

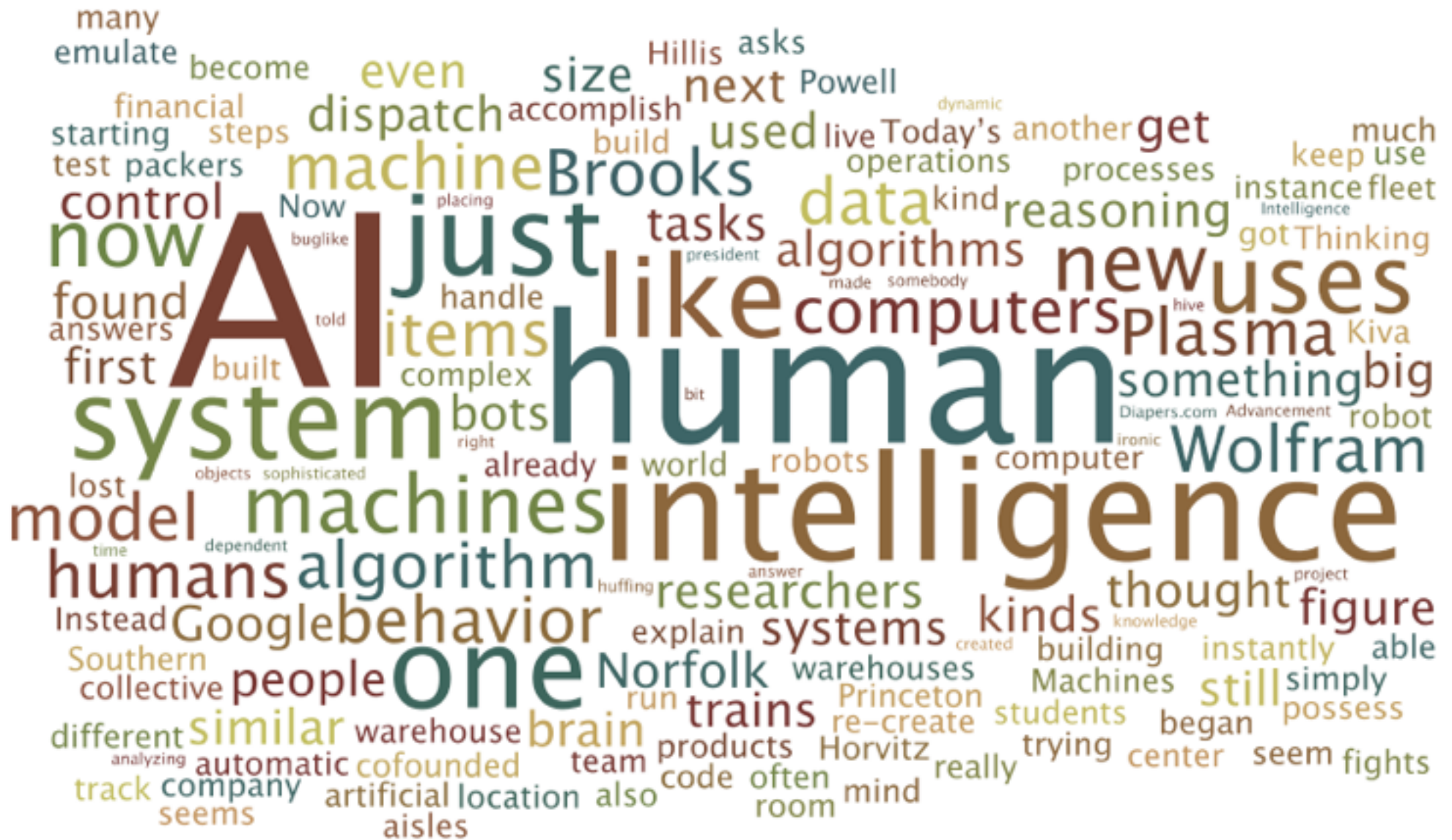
Introduction

Jason Baldrige
The University of Texas at Austin
Language and Computers





- http://www.youtube.com/watch?v=NLIgopyXT_g



New York Times Inaugural (Bag of) Words Visualization



1789
George Washington

[Full text of the address](#)

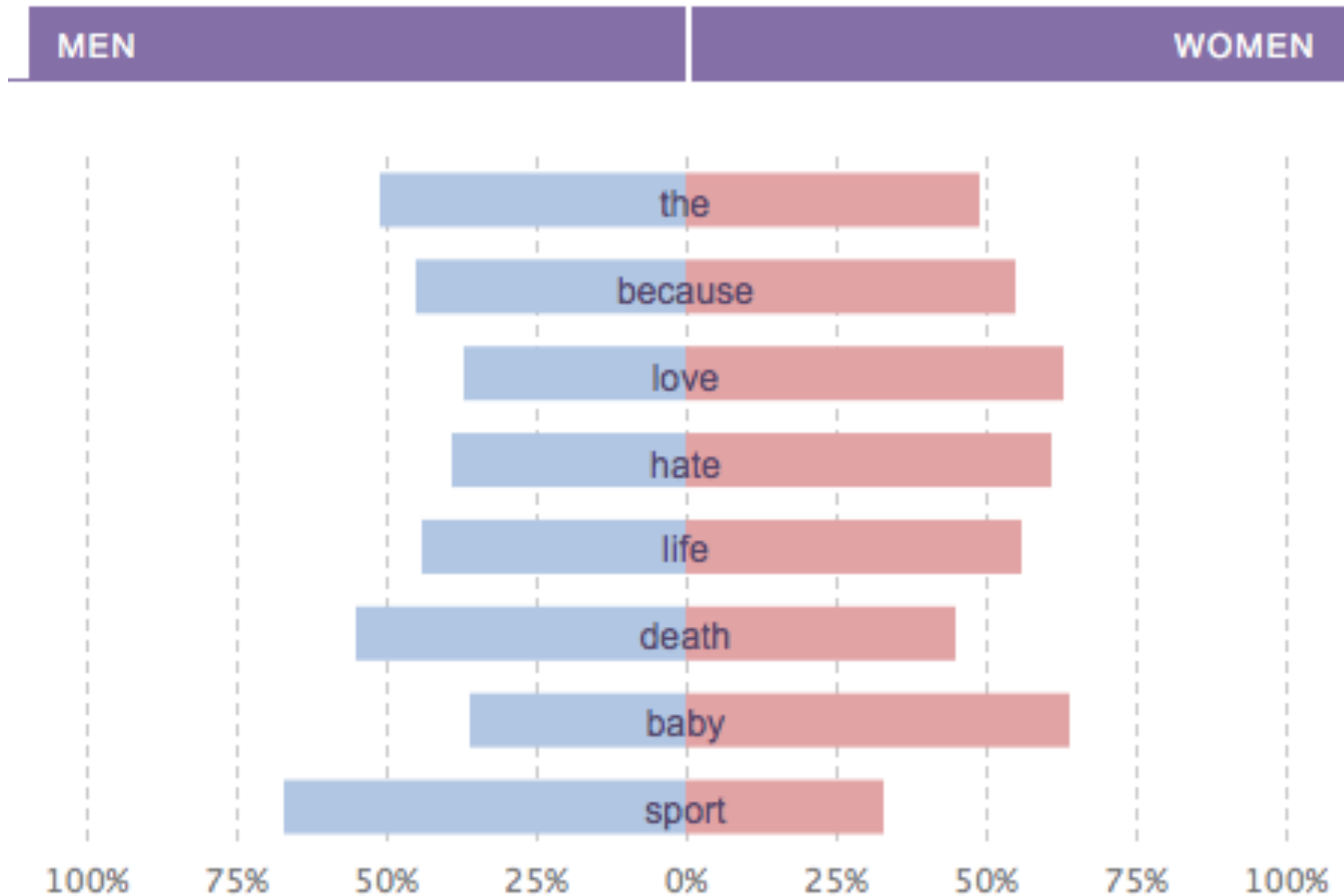
In the first inaugural speech, George Washington emphasized his duty to the newly formed nation and its citizens. He had been called to the position much as he had been called to serve in the Revolutionary War. He would obey the "public summons" to serve the "public good": "The voice of my country called me."

government public country
present citizen duty unite hand people
nature circumstance great liberty nation happiness fellow
measure establish power American hope right states union free pecuniary
peculiarly humble recommendation call policy day particular decide sentiment executive
administration article render human system decline private qualification future confidence
success subject expedient trust require dare heaven share blessing object judge influence
view character former house station event experience voice light love impression

http://www.nytimes.com/interactive/2009/01/17/washington/20090117_ADDRESSES.html

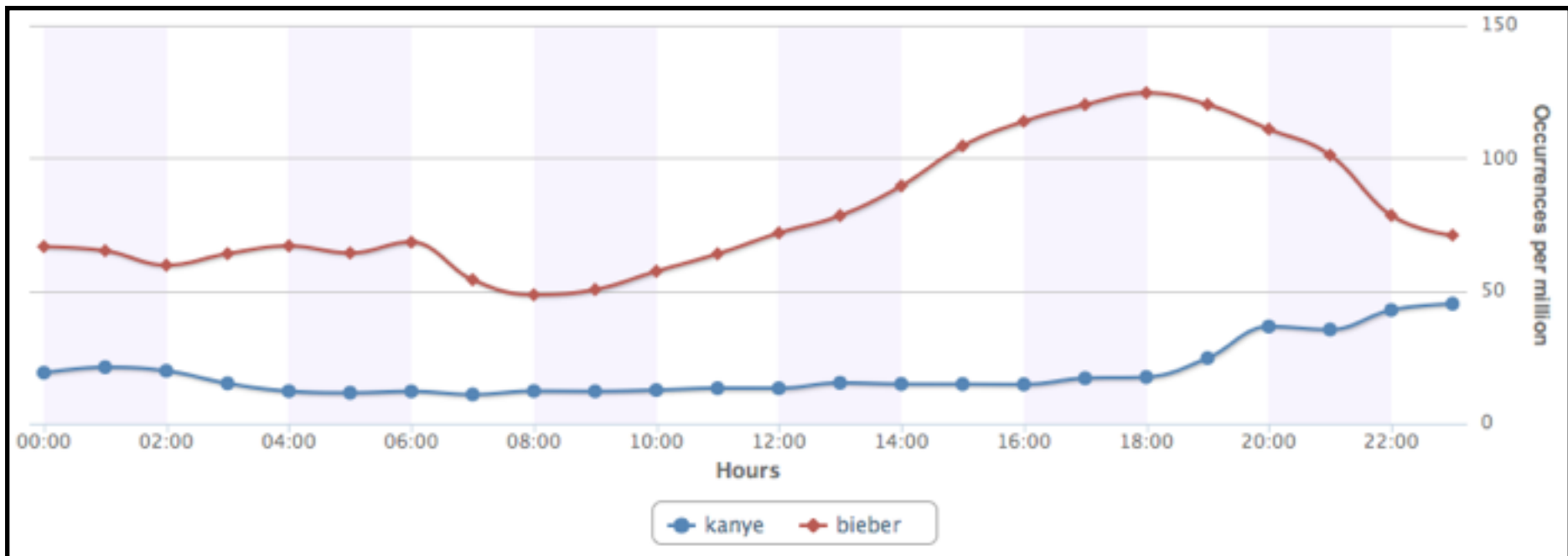
He says, she says

<http://www.tweetolife.com/gender/>



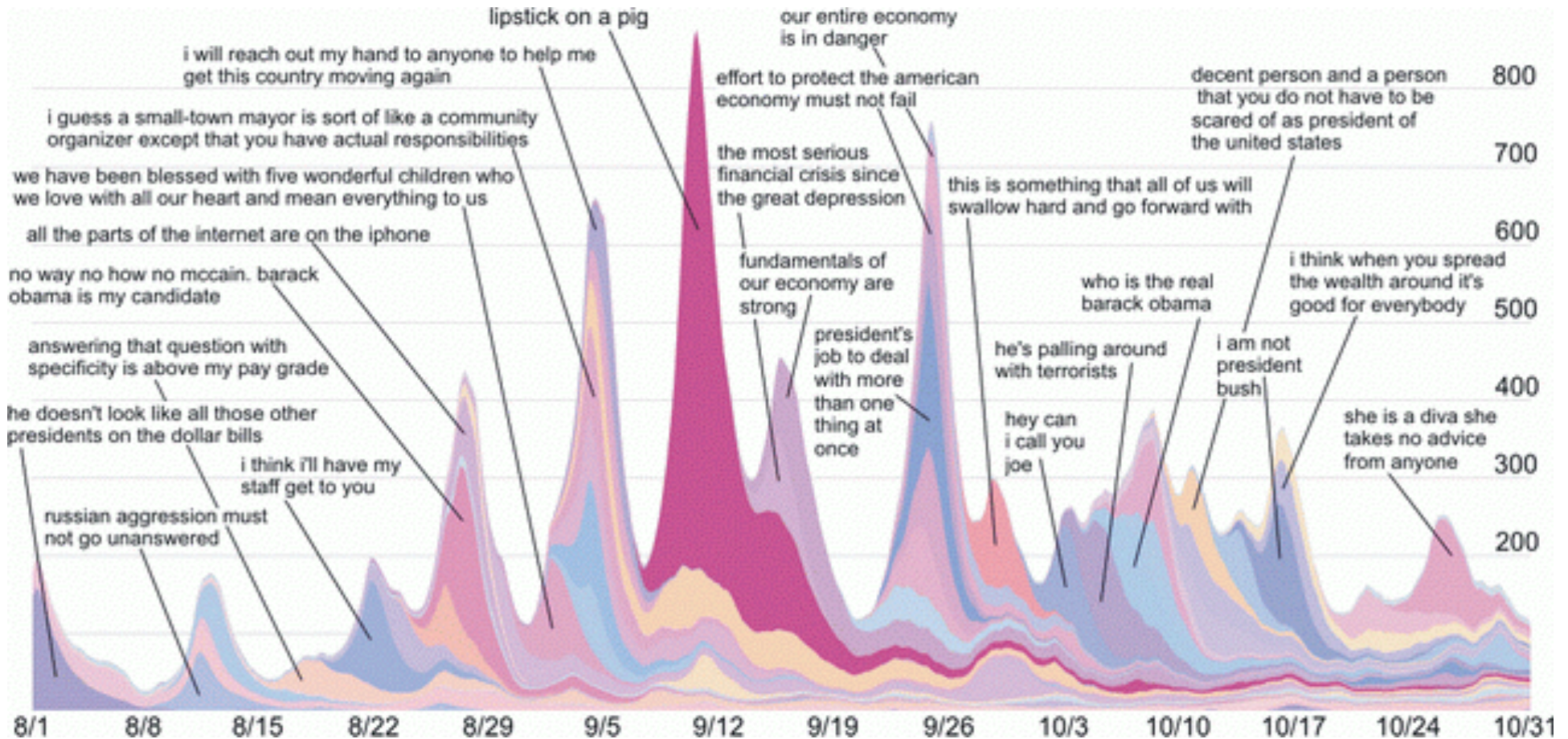
Temporality of words, by hour

<http://www.tweetolife.com/hour/>

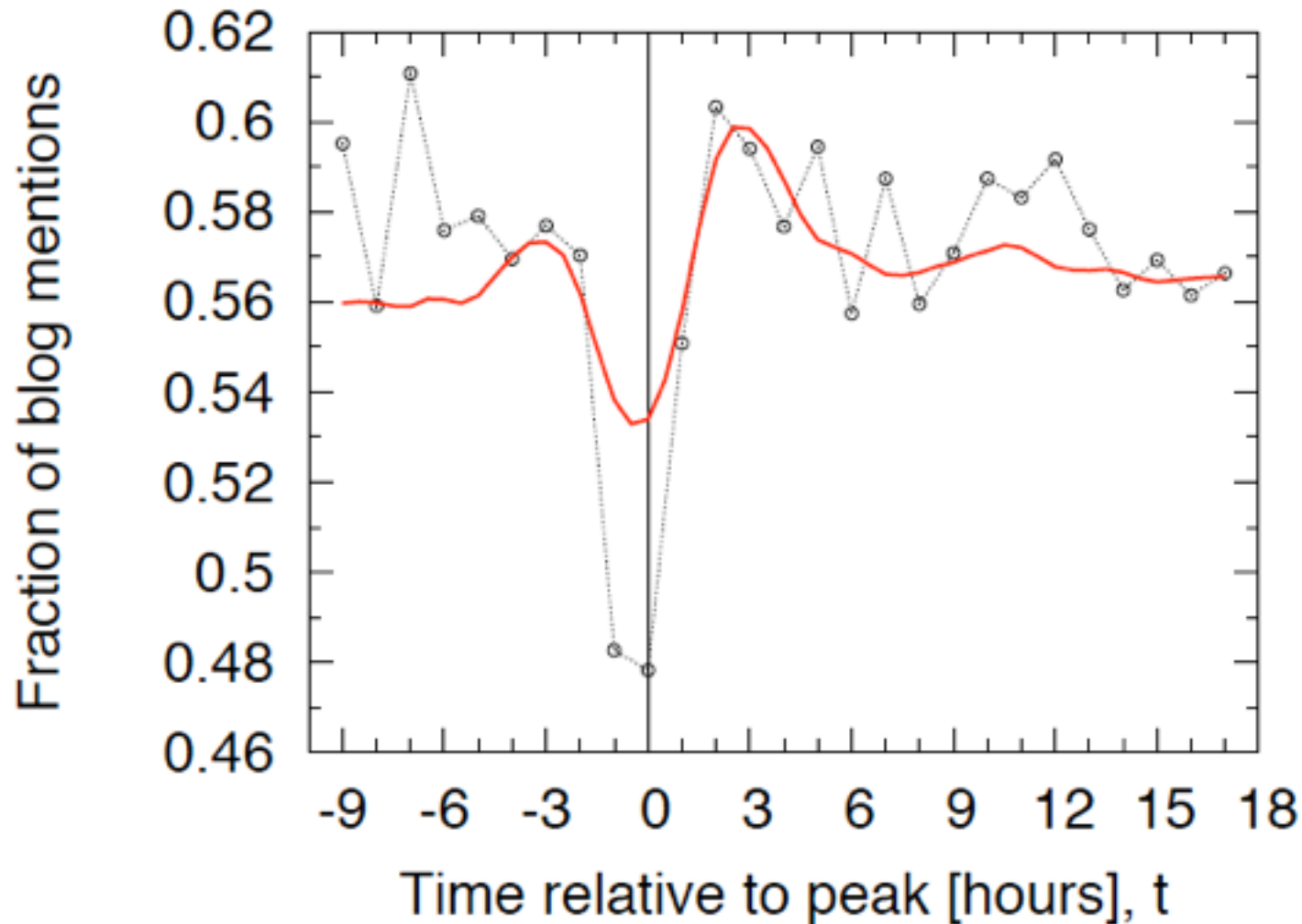


Meme me up

<http://memetracker.org/>



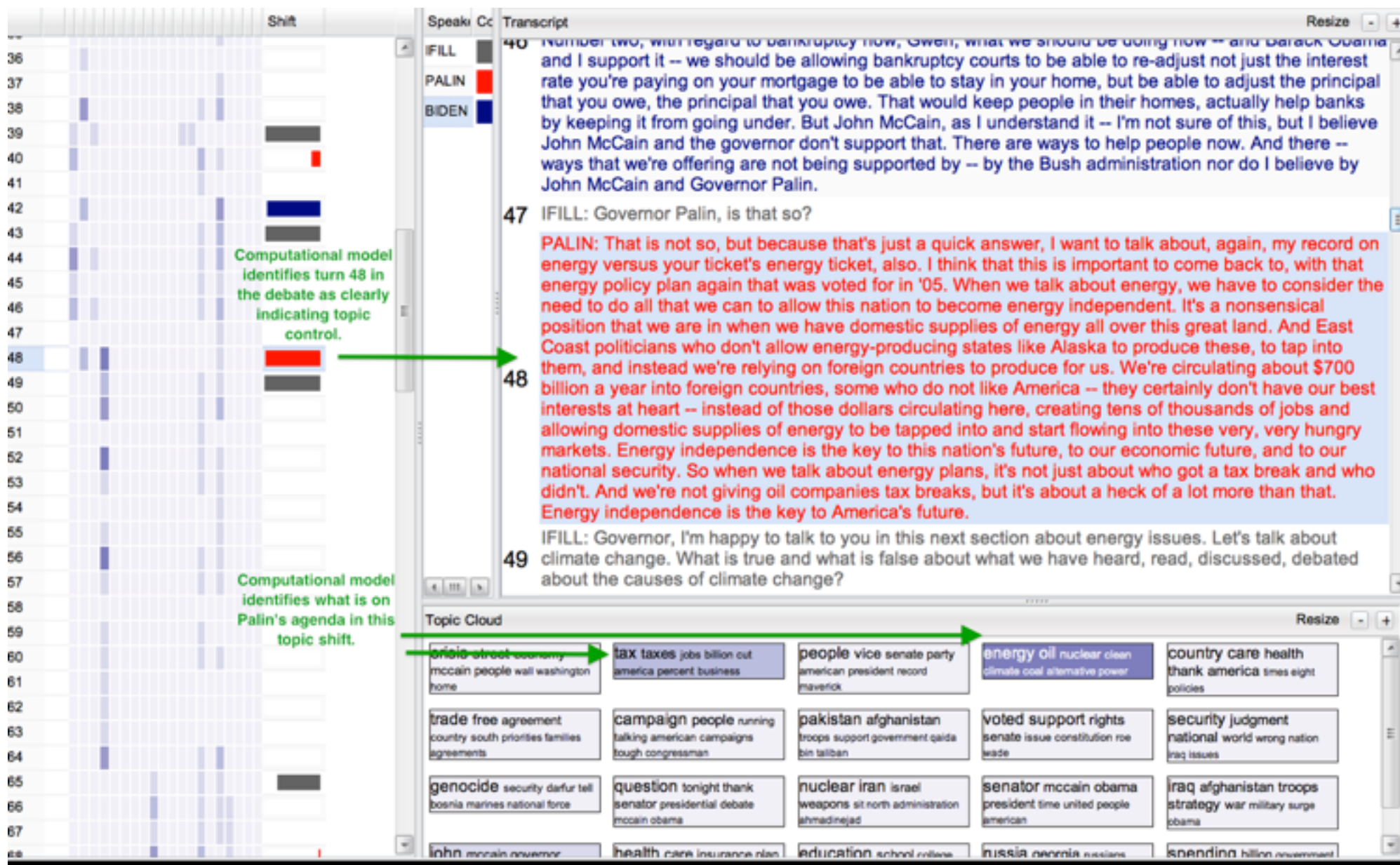
The pulse of the media



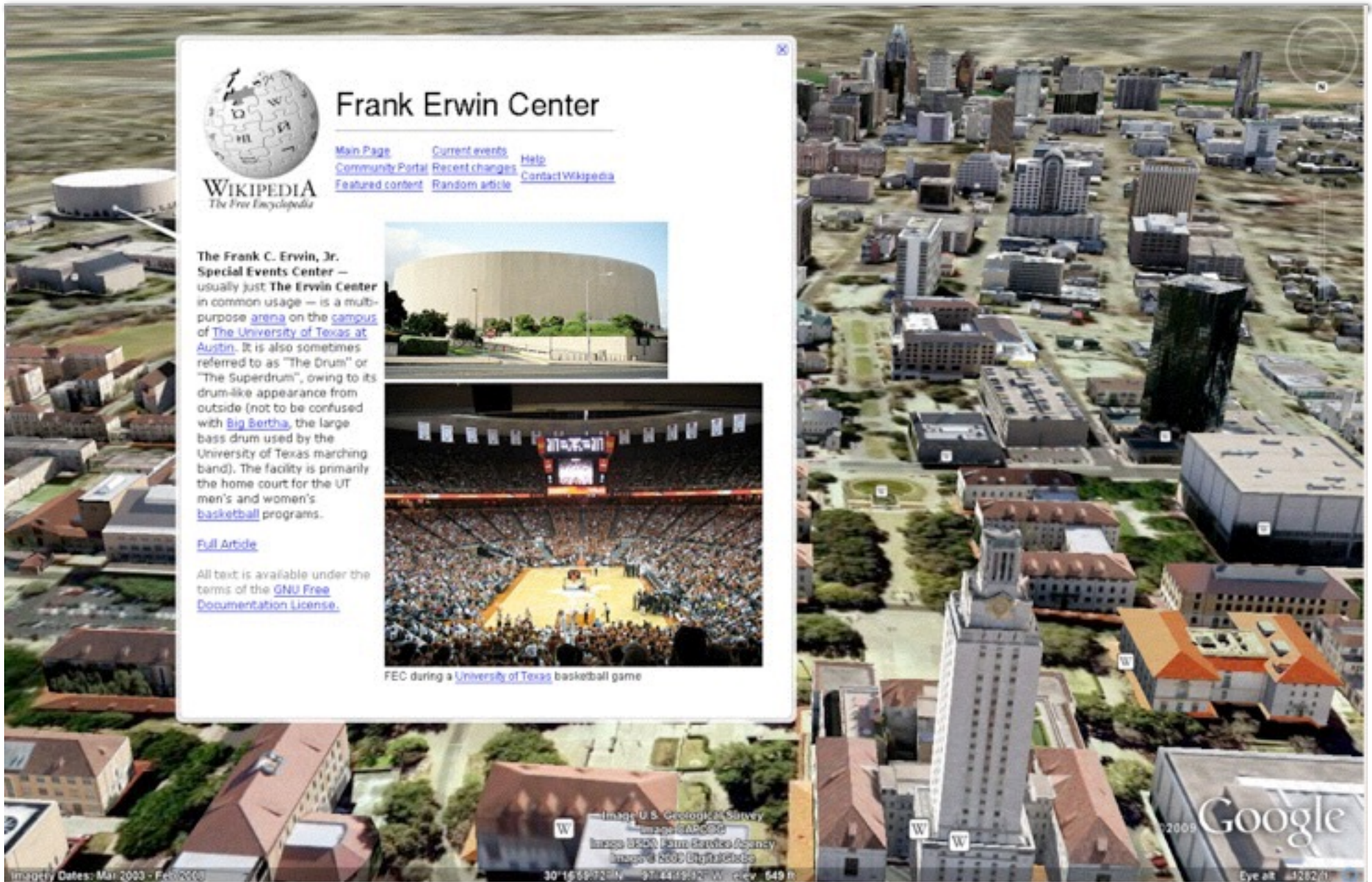
J. Leskovec, L. Backstrom, J. Kleinberg. Meme-tracking and the Dynamics of the News Cycle. ACM SIGKDD Intl. Conf. on Knowledge Discovery and Data Mining, 2009.



Analysis of debates



Georeferenced content in Wikipedia



Over 1 million coordinate links have been annotated.

Georeferenced Twitter



twitter

storm since:2009-08-26 near:78712 withi

Realtime results for **storm since:2009-08-26**
near:78712 within:15mi



nannermagrill: just danced in the rain; now drying off on the porch and watching the **storm**. the PERFECT birthday gift!!!!

Austin, TX

Aug 27, 2009 02:31 AM GMT · from TweetDeck · [Reply](#) · [View Tweet](#)



katemorris: To South Austin PPL, get ready, this **storm** is rough but we need rain

Austin, TX

Aug 27, 2009 02:31 AM GMT · from Seismic · [Reply](#) · [View Tweet](#)



jameswheadrick: And of course the **storm** dies as soon as I set up my camera

Austin, TX

Aug 27, 2009 02:29 AM GMT · from txt · [Reply](#) · [View Tweet](#)



crashantigox: @Buchanan007 the **storm** coming in is bringing cold weather

iPhone: 30.326029, -97.729286

Aug 27, 2009 02:26 AM GMT · from TwitterFan · [Reply](#) · [View Tweet](#) · [Show Conversation](#)



sgsharms: At the showdown, er, little woodrow's on Guadalupe listening to the approaching **storm**...and weezer.

Austin, Texas

Aug 27, 2009 02:26 AM GMT · from Tweetie · [Reply](#) · [View Tweet](#)



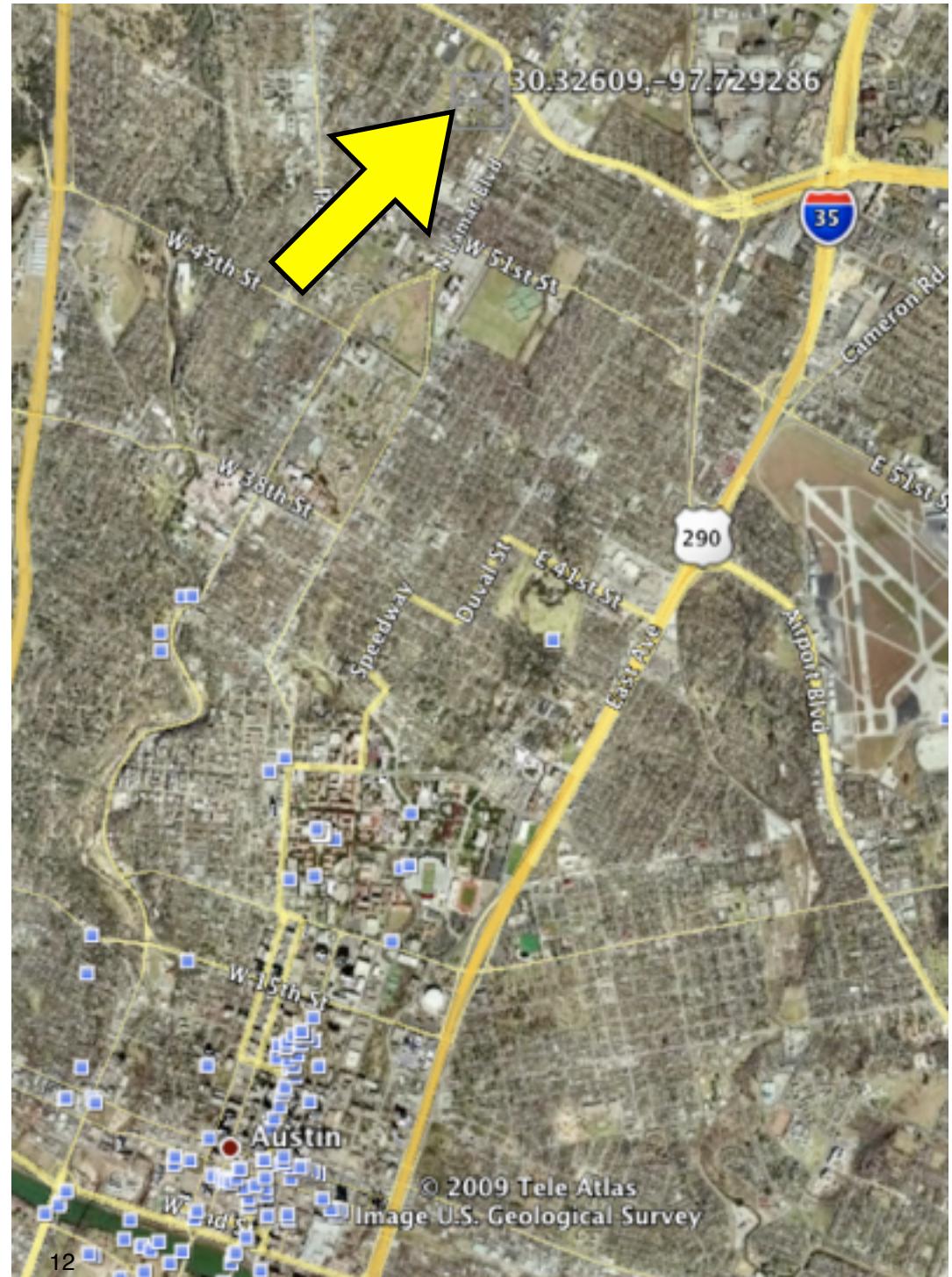
locustfist: the **storm** is just skirting by avery ranch. cool lightning though.

Austin, TX

Aug 27, 2009 02:26 AM GMT · from TweetDeck · [Reply](#) · [View Tweet](#)



Chippah58: The rain **storm** knock'd out my power





u/hrdi/



Hôtel des Mille Collines

WIKIPEDIA
The Free Encyclopedia

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[Random article](#)

The **Hôtel des Mille Collines** is a large hotel in [Kigali](#), the capital city of [Rwanda](#). It became famous as the building in which more than a thousand people took refuge during the [Rwandan Genocide](#) of 1994. The story of the hotel and its manager at that time, [Paul Rusesabagina](#), was used as the basis of the film *Hotel Rwanda*.



The front of the hotel

[Full Article](#)

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its documentation initiative

Texas Libraries
TEXAS AT AUSTIN



 Kicukiro, Kigali, Rwanda

gambo

yanyu?

...kaba mbere y'intambara
...mu kagali, mbere kari Gasharu
umurenge wa Kicukiro, akarere
ume noneho intambara ibaye,
...gambo turahunga tujya mu yindi
...amwe ziraza zihita zidushorera
...kuri etaje iri hiryu hano.



00:01:36		Baratuzana abandi twari kumwe babicira hano ndumva bararengaga barindwi. Bamaze kubica ubwo njye nahise mbacika, nyura hagati y'amazu hirya aha ngera ku muhanda wa hano hepfo w'igitaka Ubwo interahamwe zarengaga nk'icumi, zahise zimbohoza zimaze kumbohoza zirandarana buracya ndagenda nsubira hepfo y'aho twabaga.
00:02:11	Yes	Ahangaha mwatubwiye ko haguye abantu barenga barindwi.
00:02:15		Haguye abantu barenga barindwi.

Crisis response: Haiti earthquake



ID: 4025

TITLE: Water needed for

DATE: 2010-01-28 22:38

LOCATION: Rte Delm

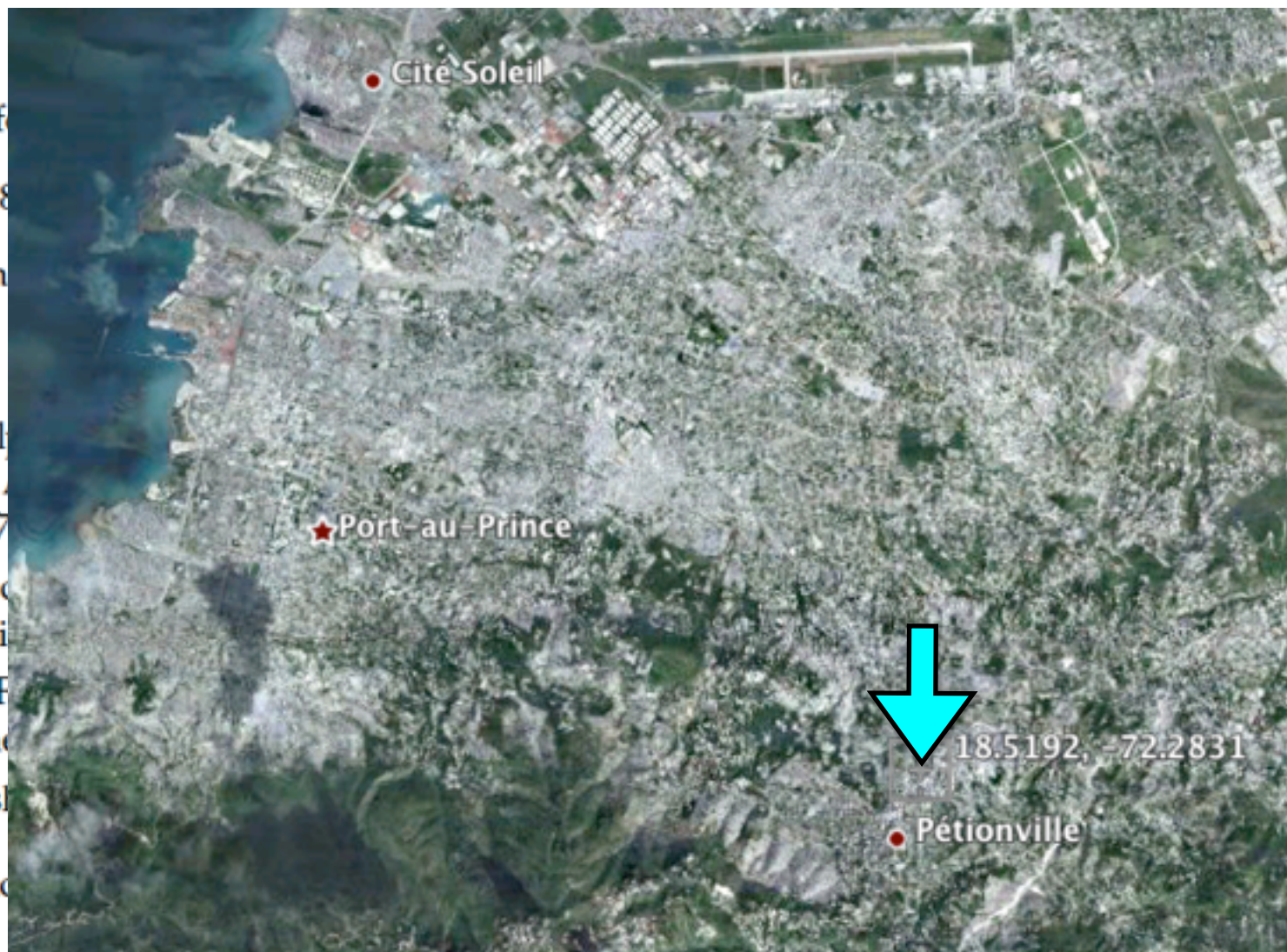
DESCRIPTION:

- *English:* Need help with water and food. I might be number 27
- *Creole:* Jai besoin de la nourriture. ai
- *Comments:* In the F but she doesn't me
- *Ushahidi ID:* IDUs

CATEGORY: 2. Urgent

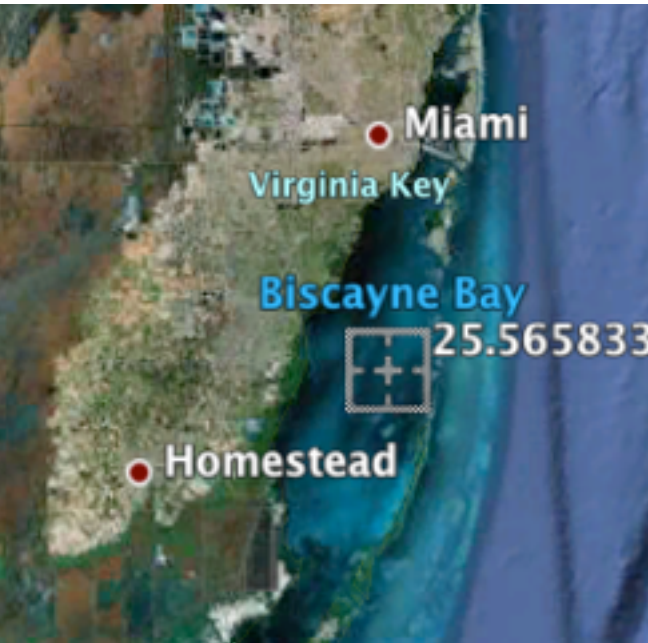
LATITUDE: 18.5192

LONGITUDE: -72.2831





On a lighter note... they're on a boat!



Oh sh*t, get your towels ready
It's about to go down
Everybody in the place hit the f*cking deck
But stay on your motherf*cking toes
We running this, let's go

I'm on a boat, I'm on a boat
Everybody look at me
'Cause I'm sailing on a boat
I'm on a boat, I'm on a boat
Take a good hard look
At the motherf*cking boat

I'm on a boat motherf*cker, take a look at me
Straight flowing on a boat on the deep blue sea
Busting five knots, wind whipping out my coat
You can't stop me motherf*cker, 'cause I'm on a boat

Take a picture, trick, I'm on a boat, bitch
We drinking Santana champ 'cause it's so crisp
I got my swim trunks and my flippie-floppies
I'm flipping burgers, you at Kinko's
Straight flipping copies

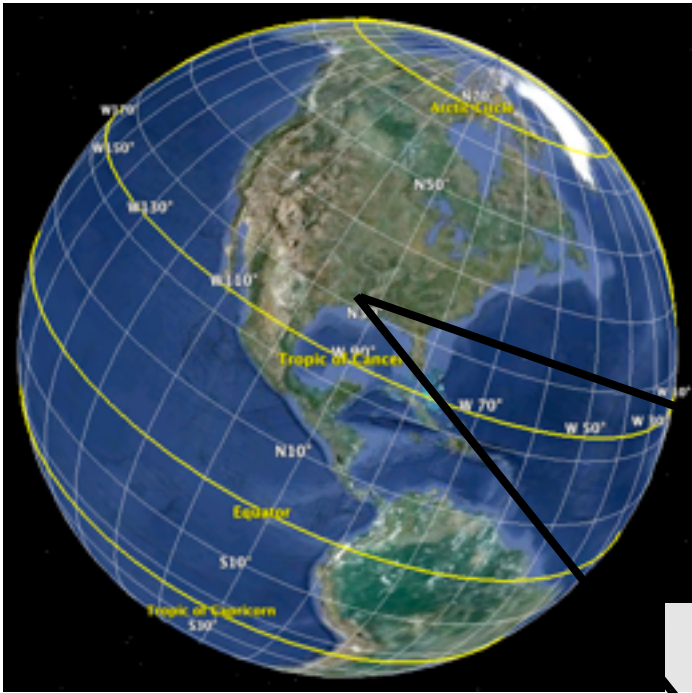
I'm riding on a dolphin, doing flips and sh*t
This dolphin's splashing, getting everybody all wet
But this ain't Seaworld, this is real as it gets
I'm on a boat, motherf*cker, don't you ever forget







towels
deck
motherf*cking
boat
sailing
sea
knots
bitch
swim
Kinko's
dolphin
Seaworld

Where's a word on Earth?










Automatic geolocation

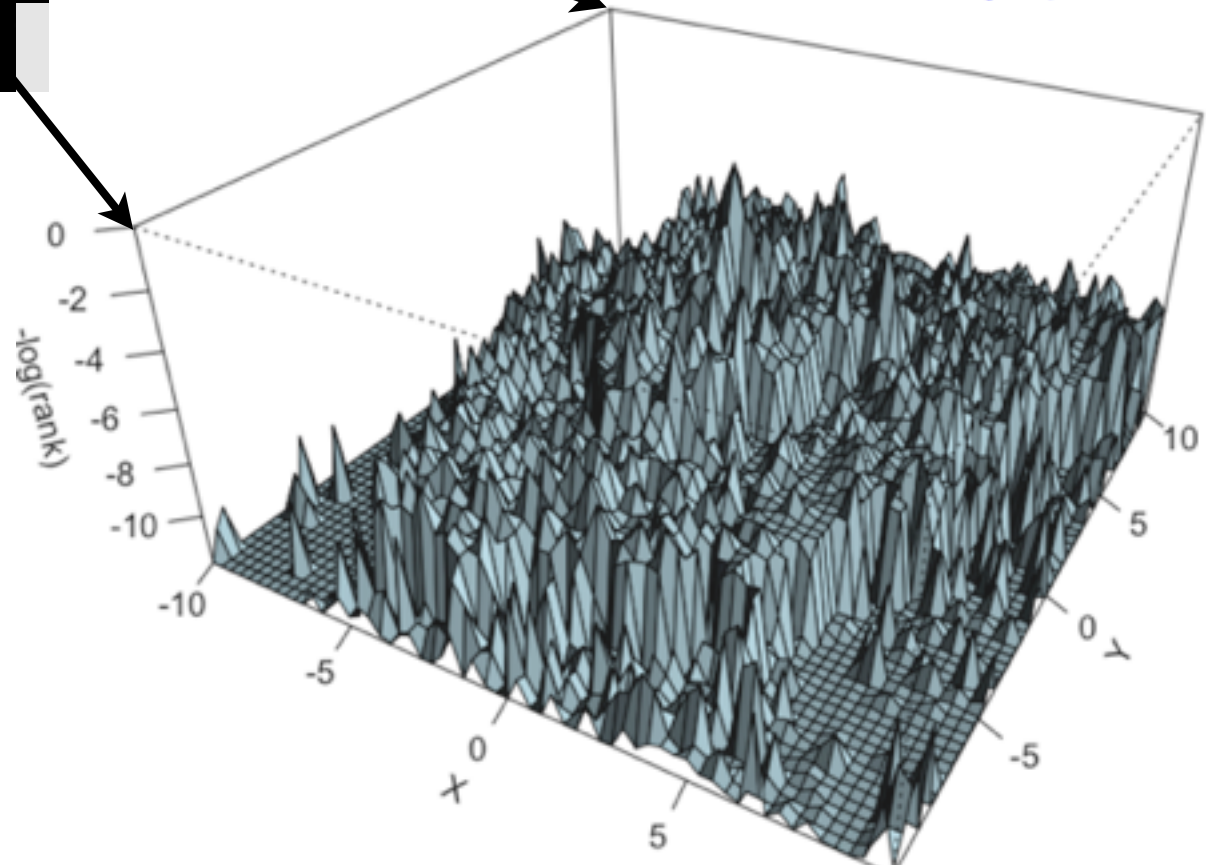


-  Philip Flip Kromer Over 100
I'm at Opal Divine's Freehouse (Austin, TX) w/ 2 others
[4sq.com/yKfbTB](#)
[View media](#)
-  Philip Flip Kromer Over 100
Heading out w/ @bill_michels and @twbell to Data Drinks at Opal Divines 700 W 6th [bit.ly/datadrinks12](#) - No free booze, just smart geeks
-  Philip Flip Kromer Over 100
Big data meetup - Hilton 6th floor (@hilton austin 6th floor meeting rm A) [4sq.com/xXyOIZ](#)
[View media](#)
-  Philip Flip Kromer Over 100
@Hippolyta @barstunde not to worry, we're concentrated on making humans smarter - Human + machine way beats machine: [collisiondetection.net/m5/archives/20...](#)
[In reply to Hippolyta](#)
-  Damon Clinkcales Oldman
Secret #sxsw tip for coffee lovers... @HoundstoothATX is downtown on sixth street this week. Thank you @SoundCloud! You chose very well.
Retweeted by Philip Flip Kromer
-  Philip Flip Kromer Over 100
@kellan 6:00 Opal Divines data drinks? /cc @antgoldbloom @marshalk @mattb @caseorganic @IQpi

twitter Search

Realtime results for **storm since:2009-08-26 near:78712 within:15mi** 0.33 seconds

-  nanermagrill: just danced in the rain, now drying off on the porch and watching the storm the PERFECT birthday gift!!!!
Austin, TX
Aug 27, 2009 02:31 AM GMT · from TweetDeck · [Reply](#) · [View Tweet](#)
-  katemorris: To South Austin PPL, get ready, this storm is rough but we needed the rain
Austin, TX
Aug 27, 2009 02:31 AM GMT · from Seismic · [Reply](#) · [View Tweet](#)
-  jameswhedrick: And of course the storm dies as soon as I set up my camera
Austin, TX
Aug 27, 2009 02:29 AM GMT · from txt · [Reply](#) · [View Tweet](#)
-  crashsantiaqox: @Buchanan007 the storm coming in is bringing cold weather
iPhone: 30.326029,-97.729286
Aug 27, 2009 02:28 AM GMT · from TwitterFan · [Reply](#) · [View Tweet](#) · [Show Conversation](#)
-  spharms: At the showdown, er, little woodrow's on Guadalupe listening to the approaching storm...and weezer.
Austin, Texas
Aug 27, 2009 02:26 AM GMT · from Tweetie · [Reply](#) · [View Tweet](#)
-  locustlist: the storm is just skirting by avery ranch. cool lightning though.
Austin, TX
Aug 27, 2009 02:26 AM GMT · from TweetDeck · [Reply](#) · [View Tweet](#)
-  Chippah58: The rain storm knock'd out my power



Combining georeferencing with word clouds



The Dog & Duck Pub

pub	beer	beer	great	patio
irish	pool	beers	service	outdoor
chips	dive	selection	good	nice
food	place	food	place	great
good	tavern	tap	nice	inside
great	good	great	friendly	area
beer	food	place	prices	sit
place	bar	good	food	back

Austin, TX

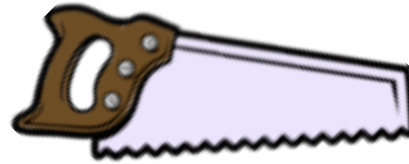
austin	mexican	tacos	sushi	bbq
good	food	taco	roll	ribs
ve	salsa	salsa	rolls	brisket
time	chips	good	fish	sauce
texas	margaritas	tortilla	good	pork
town	good	tortillas	place	good
food	margarita	corn	tuna	meat
queso	enchiladas	nick	spicy	pulled
south	mex	place	fresh	sides

2010 project by Andy Luong (UT CS undergrad): topic modeling and visualization of 13,000 restaurants in 42 North American cities based on their Yelp reviews.

What does this sentence mean?



[<http://www.clker.com/clipart-green-eyes-3.html>]



[<http://www.clker.com/clipart-3163.html>]



[<http://www.simonpalfrazer.com/category/tournament-poker/>]

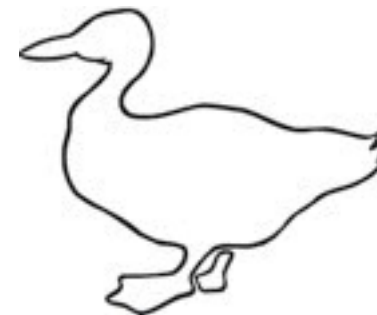
I **saw** her duck with a telescope.

verb

noun



[<http://casablancapa.blogspot.com/2010/05/fore.htm>]



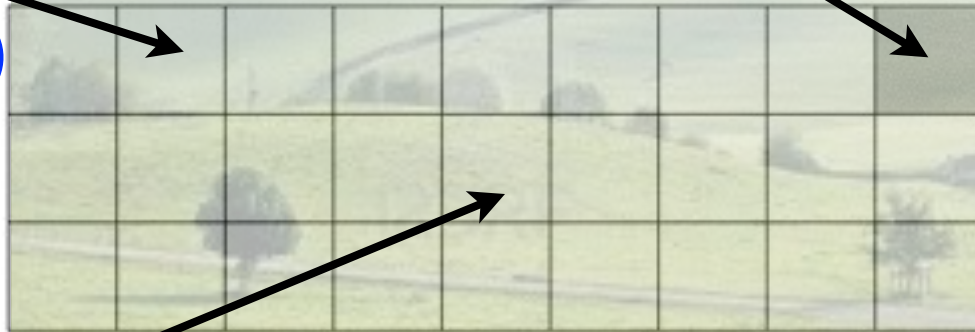
[<http://www.supercoloring.com/pages/duck-outline/>]

Ambiguity is pervasive

the a are of I [Steve Abney]

an “are” (100 m²)

a



b

c

A

B

C

D

E

F

G

H

I

another “are”



Mistakes are consequential

healthBASE

Causes of AIDS

Found 20 Causes from 116 records.

Causes of AIDS (20)

- + Contact infected partner
- + Sexual contact
- + Virus
- + Jew
- + Physiotherapy
- + Feature
- + Strong magnetic field
- + AUDIOVISUAL
- + Akhmed Zakayev
- + Bacille Calmette-Guerin

FAIL

[View more Causes](#)

Being right can be consequential too



People get language rong two

“The Onion” Strikes Again!

+ Add to Favorites

+ Add to My Site



via [redacted]

funny facebook fails – “The Onion” Strikes Again! lighter machine? I hope it wasn't stolen from me by our well paid and highly educated politicians agin. Please forgive us Lord .



Planned Parenthood Opens \$8 Billion Abortionplex
www.theonion.com

TOPEKA, KS—Planned Parenthood announced Tuesday the grand opening of its long-planned \$8 billion Abortionplex, a sprawling abortion facility that will allow the organization to terminate unborn lives with an efficiency never before thought possible....



[redacted]

Planned Parenthood's Auschwitz. Who would have thought!



Planned Parenthood Opens \$8 Billion Abortionplex
www.theonion.com

TOPEKA, KS—Planned Parenthood announced Tuesday the grand opening of its long-planned \$8 billion Abortionplex, a sprawling abortion facility that will allow the organization to terminate unborn lives with an efficiency never before thought possible....



[redacted]

An 8 BILLION DOLLAR ABORTIONPLEX??? This has to be stopped!!!!



Planned Parenthood Opens \$8 Billion Abortionplex
www.theonion.com

TOPEKA, KS—Planned Parenthood announced Tuesday the grand opening of its long-planned \$8 billion Abortionplex, a sprawling abortion facility that will allow the organization to terminate unborn lives with an efficiency never before thought possible....



- COSY - Mobile Robot
- MIT Media labs - Ripley
- Microsoft Research - Situated Interaction



- Basic following behavior and supervised learning of





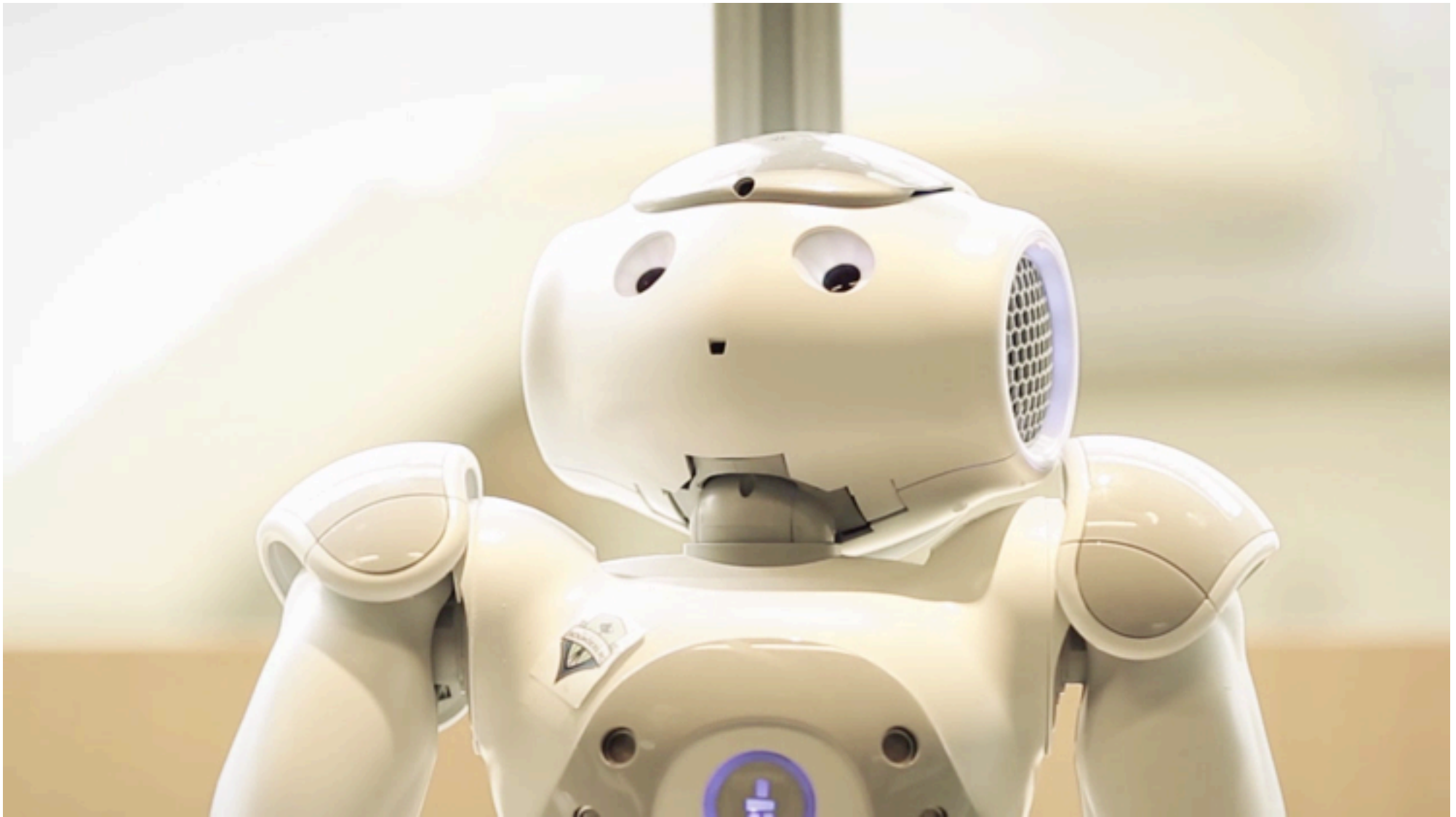
- Basic locative questions.





- When speech recognition fails...
 - http://videolectures.net/aaai07_zender_htsn/





<http://blogs.microsoft.com/firehose/2014/04/08/smart-elevator-robot-and-virtual-admin-will-help-guide-you-at-microsoft-research/>



- Instructor - Jason Baldrige
- TA - Hammal Al Bulushi
- Syllabus: http://utcompling.github.io/language_and_computers_s16/syllabus
- Schedule: http://utcompling.github.io/language_and_computers_s16/schedule/
- See the links page for links to materials in these slides and more:
- Canvas



- Who this course is geared toward and who it isn't.
 - This course is meant to be fun and topical, yet rigorous and specific.
- Other computational linguistics courses:
 - Introduction to Computational Linguistics
 - Natural Language Processing
- I welcome your input and feedback. (See something cool in the news? Tell me!)
- Questions?