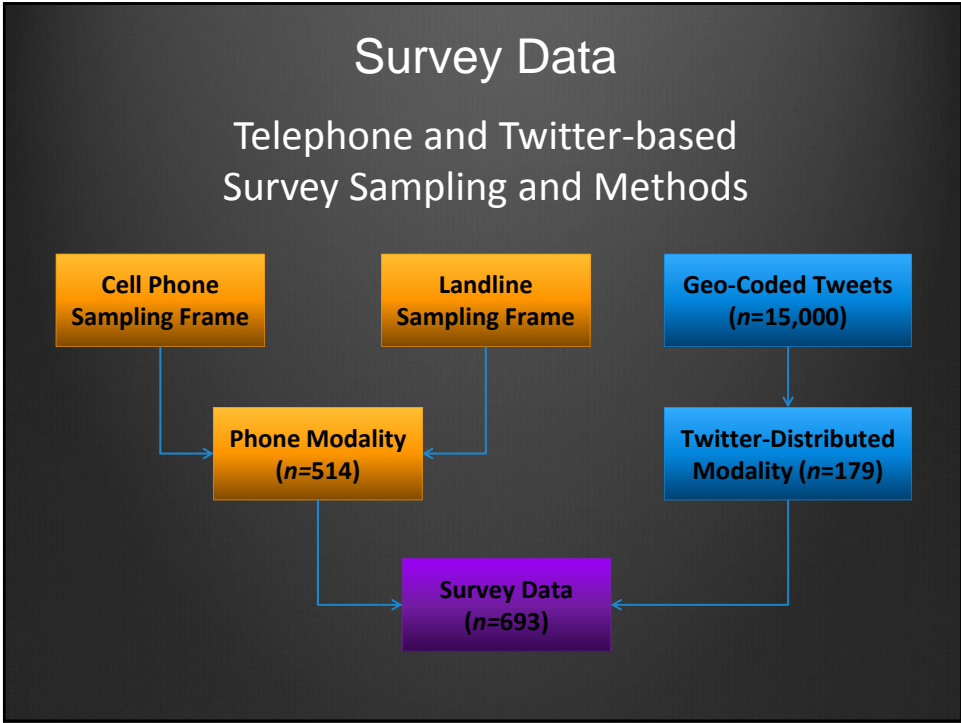
Introduction

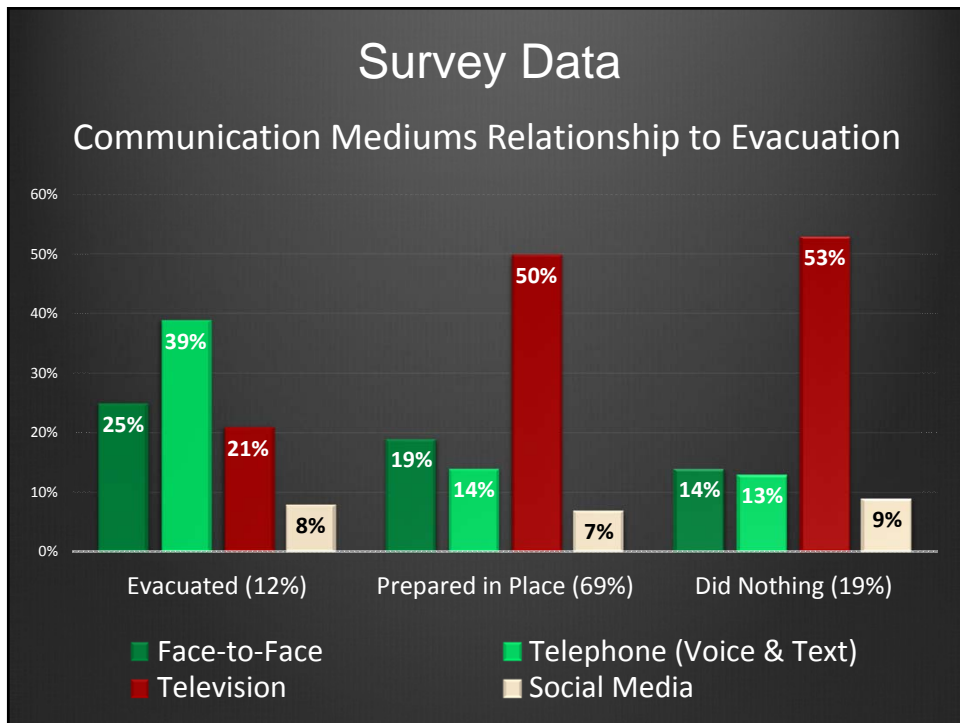
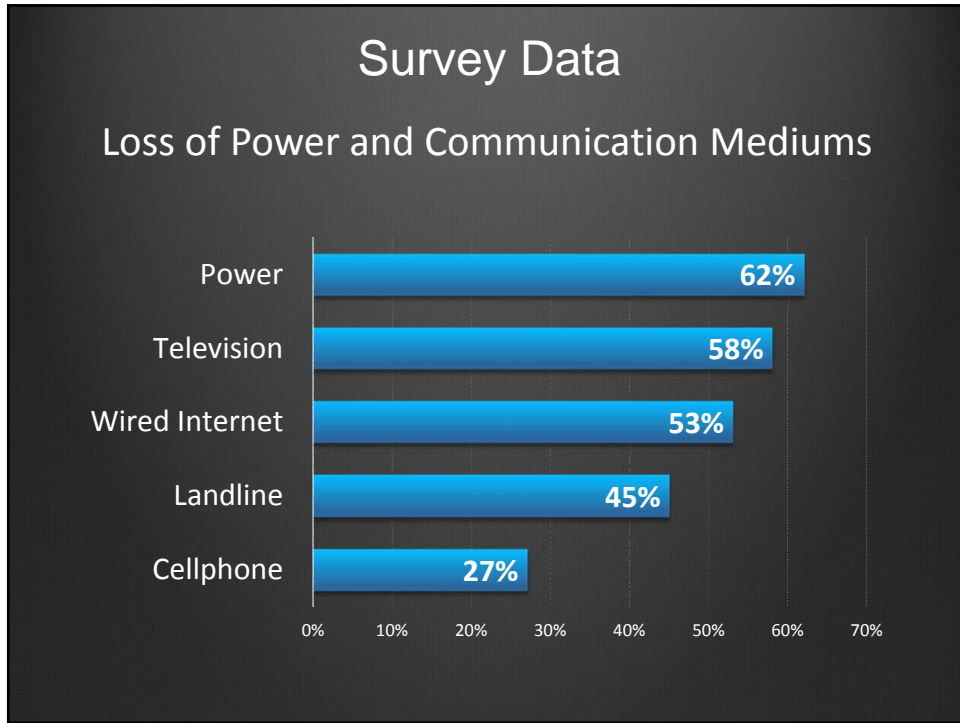
Funding

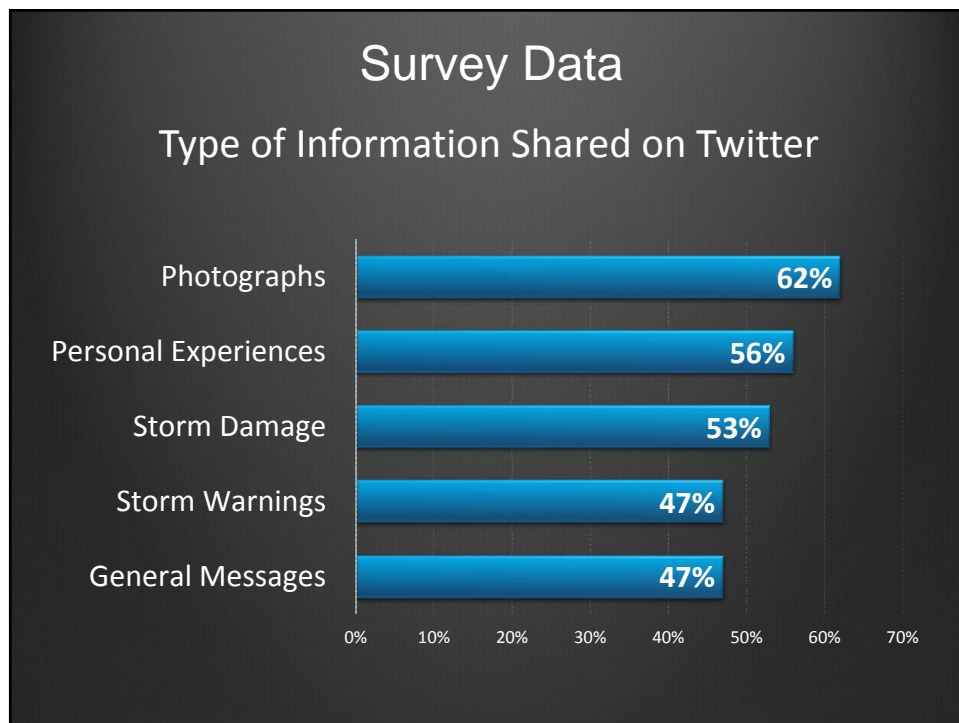
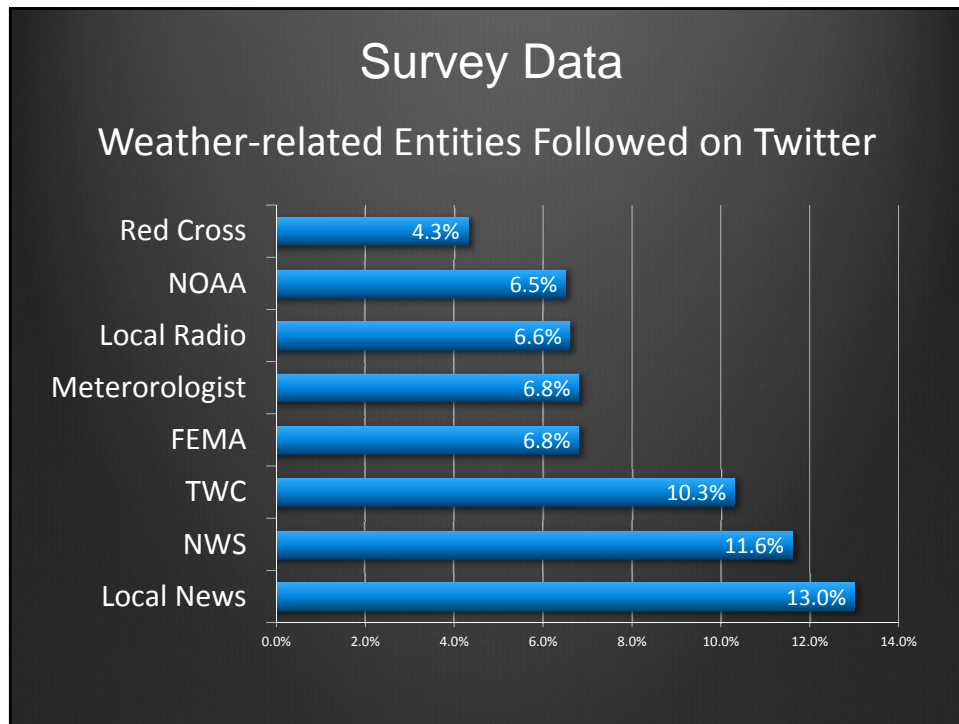
- National Oceanic and Atmospheric Administration
Coastal Storm Awareness Program
Connecticut Sea Grant

Objectives

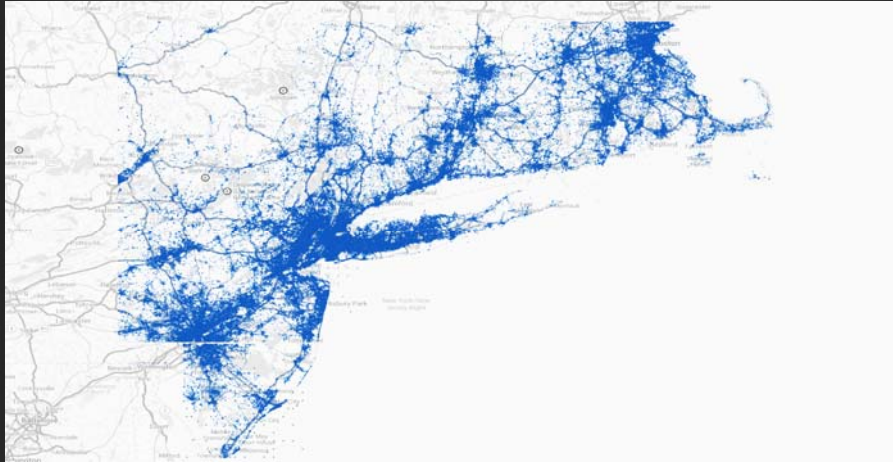
- Survey affected population regarding storm-related communication
- Identify and codify storm-related messages from Twitter
- Identify major “Influencers” disseminating weather-related info
- Develop a Twitter-based, data collection and bidirectional communication system for weather-related emergencies



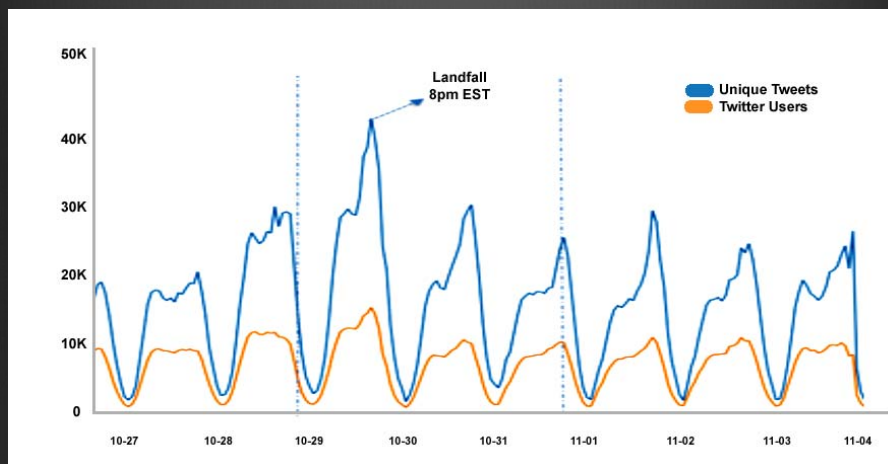




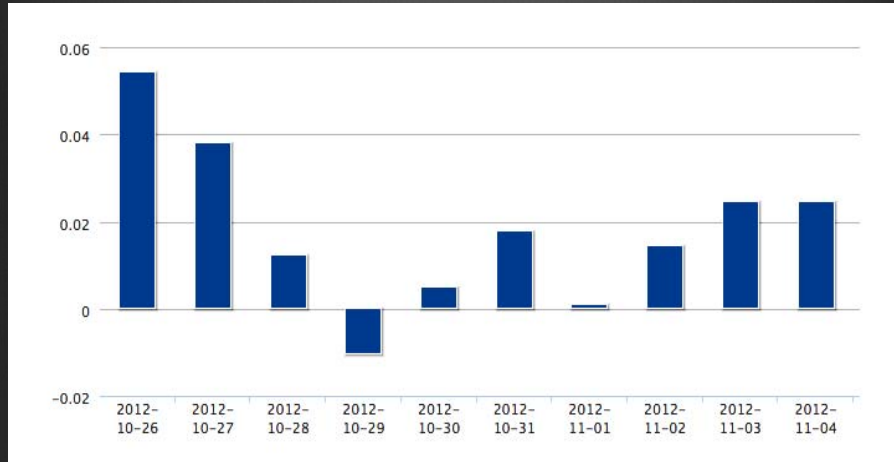
Social Media Data 4.5 million Geo-coded Tweets



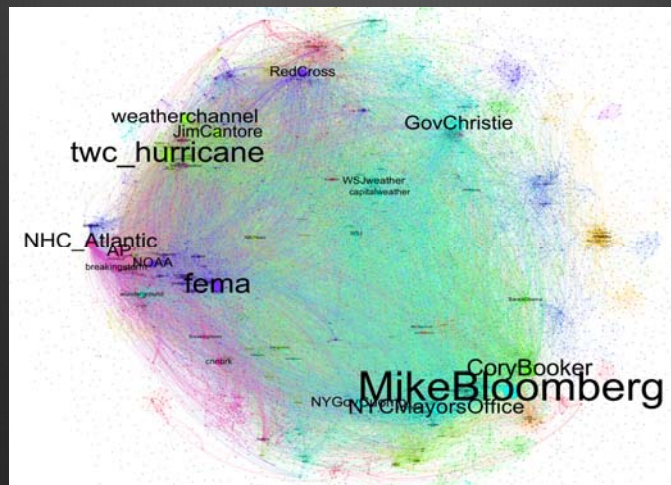
Social Media Data Volume



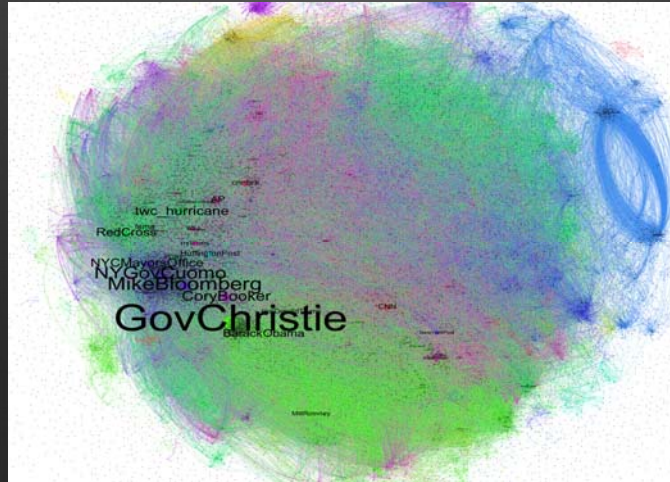
Social Media Data Sentiment



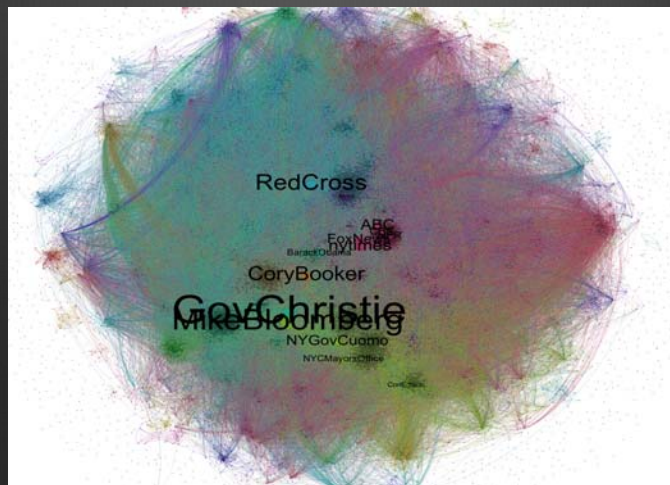
Social Media Data User Network – Pre



Social Media Data User Network – During



Social Media Data User Network – Post



Social Media Data Identifying and Codifying



Pleading for
Help



Rachel Gedansky | 2012-10-28T04:24:16.000Z

Need help SOS



Angelo- Fat-Boyz | 2012-10-30T16:23:05.000Z

Ppl trapped on there homes. Down the road from meThey need help
<http://t.co/sTf7OeKM>

Offering
Help



Jonathan | 2012-11-02T15:34:39.000Z

Back in Brooklyn. Anyone in the mill basin or Bergen beach area need help w anything?



Alex Contreras | 2012-10-27T23:57:18.000Z

@bob_brandyberrry if you need help on any part, let me know I'll be happy to help

Organizing
Help



andrea zayas | 2012-11-07T17:34:57.000Z

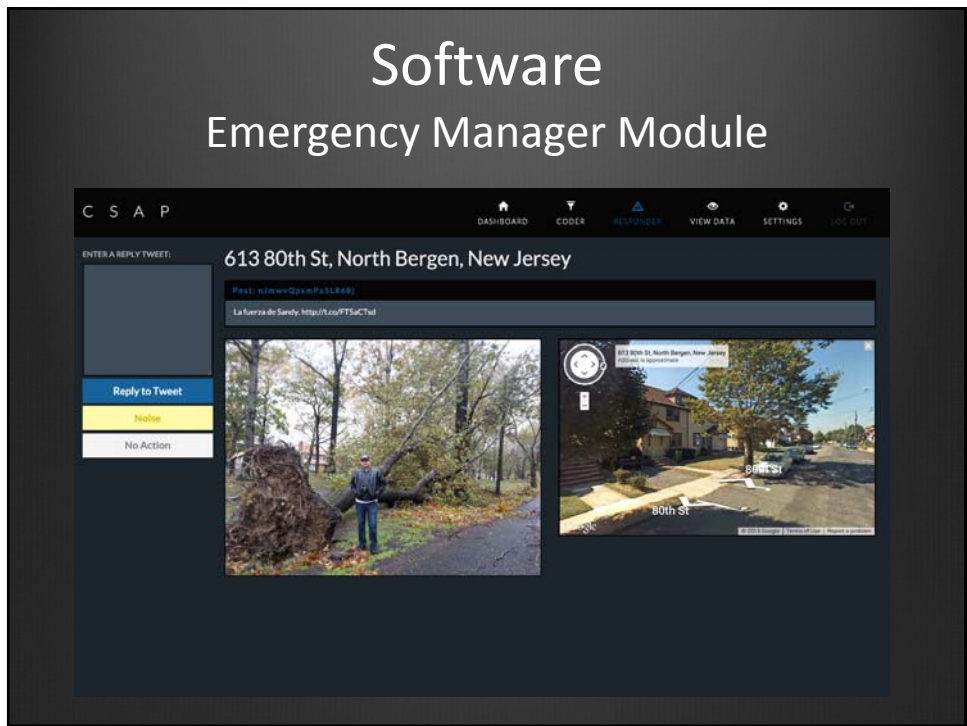
@520ClintonOS dispatch volunteers to 560 Sheffield ave, ps 160 please-need help relocating a school.



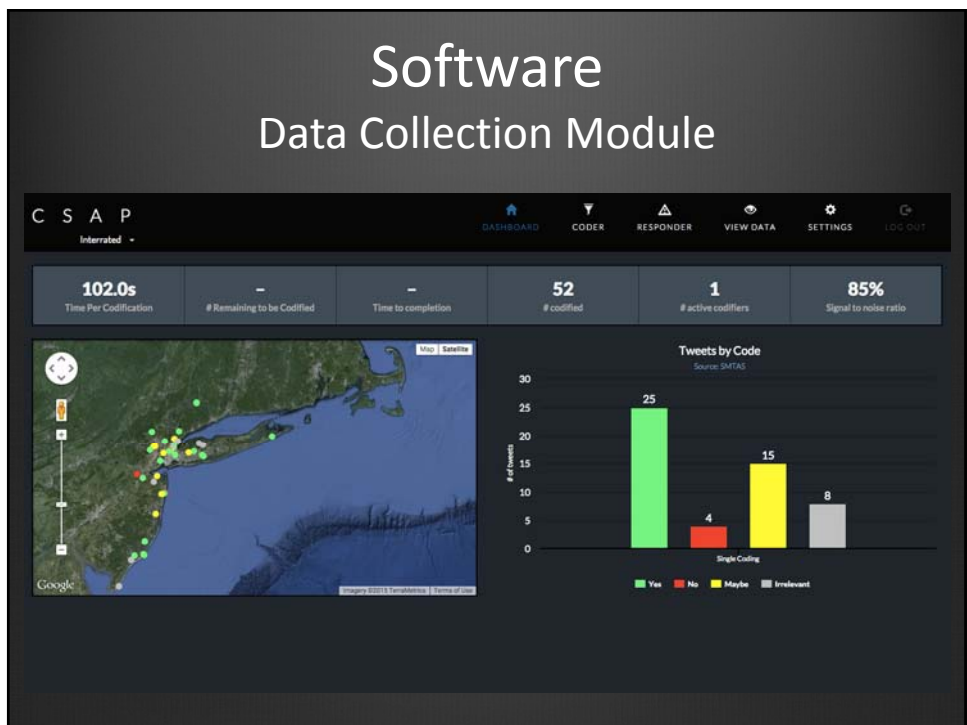
NYUCSALS | 2012-11-3T10:52:53.000Z

There is food right now at PS 234 at 292 Greenwich Street that we need help distributing to areas further downtown. #sandyvolunteer

Software Emergency Manager Module



Software Data Collection Module



Software Example Image

Post: pFj667ZsL5GwMw9s - 2012-10-30 20:55:13+00:00

Haven't seen much damage in Astoria, but saw this down the street #sandy @ I.S. 126 <http://t.co/NYPzJKXf>



Software Example Image

Post: B7e2FKKcjpnTsax5x - 2012-10-31 17:58:25+00:00



Damage and debris by the marina in Brigantine #sandy <http://t.co/PR5K4tCs>



Software Example Image

Post: W6LaQPBqalCetvYYM - 2012-10-31 03:32:22+00:00

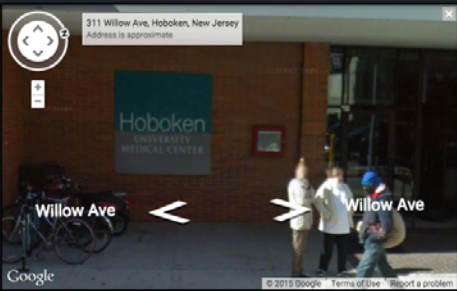

#erock #eryc #flooded #hurricanesandy #ny @ East Rockaway Yacht Club <http://Lco/UhCnCoPA>



Software Example Image

Post: TtB3fuaJRjs5377B9 - 2012-10-31 16:58:35+00:00

Hoboken Medical Center Day 2 -- still flooded. #hoboken #sandy @ Hoboken University Medical Center <http://Lco/H4FeEGQq>



Software Example Image

Post: qQ99KNCLg9CDh6Aix - 2012-10-31 17:12:46+00:00

Our beloved taqueria, flooded. #Sandy #nofilter @ Taqueria Downtown <http://t.co/jXDnMRqQ>



Future of Using Human Sensors for Obtaining Weather-Related Information

- ~150 million more Twitter users since Hurricane Sandy
- Posting photographs has become much easier and more commonplace. Twitter hosts photos natively.
- Advances in natural language processing and image recognition will increase the efficiency of the software
- We do not condone capturing photographs of dangerous weather activity, but our software allows such photographs to be used for a greater good.

Questions

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