



# Event Registry

learning about the world  
through the news media

Gregor Leban, CEO

# Event registry (<http://eventregistry.org/>)

- **Encyclopedia for world events**
- Event registry is a system for
  - **collecting news content published globally**
  - **automatic identification of world events from news articles**
  - **Extraction of core event information**
- Extensive search and visualization options



# Why is it useful?

- Huge amount of news content generated daily in unstructured form
- Using AI we can transform it to structured form
- Structured form allows use of various facets (time, locations, topics, ...) to isolate specific content of interest
- Used by: Risk analysts, policy makers, stock traders, NGOs, financial institutions, ...

# What is an event?

- Event = any significant happening in the world
- Assumption: If something is significant → reported by various news publishers
- Event is identified through a collection of news articles that report about the same thing



## Flydubai plane crashes in Russia; 62 dead

🔥 609

WHEN: Sat, March 19, 2016

WHERE: Rostov-on-Don, Russia

CATEGORIES: Society→Issues→Transportation , Science→Technology→Aerospace , Business→Transportation and Logistics→Aviation

ENTITIES: [Rostov-on-Don, Russia](#) [Dubai, United Arab Emirates](#) [Russia](#) [Boeing](#) [Flydubai](#)

KEYWORDS: [Airport](#) [Boeing 737](#) [Fixed-wing aircraft](#) [Airline](#) [Runway](#)

ARTICLES: 815 (362 English, 92 German, 106 Spanish, 21 Portugese, 28 Italian, 87 French, 5 Russian, 32 Turkish, 66 Chinese, 16 Croatian)

A CCTV camera captured the moment the aircraft exploded on the runway A FlyDubai Boeing 737-800 has crashed in a fireball while it attempted to land at a Russian airport. The passenger jet was believed to be making its second attempt to land at Rostov-on-Don airport in poor visibility. A video published on Youtube appears to show a fireball as the aircraft crashes into the ground. This is believed to be the moment the crashed on landing at Rostov-on-Don airport in Russia The aircraft...



## Explosion on Tube at Parsons Green leaves commuters with 'facial burns'

🔥 9,518

WHEN: Fri, September 15, 2017

WHERE: London, United Kingdom

CATEGORIES: Society→Law→Law Enforcement , Health→Public Health and Safety , Society→Issues→Warfare and Conflict

ABOUT: London, United Kingdom Parsons Green Terrorism London Underground Police United Kingdom Train Metropolitan Police Service  
Rush hour Improvised explosive device Twitter Rapid transit

ARTICLES: 835 (835 English)

A BLAST that ripped through a London Underground train this morning injuring 20 is believed to be a terror attack, according to reports. There a warnings a suspect armed with a knife is still on the run as bomb squads are called in to deactivate a second device. This morning's explosion left commuters with "facial burns" after a "fireball flew down a carriage". People fled the station screaming as the blast sent flames flying with a Metro reporter at the scene saying people are "really badly ([The Sun](#))

Score: 46



## Refugees From Burundi Killed in Congo, Activists Say

🔥 135

WHEN: Sat, September 16, 2017

WHERE: Bujumbura, Republic of Burundi

CATEGORIES: Society→People , Society→Issues , Society→Issues→Warfare and Conflict

ABOUT: Democratic Republic of the Congo Republic of Burundi Refugee United Nations South Kivu Province, Democratic Republic of the Congo  
Military of the Democratic Republic of the Congo United Nations peacekeeping missions involving Pakistan Kamanyola  
United Nations Organization Stabilization Mission in the Democratic Republic of the Congo Pierre Nkurunziza Twitter  
Bukavu, Democratic Republic of the Congo

ARTICLES: 118 (78 English, 8 Portuguese, 32 French)

NAIROBI, Kenya -- At least 34 refugees who had fled political violence in Burundi were killed by government forces in the neighboring Democratic Republic of Congo, a civil society group said Saturday. A Congolese government spokesman could not immediately be reached for comment, and the number of deaths and other details about the episode could not be independently verified. The events occurred Friday afternoon in Kamanyola in eastern Congo when a group of Burundian refugees went to an office ([The New York Times](#))

Score: 10



## World hunger again on the rise, driven by conflict and climate change, new UN report says

🔥 550

WHEN: Fri, September 15, 2017

CATEGORIES: Society→Issues , Society→Philanthropy , Society→Issues→Warfare and Conflict

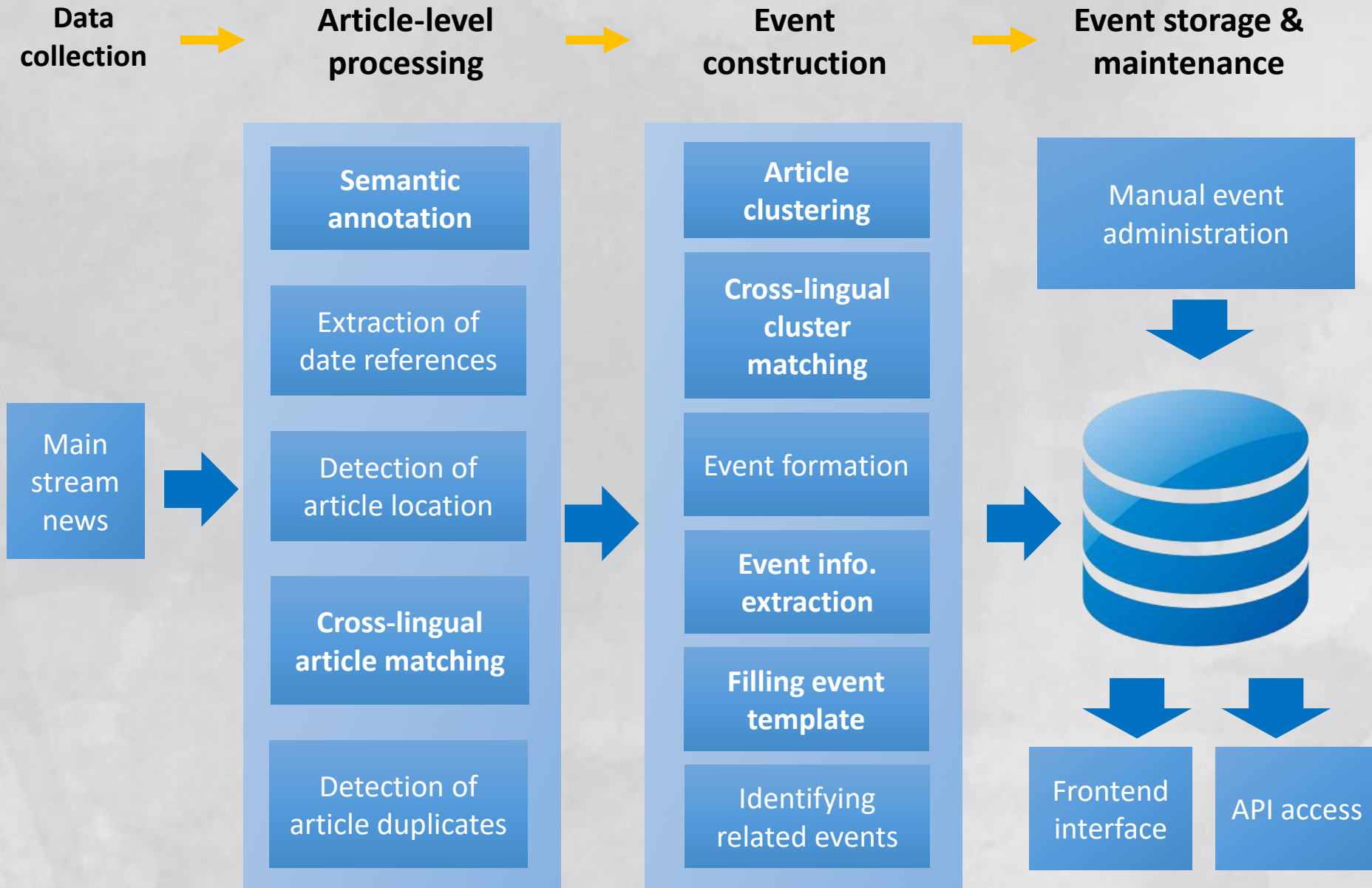
ABOUT: Hunger United Nations Malnutrition Food security Food and Agriculture Organization Nutrition Climate Climate change UNICEF  
Food Oktoberfest Obesity

ARTICLES: 214 (36 English, 49 German, 74 Spanish, 34 Portuguese, 10 French, 11 Croatian)

15 September 2017 | Rome - After steadily declining for over a decade, global hunger is on the rise again, affecting 815 million people in 2016, or 11 per cent of the global population, says a new edition of the annual United Nations report on world food security and nutrition released today. At the same time, multiple forms of malnutrition are threatening the health of millions worldwide. The increase - 38 million more people than the previous year - is largely due to the proliferation of ([World Health Organization](#))

Score: 19

# Event registry pipeline



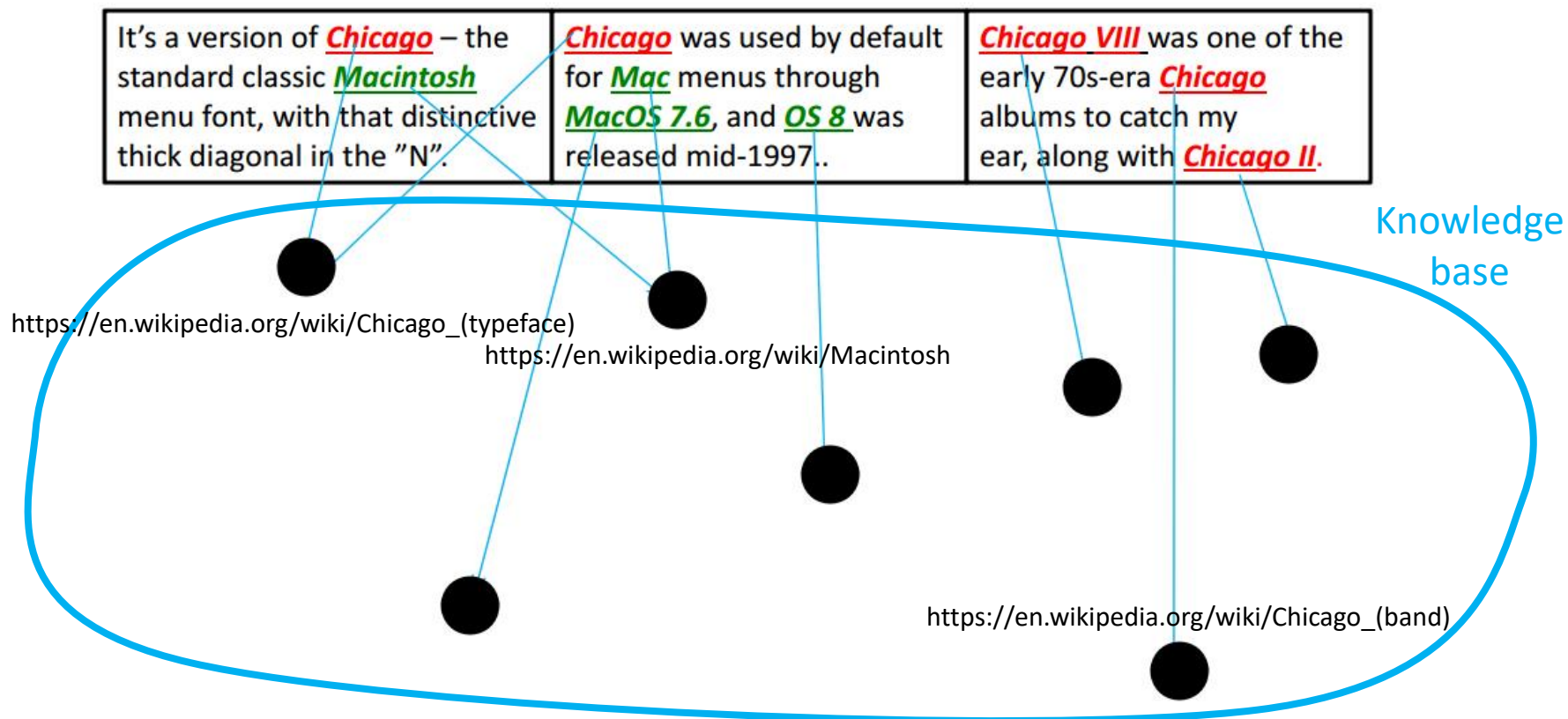
# Article semantic annotation

- We want to capture the meaning of the words mentioned in the text

It's a version of <u>Chicago</u> – the standard classic Macintosh menu font, with that distinctive thick diagonal in the "N".	<u>Chicago</u> was used by default for Mac menus through MacOS 7.6, and OS 8 was released mid-1997..	<u>Chicago VIII</u> was one of the early 70s-era <u>Chicago</u> albums to catch my ear, along with <u>Chicago II</u> .
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# Article semantic annotation (2)

- **Ambiguity** – same word, different meaning (e.g. Chicago)
- **Variability** – different words, same meaning (Mac, Macintosh)
- Entity linking = Named entity recognition + disambiguation





# Wikifier (http://wikifier.org/)

Wikifier results
Show less  Show more

Language autodetected as "en" (0).

### Text

[Syria](#) conflict: Government offers prisoner exchange Syria's foreign minister has said [Damascus](#) is ready to offer a prisoner exchange with rebels. Speaking in [Moscow](#), [Walid Mualllem](#) also said he had presented a [ceasefire](#) plan for the second city [Aleppo](#) to his [Russian](#) counterpart, [Sergey Lavrov](#). The moves came as the opposition [Syrian National Coalition](#) prepares to meet in [Istanbul](#) to decide whether to go to next week's peace conference. The coalition is under Western pressure to participate in the [Geneva](#) II talks. However, many of its members have already pulled out. Some are reluctant to go unless President [Bashar al-Assad](#) is excluded from any transitional government, but [Damascus](#) says there should be no pre-conditions for the talks. The three-year conflict has claimed more than 100,000 lives. An estimated two million people have fled the country and some 6.5 million have been internally displaced. [Aleppo](#) 'example' Mr [Mualllem](#) said he was ready to exchange lists of prisoners. "I informed [Lavrov](#) of our principled position in favour of an agreement to exchange those held in [Syrian](#) prisons for those taken by the other side," he said. "We are ready to exchange lists and develop the necessary mechanism for accomplishing these goals." The [Syrian](#) foreign minister added that he had given [Russia](#) a [ceasefire](#) plan for [Aleppo](#), which he said he wanted to "serve as an example to other towns". But correspondents say it remains far from clear that even a partial [ceasefire](#) could be achieved. On Thursday, the two foreign ministers held talks with [Iranian](#) officials. Mr [Lavrov](#) said there was "no hidden agenda" to their meeting. "This does not mean that we have some tri-party (peace) draft," he told reporters. Mr [Lavrov](#) is keen for [Iran](#) to be part of the peace talks, but [US Secretary of State John Kerry](#) has said that [Tehran](#) must first agree to the [Geneva](#) I communique which calls for a political transition in [Syria](#). Huge doubts The [Syrian National Coalition](#) is deeply divided, with its key bloc - the [Syrian National Council](#) - threatening to boycott the talks. Of the 120 members of the coalition, 44 have already pulled out of the meeting in [Switzerland](#). But all of them - and their regional backers such as [Qatar](#) and [Saudi Arabia](#) - are under huge pressure from the Americans and others to take up the opportunity to achieve the goals of the [Syrian revolution](#), the BBC's Jim Muir in [Lebanon](#) reports. However, our correspondent says that the coalition - if it goes to the talks - will be really weak, with huge doubts about how representative it is, as virtually none of

### Annotations

PR	Annotation	Annotation (en)	
0.0116	<a href="#">Syria</a> <span>W</span> <span>D</span>	<a href="#">Syria</a>	>>
0.0098	<a href="#">John Kerry</a> <span>W</span> <span>D</span>	<a href="#">John Kerry</a>	>>
0.0089	<a href="#">Aleppo</a> <span>W</span> <span>D</span>	<a href="#">Aleppo</a>	>>
0.0076	<a href="#">Damascus</a> <span>W</span> <span>D</span>	<a href="#">Damascus</a>	>>
0.0069	<a href="#">National Coalition for Syrian Revolutionary and Opposition Forces</a> <span>W</span> <span>D</span>	<a href="#">National Coalition for Syrian Revolutionary and Opposition Forces</a>	>>
0.0069	<a href="#">Bashar al-Assad</a> <span>W</span> <span>D</span>	<a href="#">Bashar al-Assad</a>	>>
0.0060	<a href="#">Saudi Arabia</a> <span>W</span> <span>D</span>	<a href="#">Saudi Arabia</a>	>>
0.0058	<a href="#">Lebanon</a> <span>W</span> <span>D</span>	<a href="#">Lebanon</a>	>>
0.0057	<a href="#">Iran</a> <span>W</span> <span>D</span>	<a href="#">Iran</a>	>>
0.0056	<a href="#">Istanbul</a> <span>W</span> <span>D</span>	<a href="#">Istanbul</a>	>>
0.0054	<a href="#">Syrian people</a> <span>W</span> <span>D</span>	<a href="#">Syrian people</a>	>>
0.0052	<a href="#">Geneva</a> <span>W</span> <span>D</span>	<a href="#">Geneva</a>	>>
0.0051	<a href="#">Sergey Lavrov</a> <span>W</span> <span>D</span>	<a href="#">Sergey Lavrov</a>	>>
0.0051	<a href="#">Tehran</a> <span>W</span> <span>D</span>	<a href="#">Tehran</a>	>>
0.0050	<a href="#">Qatar</a> <span>W</span> <span>D</span>	<a href="#">Qatar</a>	>>
0.0049	<a href="#">United States Secretary of State</a> <span>W</span> <span>D</span>	<a href="#">United States Secretary of State</a>	>>
0.0049	<a href="#">Syrian</a> <span>W</span> <span>D</span>	<a href="#">Syrian</a>	>>

### Support

**PR P(l|p) Index Phrase**

Select an annotation to show which phrases in the text support it.

### Link Targets

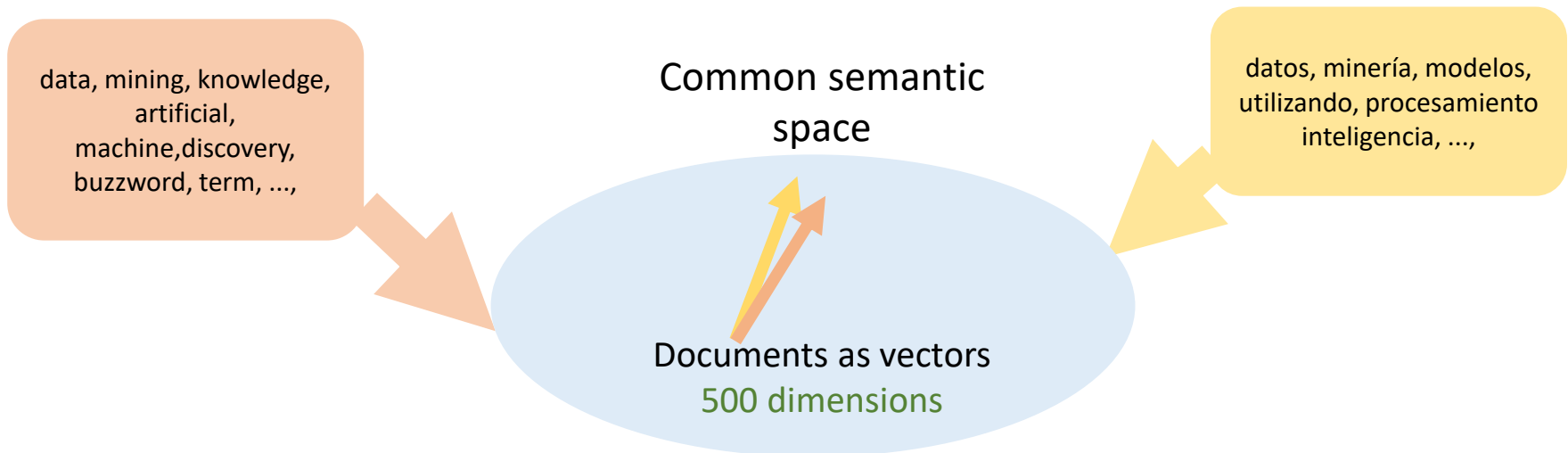
In the Wikipedia, where do links with a particular anchor text point to?

Anchor text: **syria**  
P(link | phrase) = 0.4532

PR	PR (lin.)	Score	Cosine	Target
0.0116	1.0000	0.0116	0.4036	<a href="#">Syria</a>
0.0043	0.9816		0.4884	<a href="#">Syrian Civil War</a>
0.0029	0.9589		0.1992	<a href="#">Seleucid Empire</a>
0.0026	0.9423		0.2894	<a href="#">French Mandate for Syria and the Lebanon</a>
0.0023	0.9248		0.2191	<a href="#">Ottoman Syria</a>
0.0021	0.9091		0.2431	<a href="#">Greater Syria</a>
0.0019	0.8881		0.2148	<a href="#">Roman Syria</a>
0.0018	0.8741		0.2709	<a href="#">Syria (region)</a>
0.0017	0.8689		0.2778	<a href="#">Arab Kingdom of Syria</a>
0.0017	0.8645		0.2058	<a href="#">Bilad al-Sham</a>
0.0017	0.8636		0.2309	<a href="#">Muslim conquest of the Levant</a>
0.0015	0.8453		0.4289	<a href="#">History of Syria</a>
0.0013	0.8147		0.0605	<a href="#">Syria national football team</a>
0.0012	0.7902		0.3597	<a href="#">Syrian Republic (1930–58)</a>
0.0012	0.7788		0.2919	<a href="#">Flag of Syria</a>
0.0011	0.7771		0.2406	<a href="#">Syria–Lebanon Campaign</a>
0.0007	0.6748		0.3001	<a href="#">State of Syria (1924–30)</a>
0.0007	0.6652		0.1570	<a href="#">Syrian Arab</a>

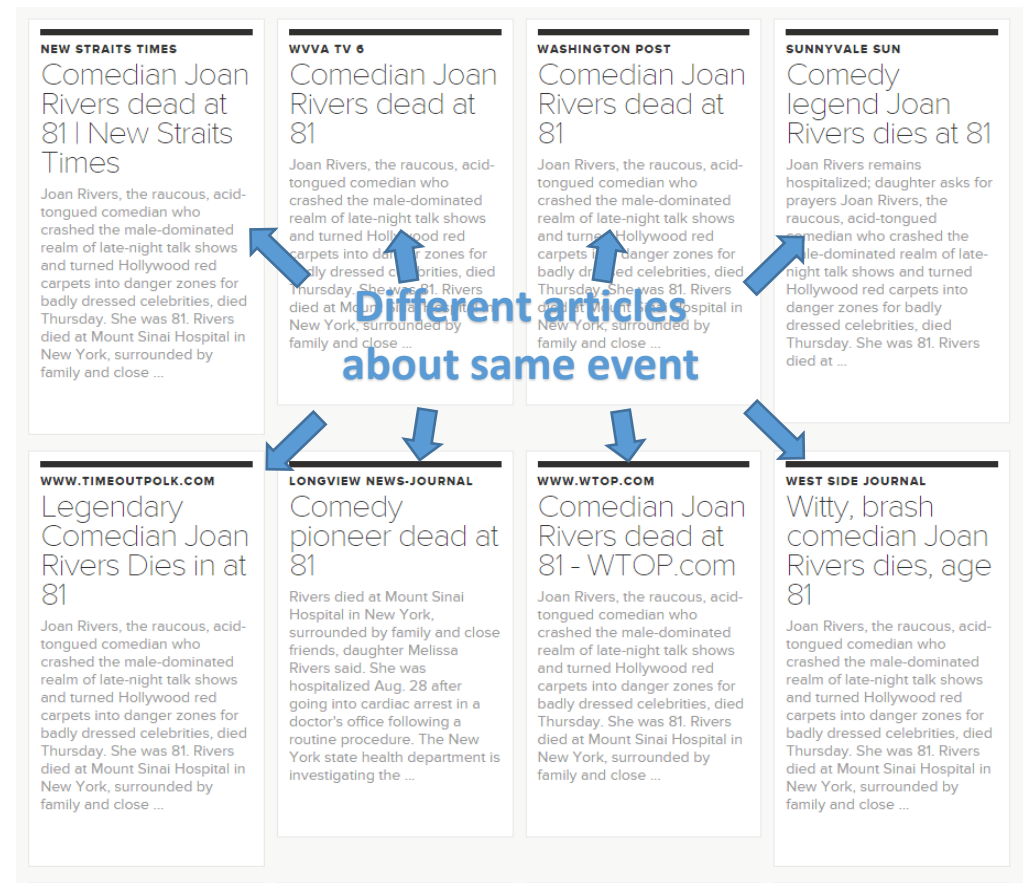
# Computing similarity between articles in different languages

- Question: how similar is this **Spanish** article to this **English** article?
- Translation tool slow/expensive
- Alternative: Canonical correlation analysis



# Article clustering

- For each language we try to identify groups of articles that describe a single event
- **Online clustering algorithm**
- Cluster based on
  - article title
  - article content
  - detected named entities



# Joining clusters in different languages

- Each cluster only contains articles in the same language
- Clusters in different languages can describe the same event – how do we find them?
- Use machine learning to decide

## English cluster



### SpaceX lands its third consecutive rocket on ship in Atlantic Ocean

PERFSCIENCE.COM  
Sat, 28 May, 08:45  
0.847

Yes, SpaceX has done it again. For the fourth time, it has managed to have a successful rocket landing. On Friday at 5:40pm Falcon 9 rocket blasted off from Cape Canaveral, Florida, carrying the Thaicom 8 satellite.

The rocket returned to earth around 10 minutes later. It made a landing in an ...



### SpaceX launches Asian satellite, attempts to land rocket

BUSINESS INSIDER  
Fri, 27 May, 22:33  
0.836

© SPACEX/AFP/FileThe Falcon 9 rocket on December 16, 2015 in Cape Canaveral -- SpaceX has managed to successfully land the first stage of its Falcon 9 rockets three times before Miami (AFP) - SpaceX on Friday launched an Asian communications satellite before trying for a fourth successful landing ...



### SpaceX launches Asian satellite, attempts to land rocket

YAHOO  
Fri, 27 May, 22:04  
0.811

Miami (AFP) - SpaceX on Friday launched an Asian communications satellite before trying for a fourth successful landing of its Falcon 9 rocket.

Under blue skies dotted with clouds, the shiny white rocket blasted off from Cape Canaveral, Florida at 5:40 pm (2140 GMT).

The satellite, known as ...



### SpaceX makes fourth successful rocket landing

MAIL ONLINE  
Sat, 28 May, 01:29  
0.807

That would make space deliveries - and travel - more economical

Elon Musk's SpaceX company notched up another victory today when it managed to



## Spanish cluster



### SpaceX lo ha vuelto a hacer

HIPERTEXTUAL  
Fri, 27 May, 22:12  
0.689

La empresa californiana de transporte aeroespacial logra poner en órbita otro satélite de comunicaciones y hacer aterrizar en medio del mar la primera fase de su cohete Falcon 9.

Ya es la tercera vez y la compañía liderada por Elon Musk vuelve a anotar otro crucial tanto en su carrera ...



### Hacer de lo imposible algo rutinario, nueva misión para SpaceX

HIPERTEXTUAL  
Thu, 26 May, 08:32  
0.747

El cohete Falcon 9 de la compañía privada SpaceX despegará desde la estación de las fuerzas aéreas de Cabo Cañaveral este jueves con el objetivo de poner en órbita satélites de comunicación. Un paso más para normalizar lo que hace un año se creía imposible: reutilizar cohetes.

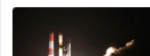
SpaceX, ...

### SpaceX consigue recuperar otro cohete tras su lanzamiento

MICROSIERVOS.COM  
Sat, 28 May, 13:31  
0.593

Este es el vídeo (acelerado) del retorno al espaciopuerto autónomo flotante Of Course I Still Love You de la primera etapa del Falcon 9 FT de SpaceX que puso en órbita el satélite de telecomunicaciones Thaicom 8.

El Thaicom 8 tiene como destino final una órbita geoestacionaria, por lo que el ...



### Se aplaza por 24 horas lanzamiento de satélite tailandés

ELESPECTADOR  
Fri, 27 May, 04:30  
0.839

El director de SpaceX, Elon Musk, anunció que su empresa

# Event formation

- Using one or more linked clusters we form an event
- From the articles in the event we extract event information:
  - Location
  - Event date
  - Main event entities and keywords
  - Event categories
  - Event title and snippet



## EgyptAir plane from Paris to Cairo goes missing

🔥 3,072

WHEN: Thu, May 19, 2016

WHERE: Cairo, Egypt

CATEGORIES: Society→Issues→Warfare and Conflict , Society→Issues→Terrorism , Science→Technology→Aerospace

ENTITIES: EgyptAir Egypt Cairo, Egypt Paris, France France

KEYWORDS: Fixed-wing aircraft Mediterranean Sea Airbus A320 family Radar Airline

ARTICLES: 6702 (3054 English, 754 German, 747 Spanish, 22 Catalan, 321 Portuguese, 144 Italian, 786 French, 836 Russian, 29 Slovene, 9 Serbian)

Story highlights69 people were on board -- 59 passengers, 10 crewWeather conditions were calm when the plane crossed the Mediterranean (CNN)EgyptAir Flight 804 heading from Paris to Cairo disappeared from radar with 69 people on board, the airline said. The plane was flying at 37,000 feet when it disappeared shortly after entering Egyptian airspace, the airline tweeted. It said the Airbus A320 had 59 passengers and 10 crew members.Conditions were clear and calm when the plane crossed over the...

# DEMO (<http://eventregistry.org/>)

Current articles and events

Any language ▾
See large map ↗

**Edo Guber Watch: INEC, security chiefs meet**  
 Location: Edo State, Nigeria  
 Mentioned in 11 articles

**Sam Bradford leads Vikings over Packers 17-14 in Minnesota debut**  
 Location: Minnesota, United States  
 Mentioned in 192 articles

**Syria ceasefire seen near collapse**  
 Location: Aleppo, Syria  
 Mentioned in 19 articles

**U.S. Marine shot in head in South LA while on military leave**  
 Location: Segovia, Spain  
 Mentioned in 17 articles

**FJSC okays Onnoghren as next CJN - Vanguard News**  
 Location: (unknown)  
 Mentioned in 7 articles

### EVENT REGISTRY STATISTICS

Data info	#
Imported articles:	141,227,827
Identified events:	5,007,526
News sources:	154,160
Unique concepts:	2,692,089
Categories:	5,015

### RECENTLY ADDED ARTICLES

### RECENTLY IDENTIFIED EVENTS



Tropical cyclone (Hurricane)

Search



Content to display:

List of articles

## List of articles

The list contains the information about articles that match the search criteria.

425,614 articles match the search criteria

RESULT SORTING



## U.S. oil prices hit \$50 on rising refinery demand, falling rig count

By Henning Gloystein

SINGAPORE (Reuters) - U.S. crude oil prices rose above \$50 per barrel on Monday and were near last week's multi-month highs as the number of U.S. rigs drilling for new production fell and refineries continued to restart after getting knocked out by Hurricane Harvey.

U.S. West ...



YAHOO FINANCE

1 min ago

Score: 4



## El Caribe en alerta ante llegada de huracán

Las islas del Caribe, devastadas por Irma hace 10 días, se preparaban para la llegada hoy de un nuevo huracán, María, que podría ganar más fuerza y causar daños considerables.

María se convirtió en huracán ayer mientras se dirigía hacia el este del Caribe con vientos de 120 km/h, informó ...



TIEMPOS

1 min ago

Score: 5



## Así se ve desde el espacio los efectos del huracán Irma sobre algunas islas del Caribe

El huracán Irma atravesó el Océano Atlántico en septiembre de 2017, golpeando a varias islas del Caribe antes de trasladarse a los Cayos de Florida y al suelo continental de los Estados Unidos. A medida que las nubes se fueron alejando de algunos lugares, como las Islas Vírgenes, la ...

YAHOO NOTICIAS...

1 min ago

Score: 5 9



## Climat: les USA cherchent à travailler avec des "partenaires" de l'accord de Paris (Tillerson)

Après plusieurs déclarations contradictoires sur la politique environnementale des Etats-Unis, le secrétaire d'Etat Rex Tillerson a déclaré dimanche que Washington recherchait "les moyens de travailler avec des partenaires de l'accord climat de Paris".

"Nous voulons être productifs, nous ...

فرانس 24

1 min ago

Score: 2

Duplicate of this article





Tropical cyclone (Hurricane)

Search



Content to display:

List of events

## List of events

The list contains the information about events that match the search criteria.

18,273 events match the search criteria

RESULT SORTING



## Caribbean under hurricane watch again. Tropical Storm Maria following Irma's track.

3,581

WHEN: Sun, September 17, 2017

WHERE: Miami, United States of America

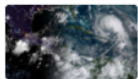
CATEGORIES: Science→Earth Sciences

ABOUT: Tropical cyclone Storm National Hurricane Center Guadeloupe United States of America Antilles Caribbean Puerto Rico Island Lesser Antilles Dominica Escala de huracanes de Saffir-Simpson

ARTICLES: 549 (177 English, 20 German, 152 Spanish, 30 Portuguese, 156 French, 14 Russian)

Tropical Storm Maria formed in the Atlantic Saturday afternoon, threatening to pound islands already hit hard by Irma with another hurricane early next week. In an 8 p.m. update, National Hurricane Center forecasters said Maria will likely bring dangerous winds, more storm surge and heavy rain to parts of the Lesser Antilles and strengthen into a hurricane Sunday, then approach the Leeward Islands on Monday. On Saturday evening, hurricane watches were issued for Antigua, Barbuda, St. Kitts, ([Bradenton Herald](#))

Score: 190



## Tropical Storm Jose may threaten Northeast next week

6,659

WHEN: Fri, September 15, 2017

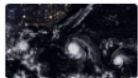
CATEGORIES: Science→Earth Sciences

ABOUT: Tropical cyclone Atlantic Ocean National Hurricane Center United States of America Maximum sustained wind East Coast of the United States Tropics Storm Tropical cyclone warnings and watches Hurricane Jose (1999) Saffir-Simpson hurricane wind scale Puerto Rico

ARTICLES: 508 (508 English)

Chat with us in Facebook Messenger. Find out what's happening in the world as it unfolds. Story highlightsJose is expected to strengthen into a hurricane again later FridayThe storm could bring rain and winds to the Northeast next week (CNN)Tropical Storm Jose is expected to strengthen into a hurricane again later Friday and turn north, threatening to bring rain and wind to the US Northeast next week. Jose remains out in the Atlantic Ocean and is moving toward the northwest, and that motion ([CNN International](#))

Score: 190



## Hurricane Irma strengthens, tears through Cuba on its way to Florida

140,412

WHEN: Wed, September 6, 2017

WHERE: Miami, United States of America

CATEGORIES: Society→Issues, Science→Earth Sciences

ABOUT: Tropical cyclone Florida, United States of America United States of America Caribbean Island Puerto Rico National Hurricane Center Storm Atlantic Ocean Wind Escala de huracanes de Saffir-Simpson France

ARTICLES: 9426 (5175 English, 383 German, 1711 Spanish, 8 Catalan, 436 Portuguese, 165 Italian, 1325 French, 129 Russian, 11 Slovene, 50 Croatian, 33 Serbian)

Story highlights"If you have been ordered to evacuate, leave now," Florida governor saysIrma is expected to be near the Florida Keys and South Florida by early Sunday (CNN)Hurricane Irma tore through northern Cuba during its long, destructive march toward Florida, where it's expected to bring catastrophic damage to parts of the state. The powerful Category 5 storm had maximum sustained winds of 160 mph when it made landfall on Cuba's Camaguey Archipelago, the National Hurricane Center said late ([CNN International](#))

Score: 190





Tropical cyclone (Hurricane)

Search



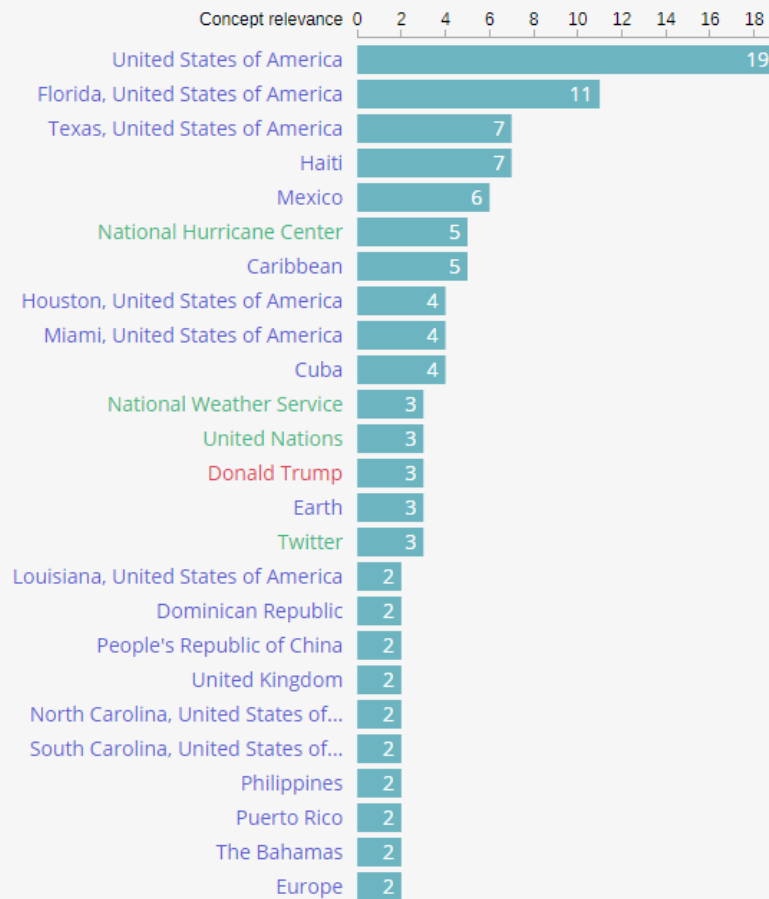
Content to display:

Top concepts

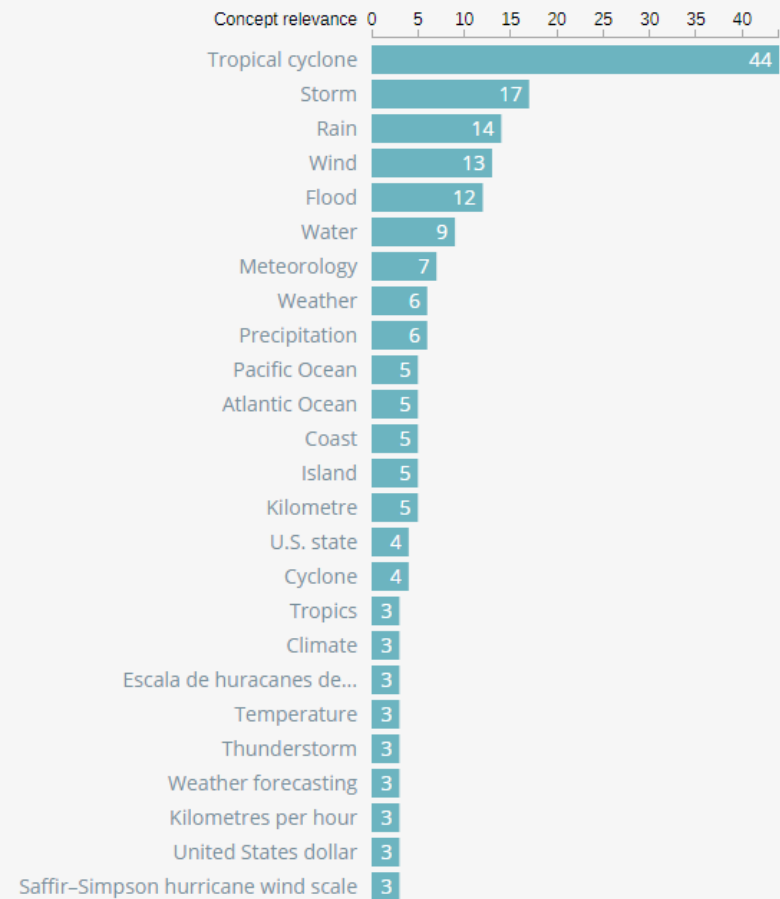
## Top concepts in events

List of concepts (entities and non-entities) that best describe what the events are about

## ENTITIES



## NON-ENTITIES



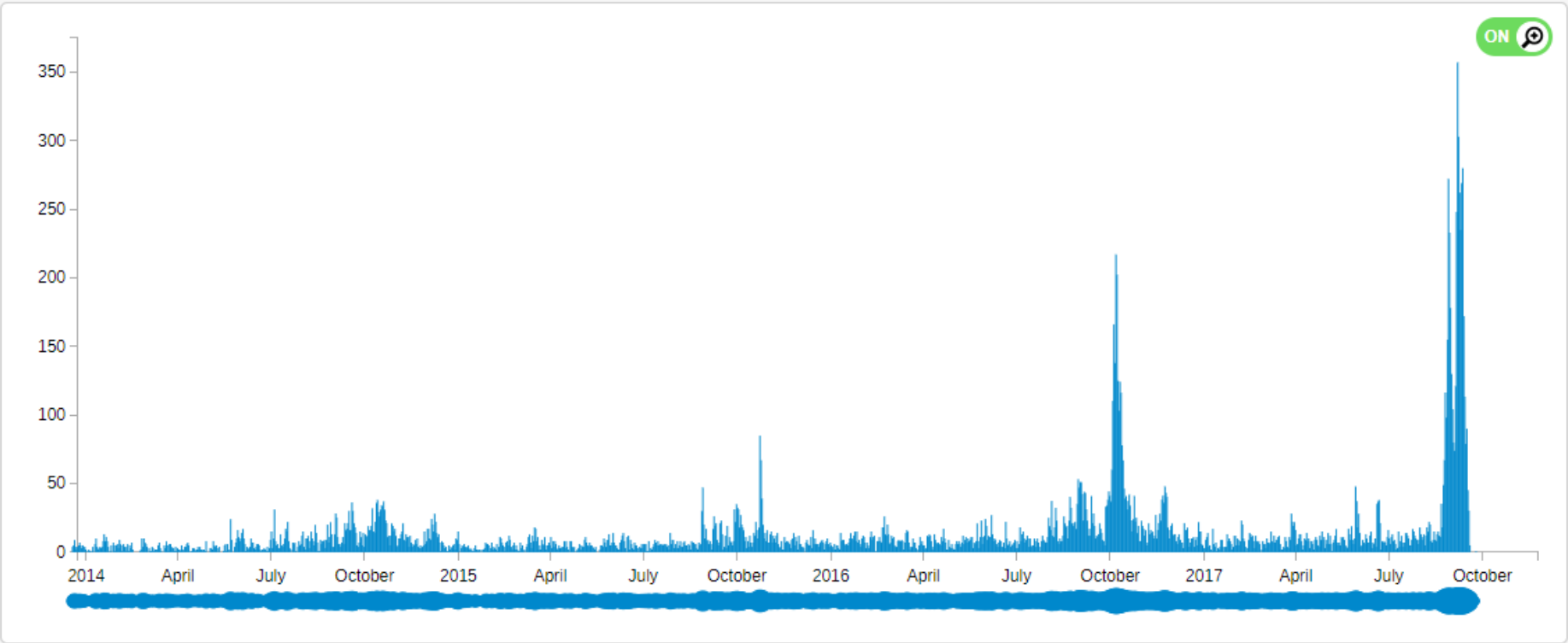
Content to display:

 Timeline 

### Timeline of events



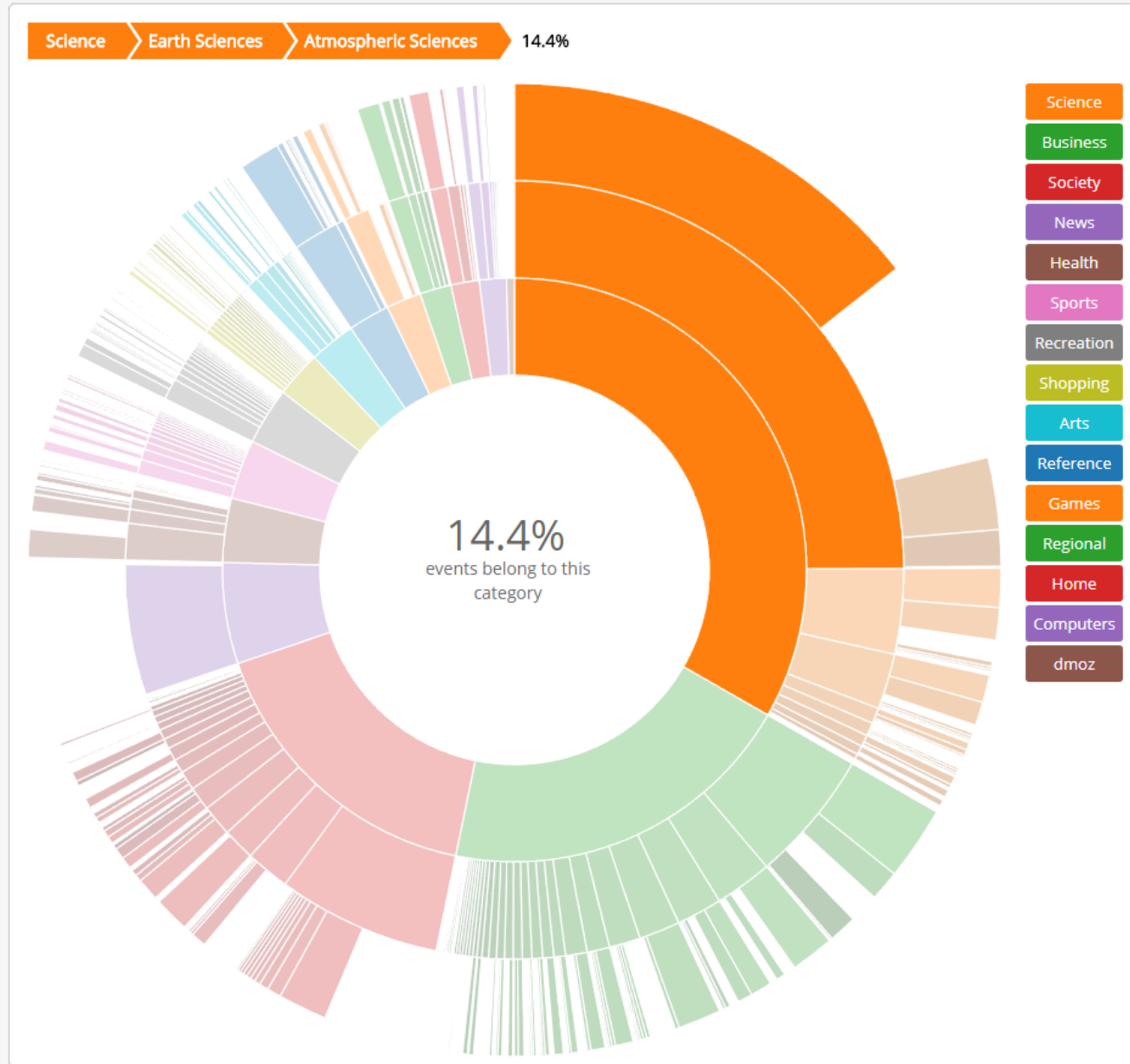
See when the events that match the search criteria were published. Click a particular column to display a list of events for that date.





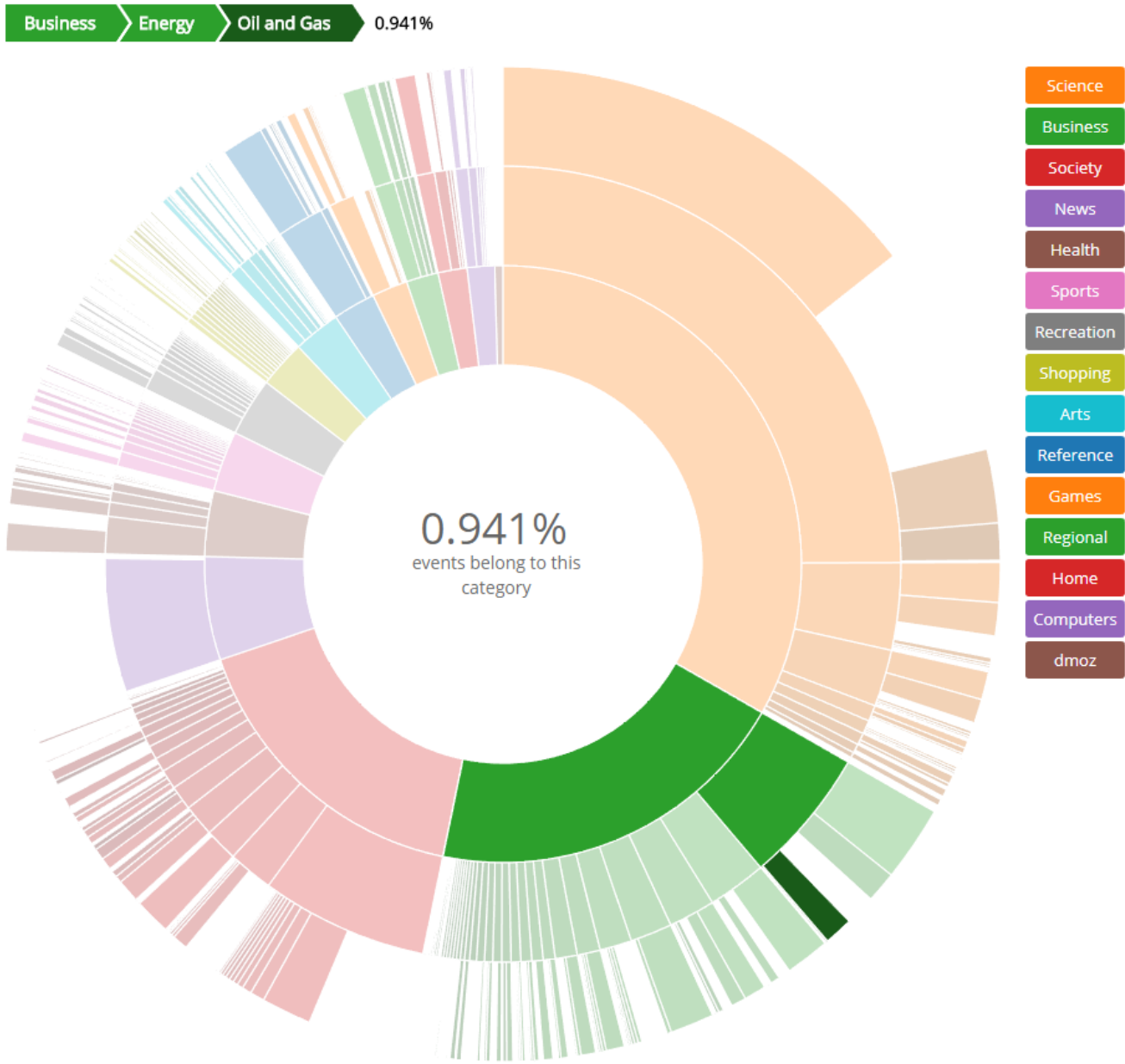
# Categories of events

Chart represents the distribution of events into different categories.  
Click a particular segment to display events in the category.



# Categories of events

Chart represents the distribution of events into different categories.  
Click a particular segment to display events in the category.





### Crude falls, gasoline surges as Harvey hits southern Texas

🔥 3,918

WHEN: Sun, August 27, 2017

WHERE: Houston, United States of America

CATEGORIES: Science→Technology→Energy , Business→Energy , Business→Energy→Oil and Gas

ABOUT: United States of America Petroleum Gasoline Refinery Texas, United States of America Oil refinery  
Barrel (unit) Gulf Coast of the United States Flood Louisiana, United States of America Futures contract  
Houston, United States of America

ARTICLES: 554 (531 English, 23 Spanish)

Clouds from Hurricane Harvey are seen in the background as smoke rises from a burn off at an oil refinery in Corpus Christi, Texas, U.S. August 26, 2017. (Xinhua/REUTERS) by Xinhua Writer Sun Oumeng NEW YORK, Aug. 30 (Xinhua) -- U.S. crude prices continued to decline and gasoline futures surged on Wednesday, as Hurricane Harvey shuts down more than 20 percent of U.S. refinery capacity, ripping through the heart of the oil industry. Now tropical storm Harvey has ravaged Houston, home to (Xinhuanet.com)

Score: 161



### UPDATE 1-Buckeye targets normal operations at Bahamas oil terminal on Tuesday

WHEN: Tue, September 12, 2017

WHERE: New York City, United States of America

CATEGORIES: Business→Energy , Business→Energy→Oil and Gas , Business→Transportation and Logistics→Maritime

ABOUT: Tropical cyclone Petroleum Fuel Caribbean The Bahamas Buckeye Partners Atlantic Ocean  
NuStar Energy Fuel oil Gasoline Puerto Rico Grand Bahama Island, The Bahamas

ARTICLES: 7 (7 English)

NEW YORK, Sept 12 (Reuters) - Buckeye Partners LP said it aims to resume normal operations its Bahamas crude oil and fuel terminal, also known as Borco, on Tuesday after Hurricane Irma rampaged through the Caribbean as one of the most powerful Atlantic hurricanes on record. The terminal, located in Freeport, on Grand Bahama Island, has no reported injuries, incidents or damage and restart activities began on Monday afternoon, the company said. While power is still out at the terminal, Buckeye (Reuters)

Score: 125



### Hurricane Harvey makes landfall in Texas - latest updates

🔥 472


WHEN: Sat, August 26, 2017


WHERE: Corpus Christi, United States of America



# Caribbean under hurricane watch again. Tropical Storm Maria following Irma's track.



 Sun, September 17, 2017

 Science → Earth Sciences

Tropical Storm Maria formed in the Atlantic Saturday afternoon, threatening to pound islands already hit hard by Irma with another hurricane early next week.

In an 8 p.m. update, National Hurricane Center forecasters said Maria will likely bring dangerous winds, more storm surge and heavy rain to parts of the Lesser Antilles and strengthen into a hurricane Sunday, then approach the Leeward Islands on Monday. On Saturday evening, hurricane watches were issued for Antigua, Barbuda, St. Kitts,

Title and summary extracted from: [Bradenton Herald](#)

Content to display:

 Articles 

## Articles

Below is a list of articles describing the event.

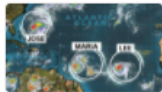
### LANGUAGE COVERAGE

eng 178 ger 20 spa 152 por 50 fra 157

### ARTICLE SORTING



« < 1 2 3 4 5 6 7 8 > »



### Tropical Storm Maria upgraded to Category 1 hurricane

(CNN) -- Hurricane Maria was upgraded from a tropical storm Sunday afternoon as it takes aim at Caribbean islands devastated less than two weeks ago by Hurricane Irma.

As of Sunday afternoon, Maria was about 140 miles (225 kilometers) east northeast of Barbados, according to the National Hurricane ...

WHNT WEATHER BLOG

8h 38min ago

Score: 1  13



### Maria, following Irma's path, is now a Category 1 hurricane

Hurricane Maria was upgraded from a tropical storm Sunday afternoon as it takes aim at Caribbean islands devastated less than two weeks ago by Hurricane Irma.

As of Sunday afternoon, Maria was about 140 miles (225 kilometers) east northeast of Barbados, according to the National Hurricane Center. ...

GANTDAILY.COM

9h 8min ago

Score: 1



### Maria, following Irma's path, is now a Category 1 hurricane

(CNN) - Hurricane Maria was upgraded from a tropical storm Sunday afternoon as it takes aim at Caribbean islands devastated less than two weeks ago by Hurricane Irma.

As of Sunday afternoon, Maria was about 140 miles (225 kilometers) east northeast of Barbados, according to the National Hurricane ...

WEARECENTRALPA

8h 49min ago

Score: 1

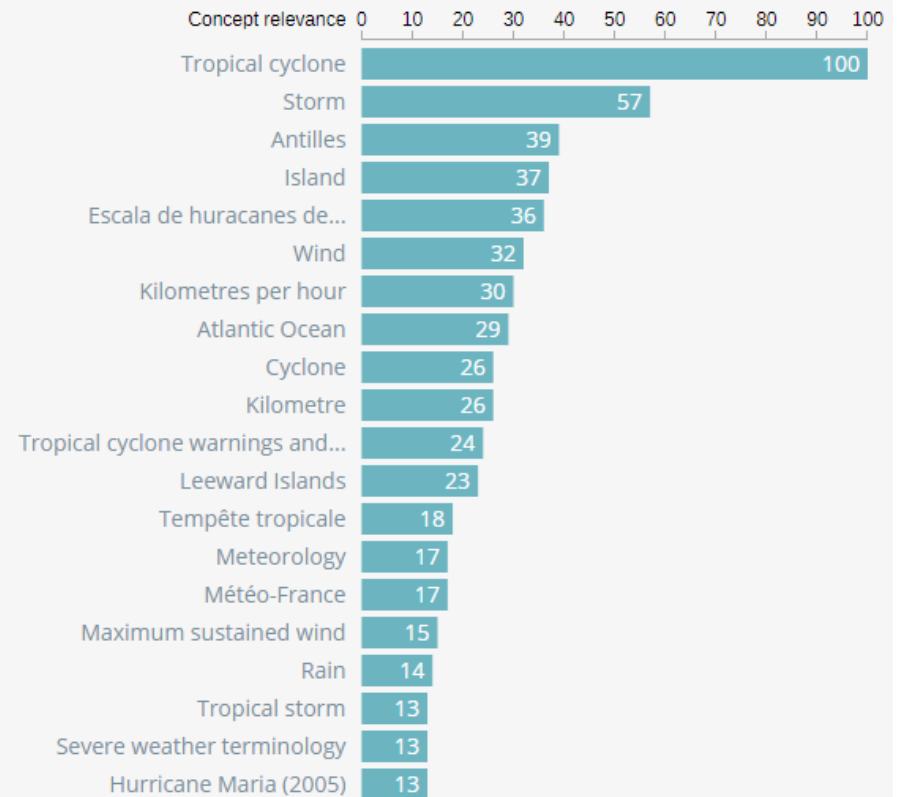
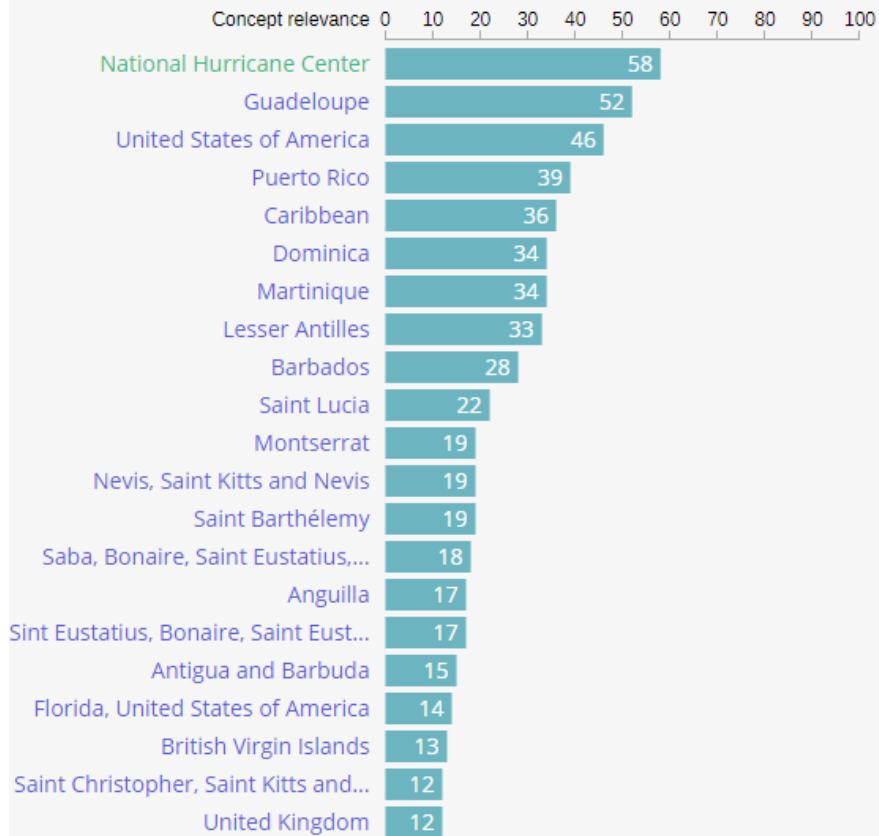
# Event concepts



Top concepts describing what the event is about.

## ENTITIES

## NON-ENTITIES





Content to display:

Similar events

## Similar events



Displays a list of other events describing similar topics. Similar events can be displayed as list (sorted by similarity to the event), as a timeline or as a chart showing daily trends of these events.

### CRITERIA FOR IDENTIFYING SIMILAR EVENTS

Types of concepts used in comparison:  People  Locations  Organizations  Nonentities

No time constraints

EVENT LIST

EVENT TIMELINE

DAILY TRENDS

September 18, 2017

## La tempête Maria est désormais un ouragan et elle met le cap vers les Antilles

Déjà fortement éprouvées par le passage d'Irma début septembre, les Antilles se préparent maintenant à affronter la tempête tropicale Maria, qui s'est transformée dimanche en ouragan et va continuer à se renforcer. Maria est désormais un ouragan se dirigeant vers les Caraïbes, qui viennent d'être e...



SEPTEMBER 17, 2017

Caribbean under hurricane watch again. Tropical Storm Maria following Irma's track.



Tropical Storm Harvey slams Caribbean islands, heads for

Hurricane Slam Into As Catego

El huracán José se intensifica a categorías en el Atlántico

Irri an el Crece peligrosidad del huracán 'José', al llegar a categoría 3

Huracán José se intensifica a categoría y se acerca a Ant

Tri thi we

Islas del Caribe se preparan ante la amenaza de Maria - El





Caribbean under hurricane watch again. Tropical Storm Maria


La tempête Maria est désormais un ouragan et elle met le cap vers les

SEPT.

OCT.

# Extensive search options

 Barack Obama  - Health care    

Search keywords:  

Event location:

Publisher:

Category:

Time of interest:   [Clear](#) | [Last month](#) | [Last week](#) | [Next week](#) | [Next month](#)

Language coverage:  ▼

Min. event coverage:  ▼

Content to display:

☰ List of events ▼

## List of events

The list contains the information about events that match the search criteria.

18,833 events match the search criteria



First < 1 2 3 4 5 6 7 8 > Last

### RECAP: Doctors investigating first ebola case in Scotland after aid worker returns from West Africa

WHEN: December 30, 2014

WHERE: London, United Kingdom

ENTITIES: Republic of Sierra Leone Glasgow Scotland London West Africa Casablanca British Airways Republic of Liberia Republic of Guinea Kingdom of Morocco

KEYWORDS: Ebola virus disease Hospital United Kingdom Infection Patient Virus Disease London Heathrow Airport Therapy Health

ARTICLES: 721 (575 eng, 87 ger, 45 spa, 14 chi, 0 slo)

The authorities will next be contacting passengers on the two flights connecting Casablanca to Heathrow, and the London airport to Glasgow with all relevant precautionary information. LIVE updates as the first ebola case has been confirmed in an aid worker seeking medical assistance in a Glasgow hospital. 7:44 pm THIS year's Ebola outbreak is the deadliest occurrence of the disease since it was first discovered in 1976. The current outbreak has killed more than all other Ebola outbreaks...

### US Withdrawing Most Troops Fighting Ebola in West Africa

WHEN: February 11, 2015

WHERE: Republic of Sierra Leone

ENTITIES: West Africa United States Republic of Liberia Barack Obama Republic of Guinea Republic of Sierra Leone World Health Organization United States Armed Forces Washington, D.C. United States Department of Defense

KEYWORDS: Ebola virus disease Epidemic Disease President of the United States The Pentagon White House Virus Infection Health Viral disease

ARTICLES: 358 (296 eng, 18 ger, 44 spa, 0 chi, 0 slo)

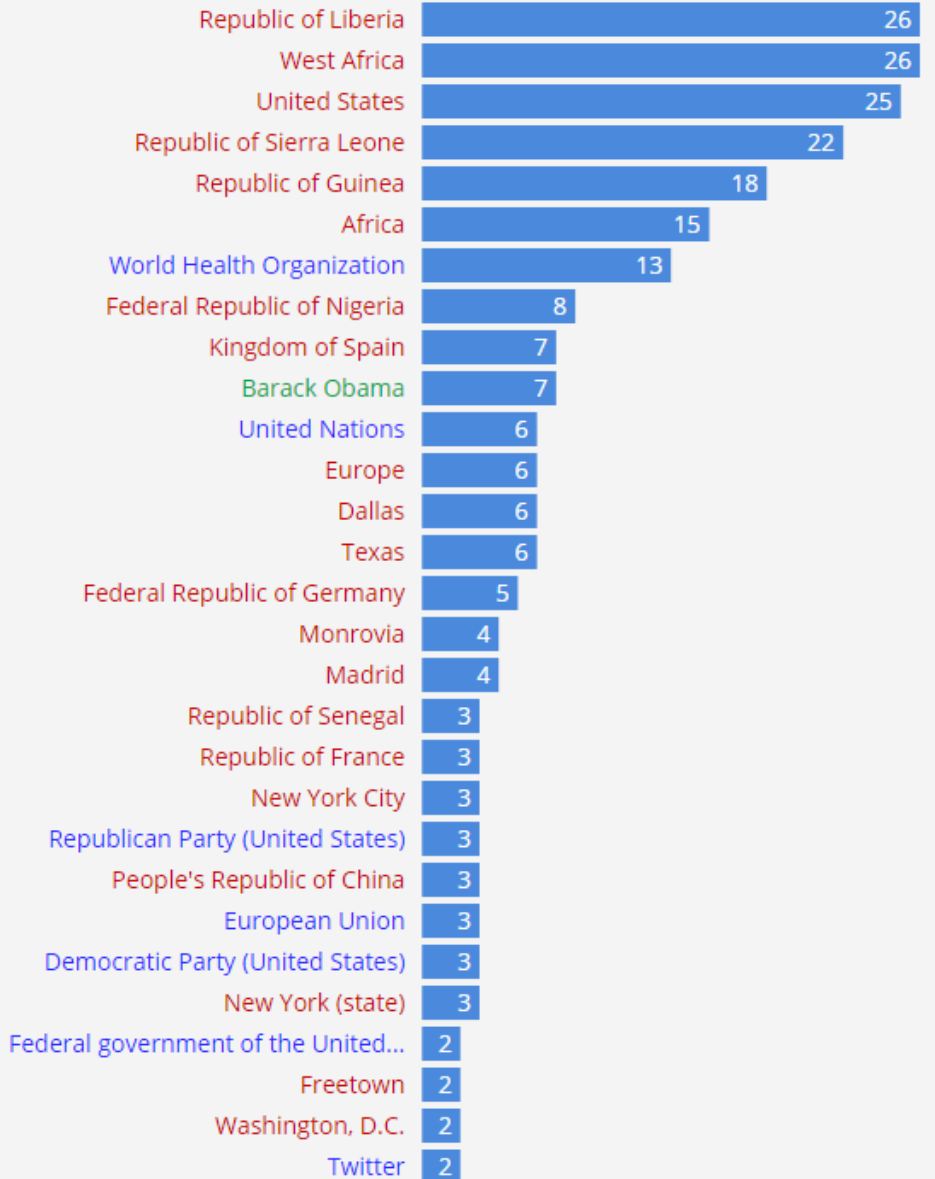
WASHINGTON -- The United States is preparing to withdraw nearly all of its troops fighting the Ebola outbreak in West Africa, the White House said Tuesday, as the global health crisis recedes amid a sharp decline in Ebola cases. Of the 2,800 troops the U.S. deployed, just 100 will remain in West Africa after April 30, officials said. About 1,500 of those troops have already returned home. Those staying in West Africa will work with Liberia's military, regional partners and U.S. civilians to...

# Top concepts in events

List of concepts (entities and keywords) that best describe what the events are about

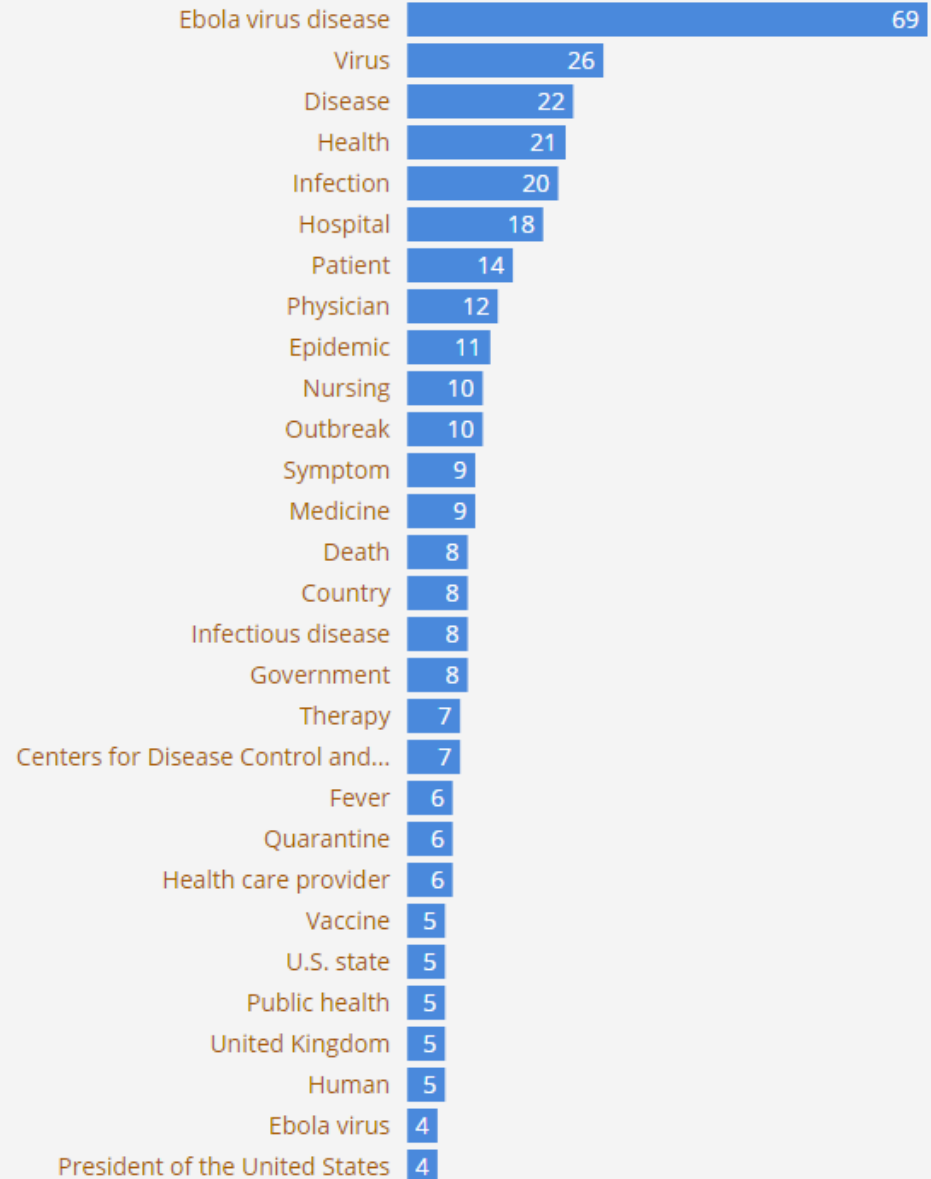
## ENTITIES

Concept relevance 0 2 4 6 8 10 12 14 16 18 20 22 24 26



## KEYWORDS

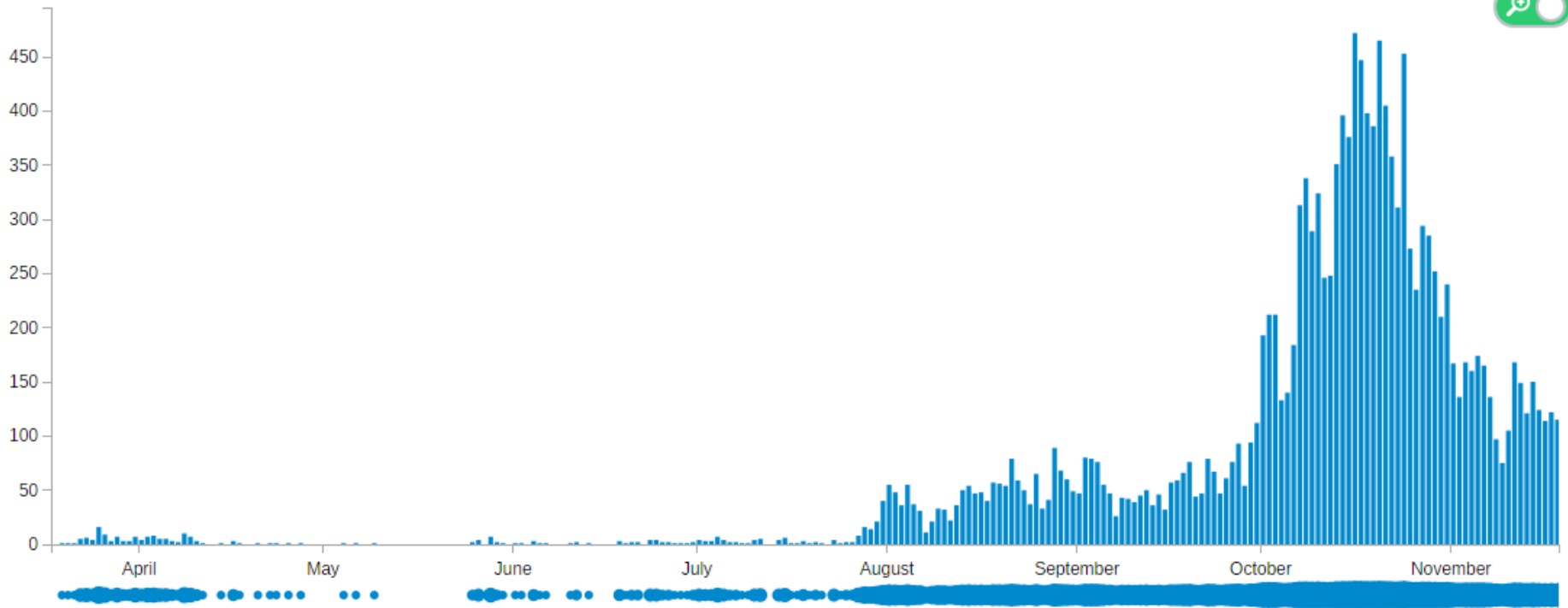
Concept relevance 0 10 20 30 40 50 60



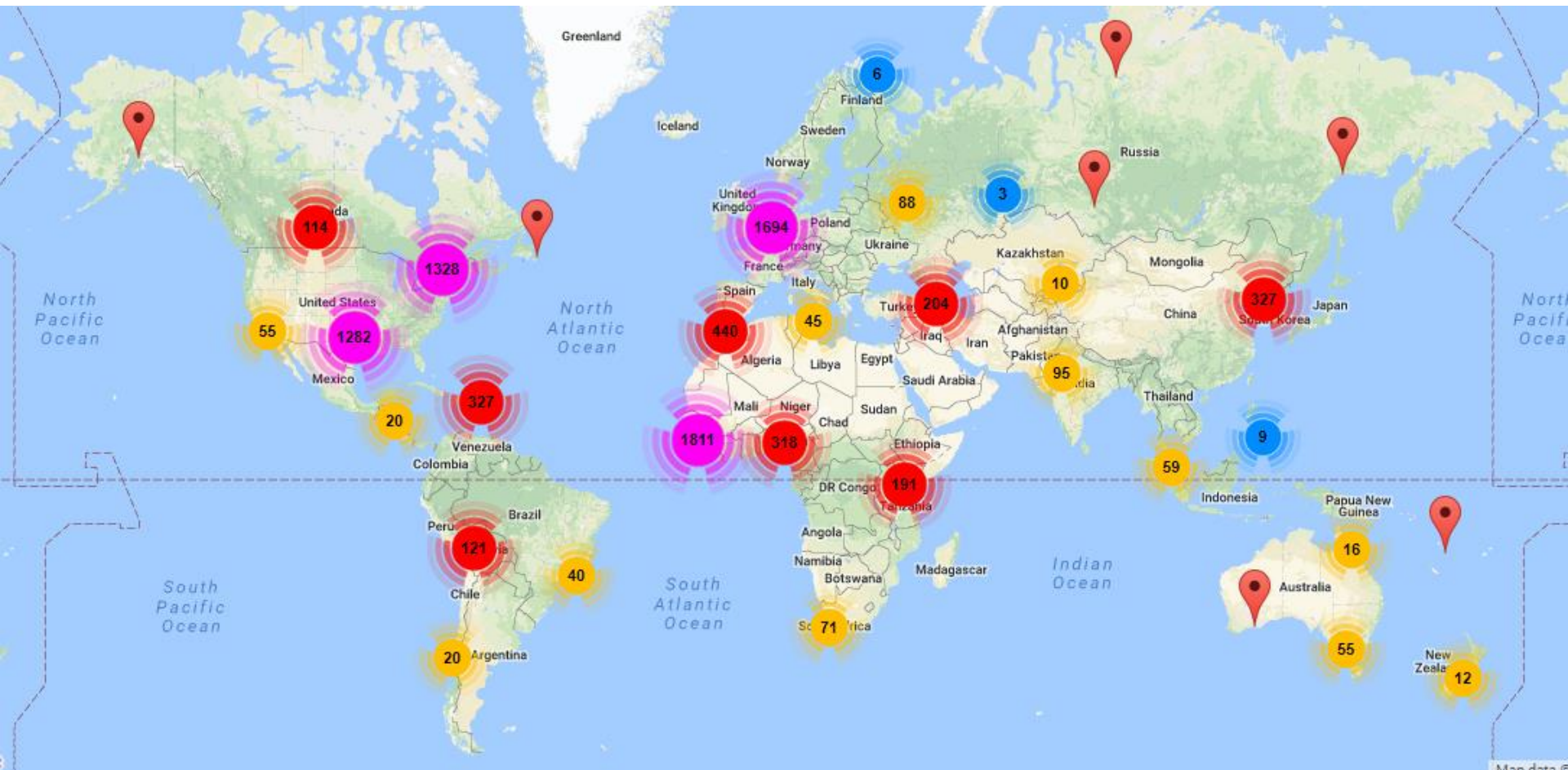


## Timeline of events

See when the events that match the search criteria happened. Click a particular column to display a list of top events for that date.



# Locations of events about Ebola

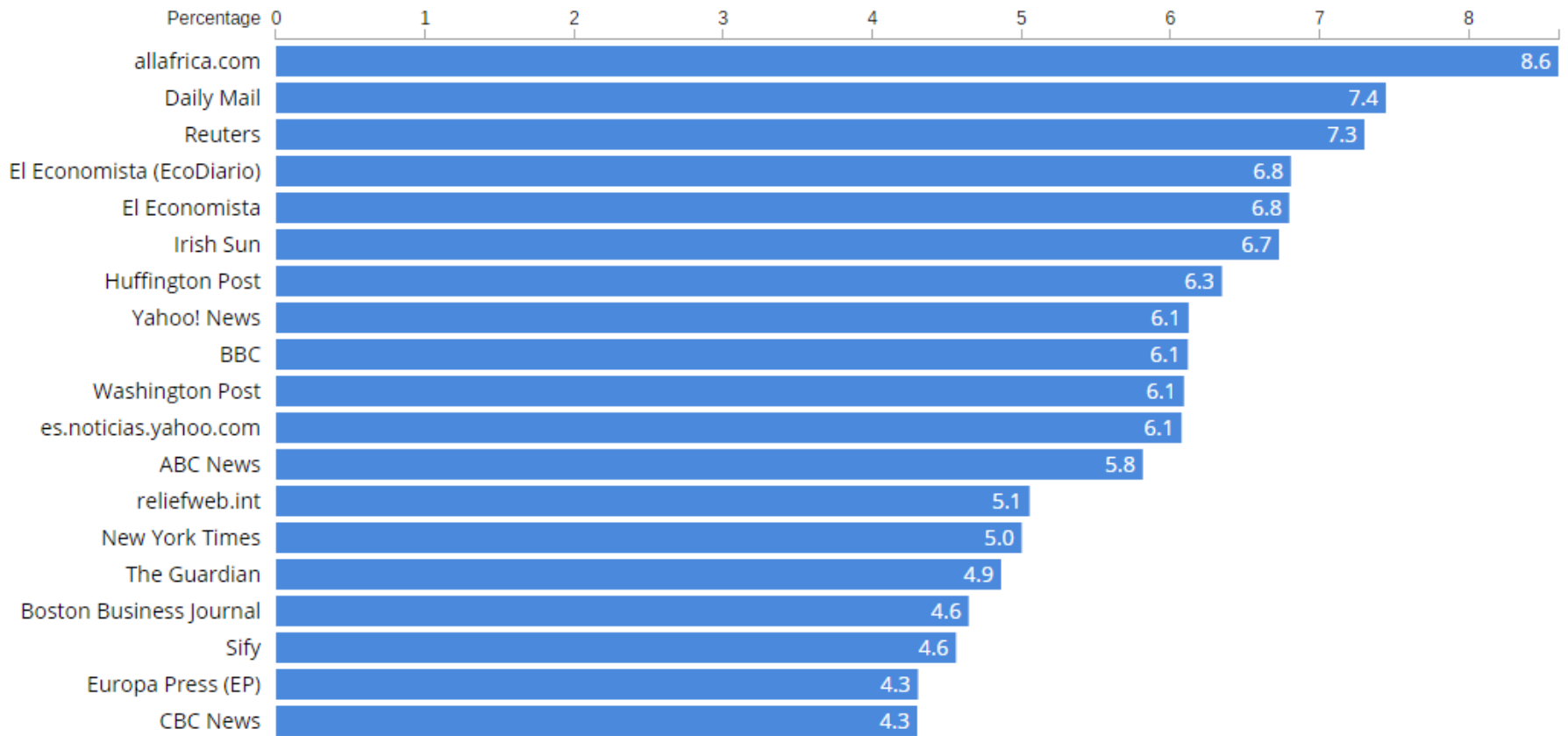


# Top publishers

The information displays who are the publishers that report the most about the resulting events. The numerical values represents the percent of the resulting events that are covered by a particular publisher. The geographical map shows the locations of the publishers and the circle sizes correspond to percentages.

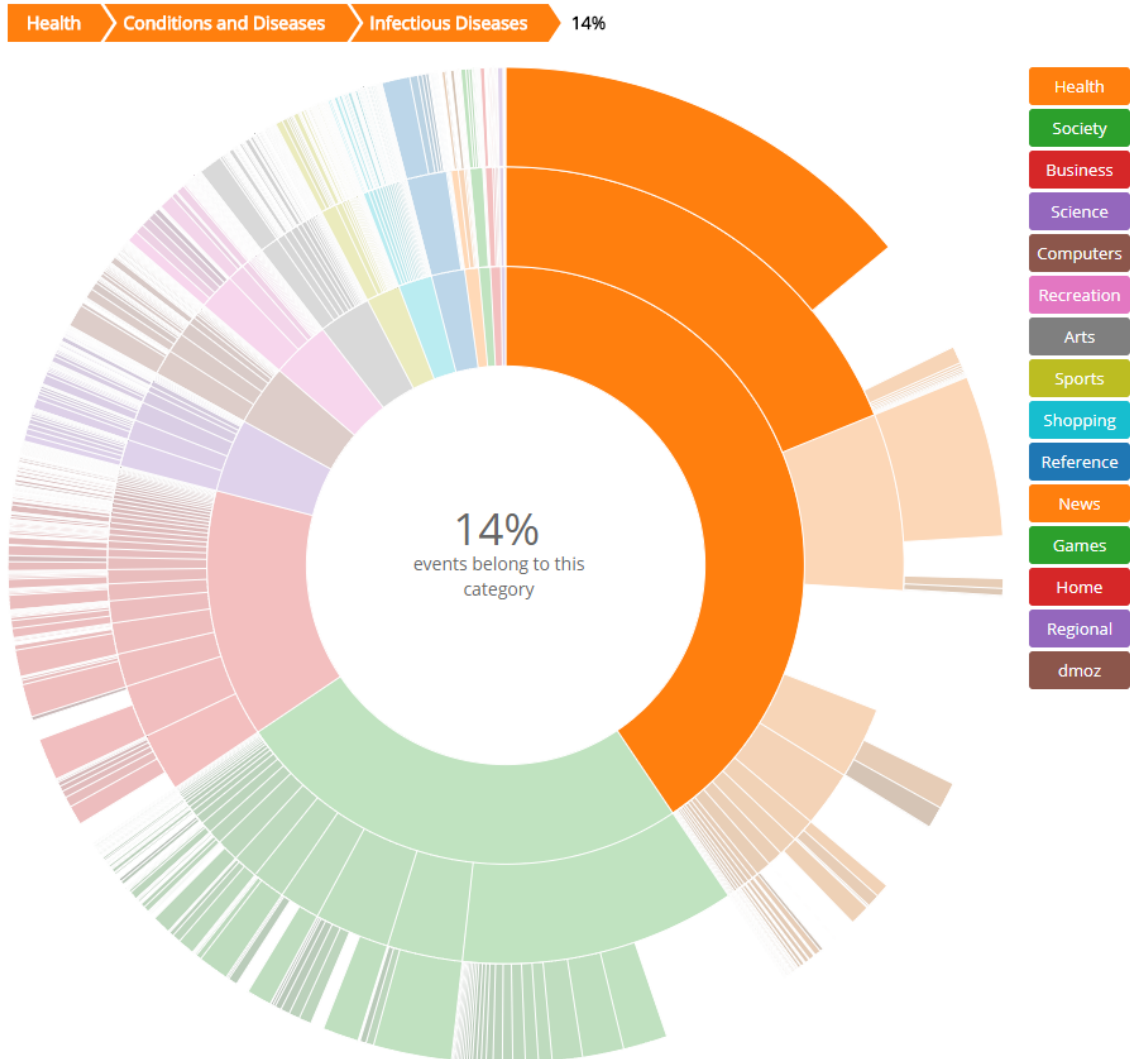
Ranked list

Geographical map





# Categories related to events about Ebola



# Trending of concepts in search results

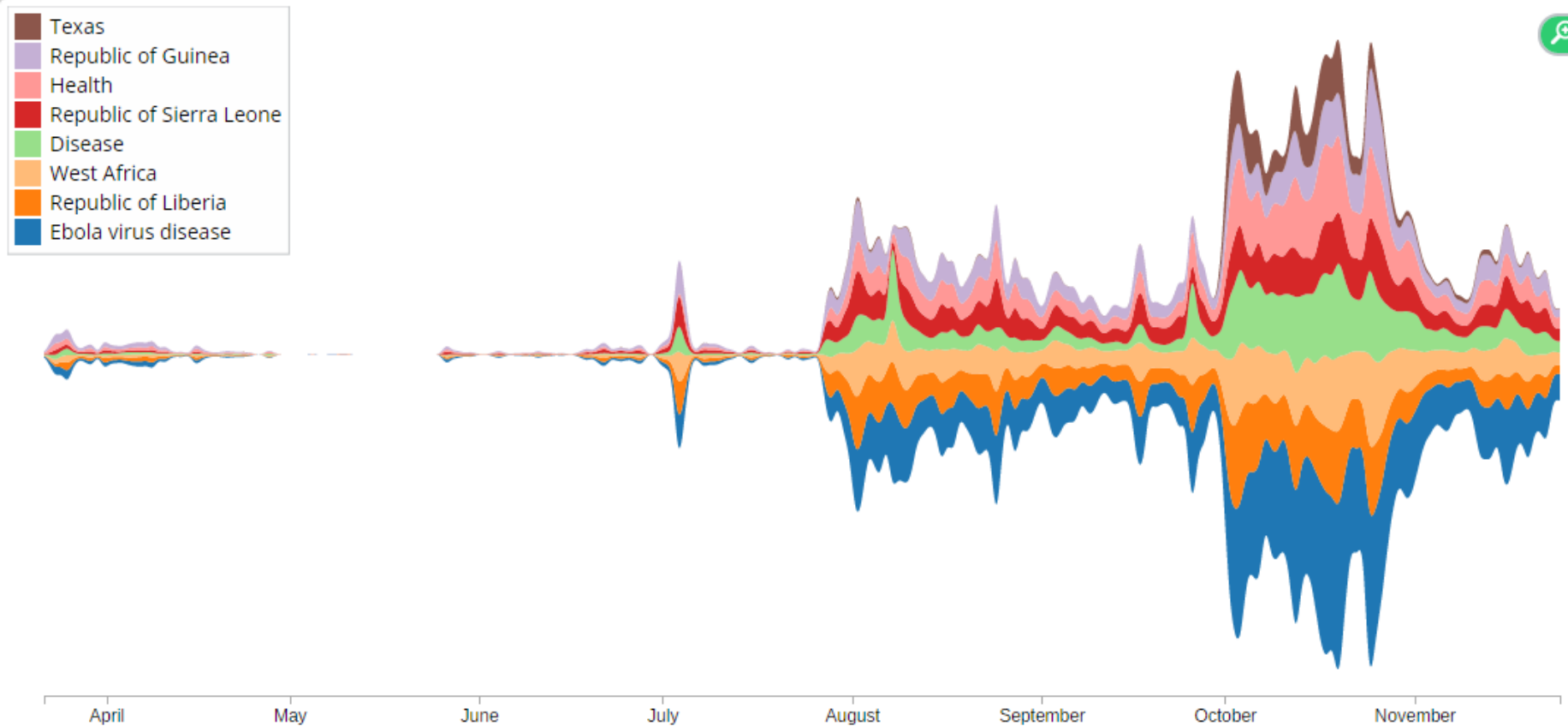
The visualization shows the trending of individual concepts in the events. You can choose the types of concepts to visualize or enter your own.

## Concept types to display & normalization

Person  Location  Organization  Nonentities

Normalize data by number of imported articles for that day ▾

📍 Ebola virus disease   📍 Republic of Liberia   📍 West Africa   📍 Disease   📍 Republic of Sierra Leone   📍 Health   📍 Republic of Guinea   📍 Texas



# Example of a large event

## North Korea fires 'unidentified ballistic missile' over Japan

Thu, September 14, 2017

Pyongyang, North Korea

Society → Issues, Society → Issues → Warfare and Conflict

SEOUL, South Korea -- President Donald Trump vowed that the U.S. is "100 percent with Japan" after North Korea fired a missile into its airspace, according to the leader of the Asian ally.

Prime Minister Shinzo Abe told reporters he spent 40 minutes on the phone with Trump to discuss Monday's launch -- which he also described as "an unprecedented, serious and significant threat."

In a statement released by the White House on Tuesday, Trump reiterated that "all options are on the table" when it

Title and summary extracted from: [NBC News](#)



Content to display:

Articles

### Articles

Below is a list of articles describing the event.

#### LANGUAGE COVERAGE

eng 1284 ger 191 spa 405 por 187 ita 29 fra 238 rus 43 ara 89 tur 60 slo 19 cro 35 ind 71

#### ARTICLE SORTING



### North Korea fires missile towards Japan from its capital Pyongyang

The Japanese government has issued a warning to its citizens after North Korea fired a missile over the country. It was launched from the Sunan district of Pyongyang, South Korea's military said. The missile has flown over Japan, Japan's NHK television said, but the government is warning citizens ...

THE NEW ZEALAND...

Fri, 15 Sep 2017, 00:49

Score: 1 223

### North Korea fires missile towards Japan

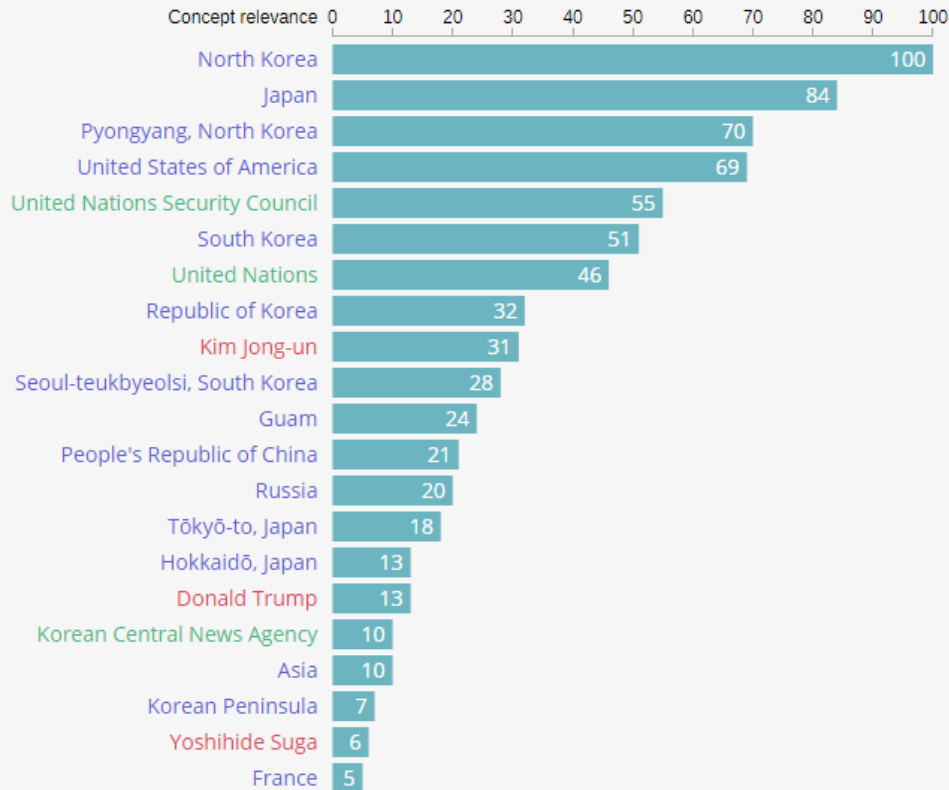
The Japanese government has issued a warning to its citizens after North Korea fired a missile over the country. It was launched from the Sunan district of Pyongyang, South Korea's military said. The missile has flown over Japan, Japan's NHK television said. The South Korean and US militaries are

GEARSOFBIZ.COM

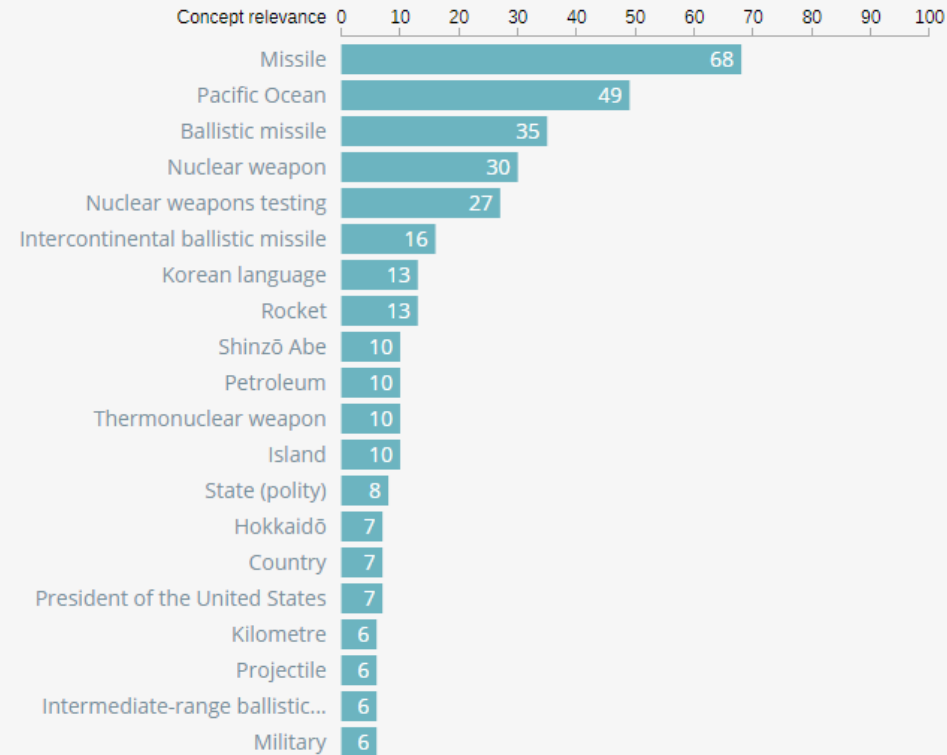
Thu, 14 Sep 2017, 23:12

# What the event is about

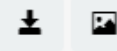
## ENTITIES



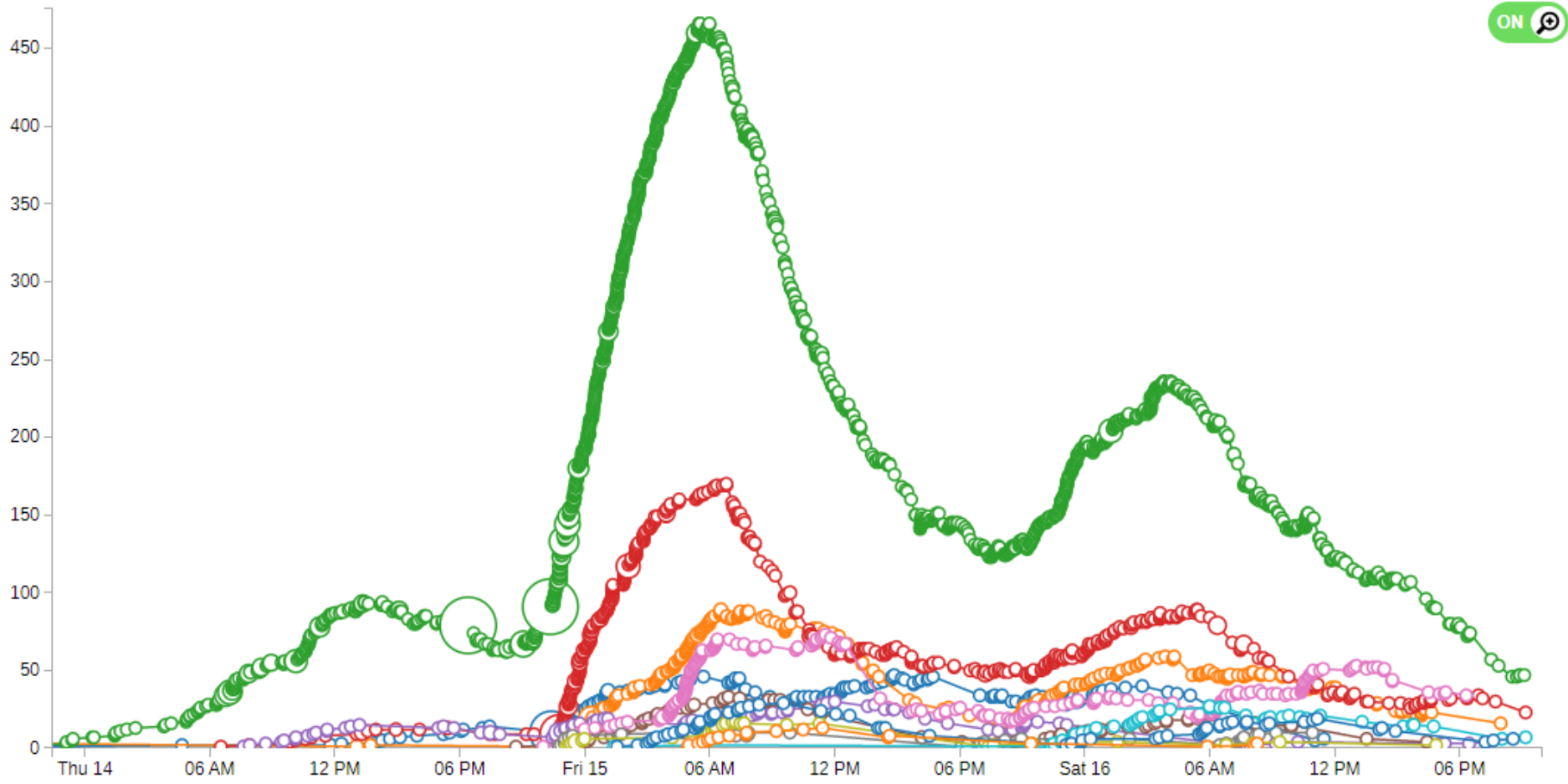
## NON-ENTITIES



# Timeline of articles



Publishing times of articles describing the event. The height of the curve indicates the number of articles published in last 8 hours.

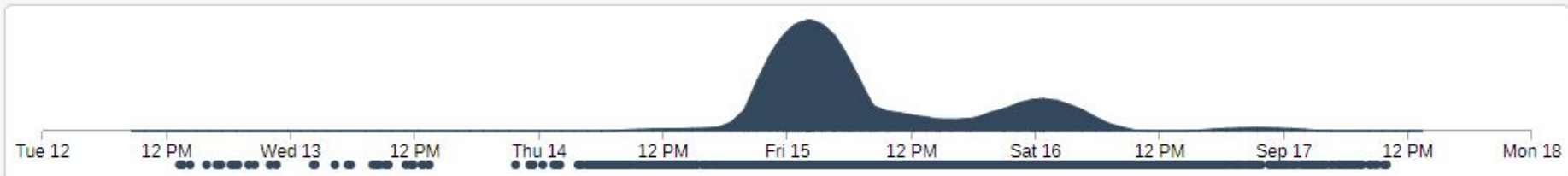
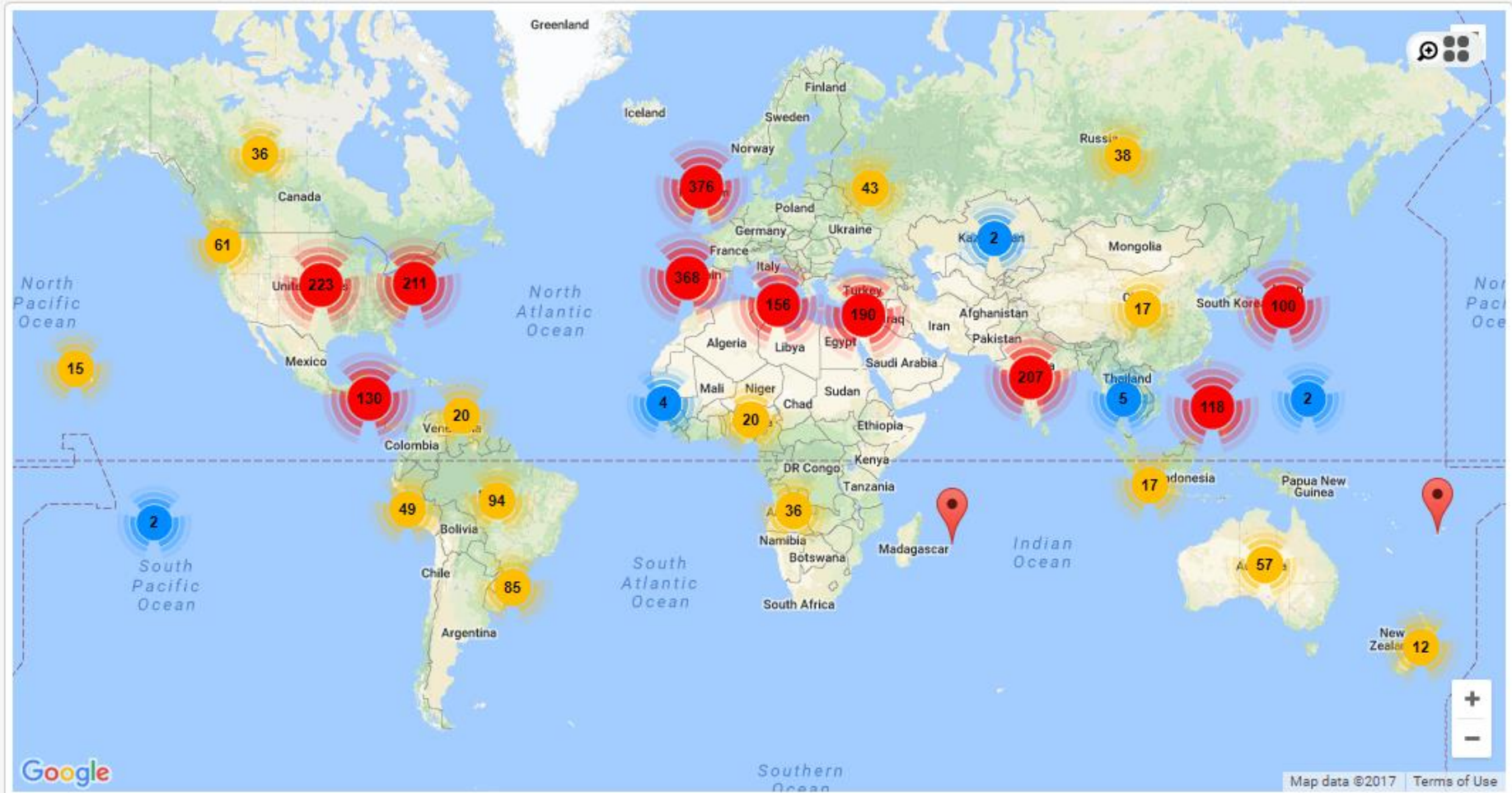


- Portuguese articles (#188)
- French articles (#257)
- English articles (#1354)
- Spanish articles (#430)
- Arabic articles (#93)
- Indonesian articles (#72)

# Sources of the news articles

Map shows the geographic locations of the news sources that published articles about the current event.

Below the map is the time distribution of articles. Click and drag to select a specific time period and highlight only the corresponding subset of sources on the map.





September 6, 2017

# 'It's possible that N. Korea becomes as hostile to China as to U.S.'

**BELJING --** When Kim Jong Un inherited power in North Korea in late 2011, then-Chinese president Hu Jintao was outwardly supportive of the untested young leader, predicting that "traditional friendly cooperation" between the countries would strengthen. Two years later, Kim ordered the execution of h...



SEPTEMBER 3, 2017

South Korea minister mulls redeploying US nuclear weapons amid tensions with North



SEPTEMBER 7, 2017

Rational actors - including China - must rein in Kim



General in Japan back on U.S.



SEPT.





Future / Ongoing work


# Detection of news bias

- Various ways in which news publishers can be “biased”
- Examples:
  - Gender bias
  - News source citations
  - Topic bias
  - Geographical bias
  - Vocabulary bias



# Infobox extraction / slot filling

- Events are of different types (e.g. earthquakes, mergers and acquisitions, product releases, ...)
- For each event type we can define a specific set of properties (slots) that should be extracted

<b>Date</b>	11 March 2011 (3 years, 5 months and 2 weeks)
<b>Origin time</b>	14:46:24 JST (UTC+09:00)
<b>Duration</b>	6 minutes <sup>[1]</sup>
<b>Magnitude</b>	9.0 ( $M_w$ ) <sup>[2][3]</sup>
<b>Depth</b>	30 km (19 mi)
<b>Epicenter</b>	 38.322°N 142.369°E
<b>Type</b>	Megathrust earthquake
<b>Areas affected</b>	Japan (primary) Pacific Rim (tsunami, secondary)
<b>Total damage</b>	Tsunami wave, flooding, landslides, fires, building and infrastructure damage, nuclear incidents including radiation releases
<b>Max. intensity</b>	IX - Violent
<b>Peak acceleration</b>	2.99 g
<b>Tsunami</b>	Up to 40.5 m (133 ft) in Miyako, Iwate, Tōhoku
<b>Landslides</b>	None
<b>Foreshocks</b>	7

# Causality

- Goal: **Finding causal templates in event sequences**
- Example 1: campaign events → election day → inauguration
- Example 2: flood → outbreak of a disease
- How to do it:
  - For each event we can identify related events
  - Generalize events to find common patterns