Visualizing Geotemporal Context for Twitter events

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Why Twitter?

AMNESTY INTERNATIONAL
Problem:

It is hard to navigate through millions of messages and extract knowledge.
Need:

A way that allow not “computers people” to navigate for understanding real world news events
1) Related work

2) System architecture

3) Lessons learn & future work
Related work:

TwitInfo
[Marcus et all, CHI’2011]
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Leadline
[Dou et al., vAST’2012]
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Leadline
[Dou et al, VAST’2012]

SensePlace2
[MacEachren et al, VAST’2011]
1) Related work

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Dataset

Headlines

CNN @CNN · 3 h
Hurricane Betty or Bob: Does It Matter? cnn.it/T9lwU1

CNN @CNN · 4 h
President Obama has arrived in Poland at the start of a four-day European tour.

CNN @CNN · 5 h
Dan Marino sues NFL over concussions. cnn.it/ln7s9Aq

Most covered words by media

Obama - Poland
Fire - Valparaíso
Dataset

Most covered words by media

Obama - Poland

Fire - Valparaíso

Search tweets containing those words
Dataset

Event for each hour:

- Obama - Poland
- Fire - Valparaíso

Set of tweets containing Obama and Poland
Set of tweets containing Fire and Valparaíso
Dataset

Event: set of keywords + tweets containing them

Obama - Poland + Set of tweets containing Obama and Poland

Fire - Valparaíso - Chile + Set of tweets containing Fire, Valparaíso and Chile + Set of tweets containing Fire and Chile
System Architecture

Given “events”:

1) Extract locations -> where is it about

2) Extract where was propagated

3) Visualize
Visualization
Visualization Interaction

Selected event description:

Components:
says, trench, mccain, chemical, vote, attack, base, military, strike, syria, action, obama

Happened at:
Mon Sep 02 2013

Locations:
Syria, Syrian Arab Republic: 80558
France: 215
1) Related work

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3) Lessons learned & future work
Lessons Learned

- “We would be able to build stories”

- We are able to follow a news

- News event with lower media coverage are not stored
Future Work

- Build a more complete dataset (on runtime?)

- Adequated data structures

- Formal evaluations
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