



Benefits of multilingual media monitoring



Ralf Steinberger

Ralf.Steinberger@jrc.ec.europa.eu

& the JRC's *OPTIMA* team - Open Source Text Information Mining and Analysis

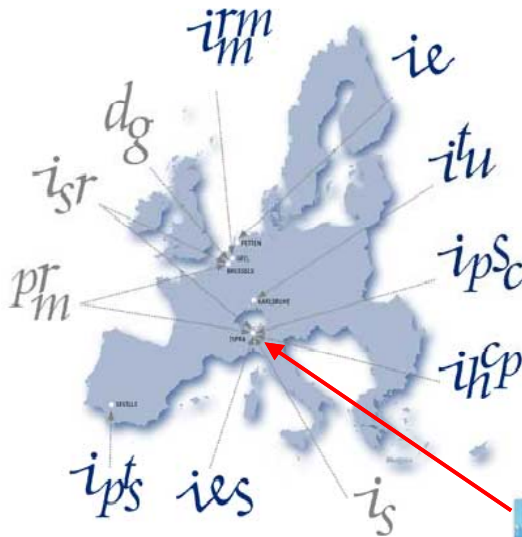
<http://langtech.jrc.ec.europa.eu/>

<http://press.jrc.it/overview.html>

- Who we are: European Commission – Joint Research Centre
- Who our users are
- Overview of what we do, what services we provide
 - Europe Media Monitor (EMM) applications - Functionality
 - Publicly accessible at <http://press.jrc.it/overview.html>




- Importance of multilinguality
- User requirements
- Our insights regarding needs



BRUSSELS (BE)
[The Directorate General \(DG\)](#)
[The Institutional and Scientific Relations Directorate \(ISR\)](#)
[The Programme and Resource Management Directorate \(PRM\)](#)

GEEL (BE)
[The Institute for Reference Materials and Measurements \(IRMM\)](#)

KARLSRUHE (DE)
[The Institute for Transuranium Elements \(ITU\)](#)

ISPRA (IT) [Download the Ispra site Brochure \(English - Italian\)](#)
[The Institute for the Protection and Security of the Citizen \(IPSC\)](#) 
[The Institute for Environment and Sustainability \(IES\)](#)
[The Institute for Health and Consumer Protection \(IHCP\)](#)
[The Ispra site Directorate \(IS\)](#)

PETTEN (NL)
[The Institute for Energy \(IE\)](#)

SEVILLE (E)
[The Institute for Prospective Technological Studies \(IPTS\)](#)



- European Commission (scientific-technical arm of public administration)
- Non-commercial
- Highly multi-disciplinary
- Serving the EU → multilingual
- Relatively small team working on Language Technology

- Any large organisation wants to monitor
 - newest developments in their field of interest
 - their public image, people's views on certain issues, etc.
 - ...
- Institutions and governments, e.g. EC, UN, National Public Health institutions
 - Security-related events (bombings, hostage takings, piracy, ...)
 - Humanitarian events (displaced people, shortage of water/medicines, natural disasters...)
 - Threats to public health (contagious diseases, nuclear or chemical leaks, ...)
 - Scientific and technological news
 - ...
- The public (journalists, specialists, anybody)
 - General information / following the news
 - Meta-news sites are independent of individual (possibly biased) news sources





- **European Commission** (most DGs) and other EU Institutions
- **EU Agencies:**
 - e.g. Public Health (ECDC), Food Safety (EFSA), Chemicals Bureau (ECHA), etc.
- **EU Member State organisations:** e.g.
 - Public Health,
 - law enforcement authorities,
 - parliaments,
 - crisis management/humanitarian
- **International and extra-European organisations:** e.g.
 - various UN organisations
 - Centres for Disease Prevention and Control in the US, Canada, China, ...
- **The public:**
 - Ca. 30,000 anonymous users of publicly accessible EMM systems.
 - Combined between 1 and 2 Million hits per day
 - (<http://press.jrc.it/overview.html>)



Functionality of EMM systems. What we do

- EMM news gathering engine
 - Monitors ~ 2,200 news sources
 - **Gathers 80,000 – 100,000 news articles per day**
 - **In about 50 languages**
 - Visits some sites every 5 minutes
 - Extracts text from the web page
 - Converts text into Unicode-encoded RSS
 - Feeds the news into the four publicly accessible media monitoring systems



- Group related news multi-monolingually
- **Categorise news** into hundreds of categories, including countries
- Extract information (entities and events)
- Track related news over time and across languages
- Collect multilingual information on entities
- Generate social networks based on info extracted from multilingual news
- Provide **tools for human moderation and dissemination**



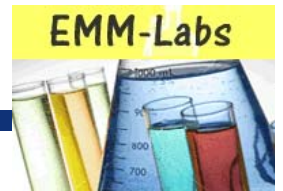


- Public site: <http://emm.newsbrief.eu/> (online since 2002)
- Categorises news into ~ 600 categories, using:
 - Boolean search word combinations
 - vicinity operators
 - optional weights
 - regular expressions

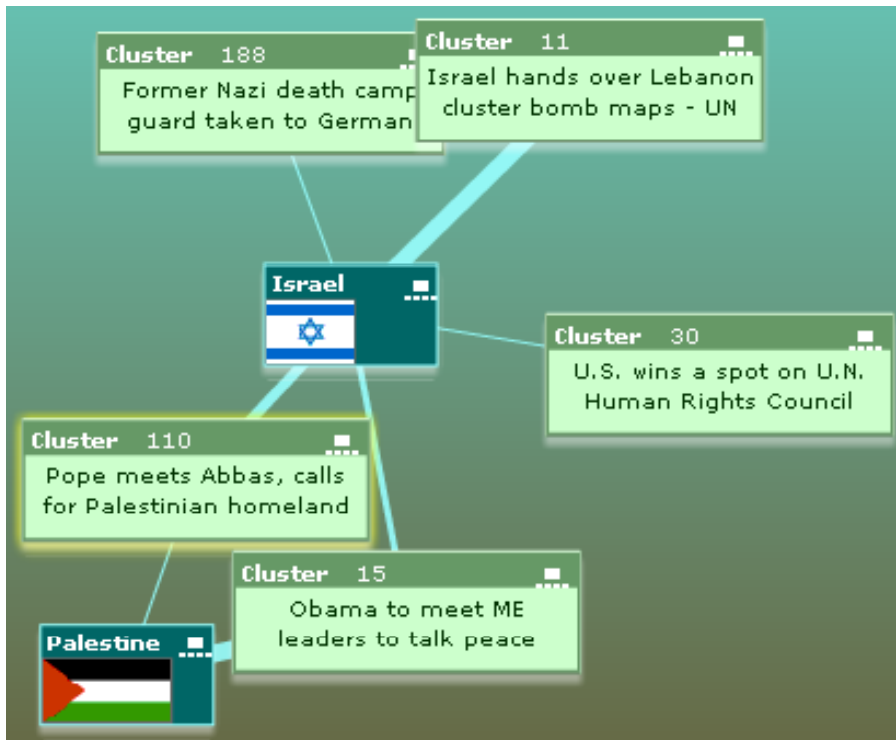
- Clusters and tracks news *live* (multi-monolingually)
- Detects breaking news
- Sends out email notifications for each category
- Also accessible as RSS, KML



Live display of latest geo-located news clusters



Display of relations between clusters and categories



MedSys – Filtering and classification in up to 50 languages



Home Diseases Bioterrorism Nuclear Chemical Other

EMM MedSys Medical Information System Updated every 10 minutes, 24 hours per day.

Search: all - All languages 18 September 2007 20:47:53 o'clock CEST

Latest News - Mustard gas

Mustardgas in the News

Number of articles for this alert (05/09/2007 to 18/09/2007)

Date	Number of articles for this alert	Articles per 10.000 received by the system
05/09/2007	1	0.1
06/09/2007	1	0.1
07/09/2007	1	0.1
08/09/2007	1	0.1
09/09/2007	1	0.1
10/09/2007	1	0.1
11/09/2007	1	0.1
12/09/2007	1	0.1
13/09/2007	1	0.1
14/09/2007	1	0.1
15/09/2007	1	0.1
16/09/2007	1	0.1
17/09/2007	1	0.1
18/09/2007	1	0.1

Zoom In: North America, South America, Europe, Africa, Asia, Australia, Original View

The country values are calculated by setting the number of articles mentioning a theme AND a country in relation to the number of articles about the theme and the number of articles about the country.

All (61) Medical (0) Newspapers (59) TV/Radio (2) Wires (0)

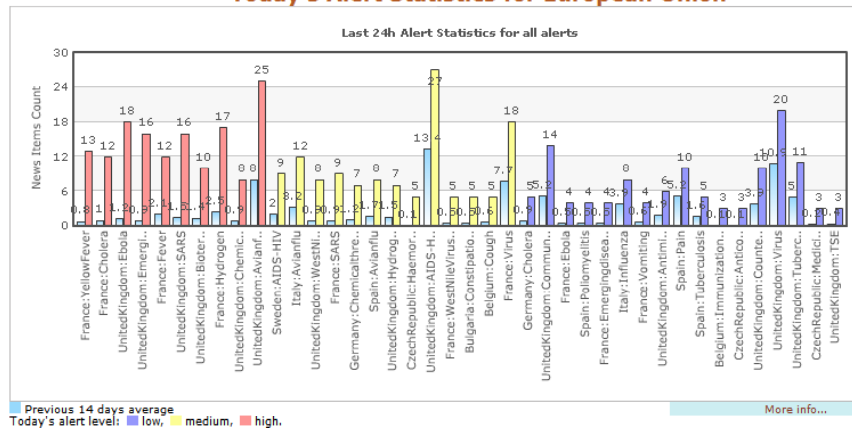
Page: 1 2 3 Next

[18/09/2007 15:24] (Ξένη δημοσίευση) - ΑΝΑΚΟΙΝΩΣΗ ΤΥΠΟΥ - HELEXPO AE - Απολογισμός 72ης ΔΕΘ
 18 September 2007 14:43:00 o'clock CEST
 (Ξένη δημοσίευση) - ΑΝΑΚΟΙΝΩΣΗ ΤΥΠΟΥ - HELEXPO AE - Απολογισμός 72ης ΔΕΘ HELEXPO A.E. Γραφείο Τύπου Δελτία Τύπου (18-9-2007) 72η ΔΕΘ: «ΔΕΘέλουμε να τελειώσει» ! Αυτή ήταν η εντύπωση - απαίτηση των 250.989 επισκεπτών της 72ης ΔΕΘ που κατέκλυσαν το Διεθνές Εκθεσιακό Κέντρο Θεσσαλονίκης από τις 9 Σεπτεμβρίου. Η «72η ΔΕΘ» τράβηξε τον νταβάνη της ανάπτυξης και της οικονομίας της Θεσσαλονίκης, αλλά και της Ελλάδας. Η 72η ΔΕΘ έφερε στην πόλη 252,9 εκατομμύρια ευρώ, 12,3 εκατομμύρια επισκέπτες, 12,3 εκατομμύρια κ.ι.λ.α. Η 72η ΔΕΘ έφερε στην πόλη 252,9 εκατομμύρια ευρώ, 12,3 εκατομμύρια επισκέπτες, 12,3 εκατομμύρια κ.ι.λ.α. Η 72η ΔΕΘ έφερε στην πόλη 252,9 εκατομμύρια ευρώ, 12,3 εκατομμύρια επισκέπτες, 12,3 εκατομμύρια κ.ι.λ.α.

WinGas: Περισσότερο φυσικό αέριο σε Βρετανία και Βέλγιο
 17 September 2007 14:46:00 o'clock CEST
 Η εταιρεία WinGas, BASF Συγκεκριμένα, η εταιρεία θα αυξήσει φέτος τις προμήθειες στους Βέλγους πελάτες της στα 12,3 δισ. κ.ι.λ.α. αερίου. Για το 2008 έχει ήδη υπογράψει συμφωνίες, οι οποίες

- Documents from all languages get classified according to the same countries and categories.
- An increase of the number of media reports on any country-category combination is detected, independently of the reporting language.
- **Graphs and alerts may show events not yet reported in your own language.**

Today's Alert Statistics for European Union



Ralf Steinberger, Flavio Fuart, Erik van der Goot, Clive Best, Peter von Etter & Roman Yangarber (2008). **Text Mining from the Web for Medical Intelligence**. In: Fogelman-Soulié Françoise, Domenico Perrotta, Jakub Piskorski & Ralf Steinberger (eds.): Mining Massive Data Sets for Security, pp. 295-310. IOS Press, Amsterdam, The Netherlands

Objective: global crisis monitoring. **Languages:** En, Fr, Es, It, Pt, Ru + (Ar)



В Турции террористы захватили 15 заложников
Turkey Lat/Lon: 39.9293,32.8533 Size: 18

Last update 2009-05-13T17:35+0200
Двое неизвестных в масках совершили в среду вооруженный налет на филиал банка в турецком курортном городе Кушадасы на побережье Эгейского моря...
Event Type: Kidnapping/Hostage Taking. Severity: 0 Killed, 0 Injured and 15 .Victims were no one killed and no one injured.

На турецком курорте грабители взяли в заложники посетителей банка

EMM-Labs

Освобождены захваченные в турецком банке заложники
news-орел 13.05.2009 17:40:00
Перевести:[ar] [bg] [zh] [hr] [cs] [da] [nl] [en] [fr] [de] [el] [hi] [it] [ja] [ko] [no] [pl] [pt] [ro] [es] [sv]

Турецкая полиция обезвредила налетчика, захватившего в заложники более 10 человек в банке в курортном городе Кушадасы на побережье Эгейского моря, передают местные СМИ. Полиция пошла на штурм банка....

Сдался полиции преступник, захвативший 10 заложников в банке Кушадасы
news-meta 13.05.2009 17:21:00
Турецкая полиция обезвредила налетчика, захватившего в заложники более 10 человек в банке в курортном городе Кушадасы на побережье Эгейского моря,.....

Полиция Турции обезвредила налетчика, захватившего заложников в банке
plan 13.05.2009 16:54:00
Драма с заложниками продолжалась более шести часов - с 11.00 местного времени (12.00 мск). По сообщению телеканалов NTV и CNN-Turk, полиции удалось убедить налетчика сдаться. Подробности проведенной операции пока неизвестны....

Google This page was automatically translated from Russian.
[View original web page](#) or mouse over text to view original language.

World news // Wednesday, May 13, 2009

In Turkey, an unknown masked seized 13 hostages in the bank

publication time: 14:29
Last Updated: 19:08

Images print download submit

The police stormed the bank in the western Turkish city of Kusadasi, where the hostages were 13 people. Robbers arrested, ITAR-TASS reported with reference to state television.



<http://emm.newsexplorer.eu/>

NewsExplorer News Analysis
Daily News Analysis, across languages and over time

Clustered news for Thursday, September 6, 2007

Latest News Summary
About EMM NewsExplorer


News language and date
en - English

Date: Sep 2007

Analysis over time
Timeline
Timeline for 09/06/2007

Clustering results:
 - United States (927)
 - United Kingdom (314)
 - China (149)
 - Japan (149)
 - India (95)
 - Canada (85)
 - Lebanon (74)
 - Pakistan (74)
 - Korea, Democratic (72)
 - Russian Federation (74)
 - Azerbaijan (71)
 - Congo, The Democratic Republic of The (67)
 - Iraq (62)
 - Iran, Islamic Republic of (60)
 - Afghanistan (59)
 - Portugal (57)
 - Nigeria (57)
 - Germany (56)
 - Kazakhstan, Territory (56)
 - Kazakhstan (55)
 - Kazakhstan (55)
 - George W. Bush (45)
 - Ben in Moon (43)
 - Luciano Pavarotti (18)
 - Vladimir Putin (12)

Since April 2004



News Analysis
RSS feed for the latest news summary
Daily News Analysis, across languages and over time

Clustered news for Thursday, November 22, 2007

Read more...

Main Menu

News Summary
About EMM NewsExplorer

News language and date

Language or country:

en - English

ar - Arabic

bg - български

es - Español

de - Deutsch

da - Dansk

en - English

et - Eesti keel

fa - Farsi

fr - Français

it - Italiano

nl - Nederlands

no - Norsk

pl - Polski

pt - Português

ro - Română

ru - Russian

sl - Slovensčina

sv - Svenska

tr - Türkçe

Countries

AT - Austria

BE - Belgium

DE - Germany

ES - Spain

FR - France

GB - United Kingdom

IT - Italy

NL - Netherlands

US - United States

AC - AFRICA



Philippines braced for typhoon
Tens of thousands of people evacuate south of capital Manila as storm approaches.

View with Google Earth

Countries

- United States (492)
- United Kingdom (196)
- Russian Federation (83)
- Zimbabwe (67)
- France (52)
- China (58)
- Italy (58)
- Afghanistan (56)
- Uganda (54)
- Angola (48)
- South Africa (45)
- Pakistan (42)
- Netherlands (38)
- Canada (36)
- Congo, The Democratic Republic Of The (36)
- Philippines (34)
- Australia (33)
- Spain (33)
- Saudi Arabia (31)
- Turkey (30)
- Korea, Republic Of (30)
- Korea, Democratic People's Republic Of (29)
- Greece (28)

Related People

- Steve McClaren (42)
- George W. Bush (29)
- Pervez Musharraf (26)
- Brian Barwick (20)
- Nicolas Sarkozy (18)
- Mohamed ElBaradei (14)
- Kevin Rudd (14)
- Martin O'Neill (14)
- Vladimir Putin (14)
- John Howard (13)
- Geoff Thompson (12)
- José Mourinho (12)
- Gordon Brown (11)
- Hugo Chavez (11)
- Mahmoud Abbas (10)
- Sven Goran Eriksson (10)
- Jan de Hoop Scheffer (10)

Pakistan court dismisses final Musharraf challenge [32]
de es fr it nl ar bg da pl pt ru sl sv tr

Pakistan's new-look Supreme Court has, as expected, dismissed the last challenge to President Pervez Musharraf's re-election.
euronews-en 2:31:00 PM CET

Iran heading transparency pledge, more needed - IAEA [32]
de es fr it da pt tr

efforts on schedule, countering Western doubts, but Tehran must step up cooperation to resolve remaining questions this year. Mohamed ElBaradei summarised findings of an International Atomic Energy Agency report on Iran at a debate of the IAEA's governing board, where differences simmered over....
austrianews 6:23:00 PM CET

Chinese bluster on Tibet and Taiwan [29]
de es fr it nl da pt sv

Contrary to expectations, China is not doing much to soften its image ahead of the Beijing Olympics by allowing its domestic critics to speak their minds or championing human rights in Sudan. Instead, Chinese leaders are defending authoritarian rule at home and abroad and waqing aggressive diplomacy against those who

This Week's New Stories

Claimants warned of fraud fears
November 20, 2007 - November 22, 2007
Search resumes at house after double body find
November 15, 2007 - November 17, 2007
Mbeki seeks Mugabe deal for summit
November 15, 2007 - November 22, 2007
Ex-Rhodesia leader Ian Smith dies
November 20, 2007 - November 22, 2007
Tapas Nine witness says 'Mediterranean man took Madeleine'
November 17, 2007 - November 21, 2007
Queen and Duke mark anniversary
November 17, 2007 - November 20, 2007
Philippines in 'separatist deal'
[Read more...](#)

This Month's New Stories

Cyclone leaves 242 dead in Bangladesh
November 14, 2007 - November 22, 2007
Georgia declares state of emergency
October 31, 2007 - November 22, 2007
France gripped by massive strike
November 12, 2007 - November 22, 2007
Space crew fixes solar wing
October 23, 2007 - November 14, 2007
Vegas showdown: Clinton 'on the hot seat'
October 23, 2007 - November

JRC EUROPEAN COMMISSION

NewsExplorer – Cross-lingual cluster linking

Multilingual Information Access Technology Transfer Day, Berlin, Germany, 8 December 2009

Castro quits as president, state-run paper reports [72]
de es fr it nl ar bg da et fa no pl pt ro ru sl sv tr

Fidel Castro announced his resignation as president of Cuba and commander-in-chief of Cuba's military on Tuesday, according to a letter published by state-run newspaper Granma.
cnn 9:23:00 AM CET

گزارش تلویزیون فرانسه از کناره گیری فیدل کاسترو
شبهه بین المالی فرانسه 24 در برنامه ویژه ای به مناسبت کناره گیری فیدل کاسترو از قدرت در کوبا با تحلیلگری سیاسی خود به گفتگی پرداخت. زمان برنار کادیه تحلیلگری سیاسی این شبکه گفت دوره انتقالی بین از فیدل کاسترو در کوبا از منتهی پیش آغاز شده است. در 31 ژوئیه 2006 وی زمام قدرت را به برادرش راوول کاسترو سپرد و...
iranpressnews 13:36:00 o'clock CET

Kuba: Fidel Castro gibt das Zepter ab
en es fr it nl ar bg da et fa no pl pt ro ru sl sv tr

Der legendäre kubanische Staatschef verzichtet laut Online-Ausgabe der kommunistischen Parteizeitung auf die Führung der Insel.
kleinezeitung 10.

Fidel Castro zrezygnował!
de en es fr it nl

Przywódca kubański Fidel Castro po 49 latach rządów zrezygnował we wtorek z funkcji przewodniczącego Rady Państwa Kuby.

Fidel Castro renunciou à presidência de Cuba
de en es fr it nl

Anúncio no órgão oficial do Partido Comunista cubano Fidel Castro anunciou hoje que se retira da presidência de Cuba.

Fidel Castro se retrage de la presedintia Cubei
de en es fr it nl

Fidel Castro a anunțat, marti, ca renunța la presedintia Cubei, in editia electronica a cotidianului "Granma".

Cuba, Fidel Castro rinuncia alla presidenza
de en es fr nl ar bg da et fa no pl pt ro ru sl sv tr

Cubaanse president Fidel Castro afgetreden
de en es fr it ar

Кубански водител Fidel Castro je danas sporočil, da se odpoveduje položaju predsednika države. Kot je objavil na spletni izdaji uradnega glasila Granma, se ne poteguje in ne bo nastopil na položaju predsednika države.

Värmbys skakade hand med Fidel Castro.
de en es fr it nl

- Ja. Jag har inte tvättat högernäven sedan dess, 1983. Jag var på en stor sammandragning på Kuba med uppmaningen att USA skulle häva blockaden mot landet.
smpt kl 19:51 CET

Фидель Кастро отказался от поста председателя Госсовета Кубы
de en fr it nl

ГЛАВНА, 19 февраля. /ИТАР-ТАСС/. Фидель Кастро отказался от поста главы государства и правительства - председателя Государственного совета Кубы. Об этом он сообщил в обращении к гражданам.

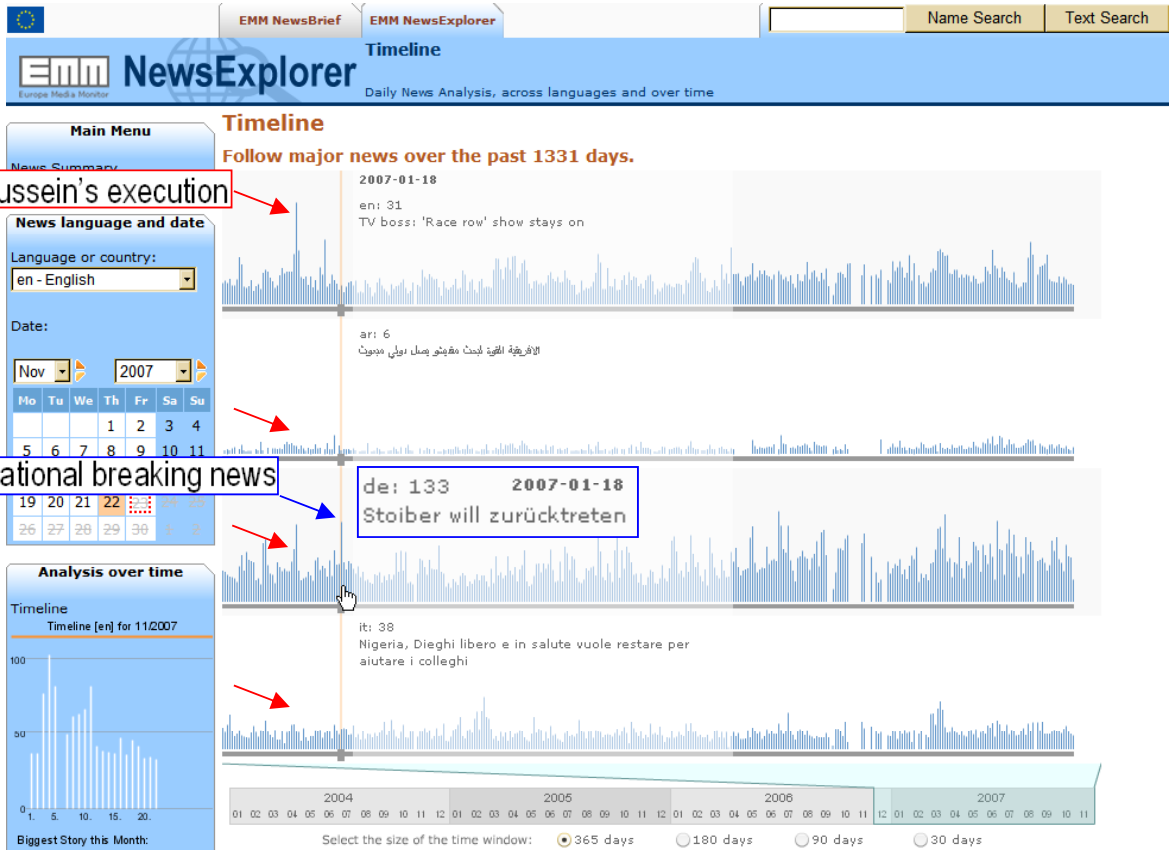
Bir dönemin sonu
de en es fr it nl

Küba Komünist Partisi'nin yayın organı Granma'ya açıklama yapan Castro, devlet başkanlığına geri dönmeyeceğini belirtti. Fidel Castro 1959 yılından beri ülkeyi yönetiyordu. Ancak 2006'da geçirdiği ağır ameliyattan beri iktidar koltuğundan uzak kaldı. Ülke yönetimine, ağabeyi Fidel Castro'ya vekalet eden Raul Castro bakıyordu.
hurvetim 10:15:00 CET

Fogh vil ikke savne Castro
de en es fr it nl

REPLIK: Castro-aja lõpu algus
de en es fr it nl

Üks 20. sajandi menukam vabadus-võitleja ja tuntum diktaator Fidel Castro kui Nõukogude "geronidid", kelle jaoks tähendas lahkumine võimult ka võim kestab vähemalt esitsotsiaalsed, sest esimeseks asendajaks peetakse teda.
lepl 23:17:00 CET



Thursday, November 22, 2007

Pakistan court dismisses final Musharraf challenge de es fr it nl ar bg da pl pt ru sl sv tr

Pakistan's new-look Supreme Court has, as expected, dismissed the last challenge to President Pervez Musharraf's re-election.
euronews-en 2:31:00 PM CET

Did Pakistan Face Rule? A Little Test Says No

Emergency rule 'destroying the judiciary'
BangkokPost 8:26:00 PM CET

Exiled ex-PM Sharif plots return to Pakistan
usaToday 10:58:00 PM CET

Pakistan Court Rules for Musharraf
ABCnews 2:43:00 PM CET

'Bush unembarrassed by Pakistan emergency'
dailytimesPK 12:28:00 AM CET

PM in Uganda for Commonwealth summit
TorontoStar 5:40:00 PM CET

Commonwealth to drop Pakistan
guardian 1:03:00 PM CET

Pakistan's Commonwealth suspension in sorrow, not anger: Britain (AFP)
news-yahoo 11:34:00 PM CET

Pakistan: Emergency and chaos

Countries

- Pakistan (26)
- United States (13)
- Saudi Arabia (10)

Places

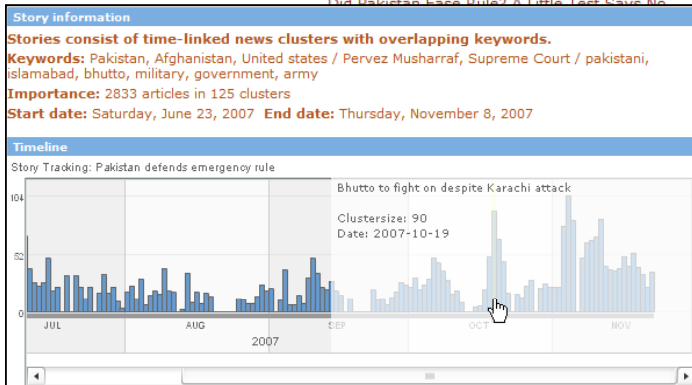
- Islamabad(PK)
- Rawalpindi(PK)
- Karachi(PK)
- Washington(US)
- Ar Riyad(SA)
- Jiddah(SA)

Related People

- Pervez Musharraf (26)
- Imran Khan (6)
- George W. Bush (5)
- Gordon Brown (4)
- Don McKinnon (4)
- Nawaz Sharif (4)
- Benazir Bhutto (3)
- Malik Mohammad Qayyum (3)
- Iftikhar Muhammad Chaudhry (2)
- Aitzaz Ahsan (2)
- Ahsan Iqbal (2)
- Thomas Jefferson (2)
- Asma Jahangir (2)
- David Cameron (2)
- Louise Arbour (1)
- Qazi Hussain Ahmed (1)
- Stephen Harper (1)
- Najam Sethi (1)
- Khalid Hassan (1)
- Hina Jilani (1)
- Wajihuddin Ahmed (1)
- John Negroponte (1)
- Rashid Qureshi (1)
- Jemima Khan (1)
- Benazir Bhutto (1)

Other Names

- Supreme Court (27)
- Human Rights Watch (3)
- Pakistan Muslim League (2)
- High Court (2)
- High Commission (2)
- GEO Television (2)
- Human Rights Commission (1)
- Al Qaeda (1)



This cluster belong to the following story: Pakistan defends emergency rule

islamabad, bhutto, military, government, army
Start date: Saturday, June 23, 2007

7 days before. Musharraf unveils new interim PM *Similarity: 0.87*

Tendulkar sets up series win over Pakistan *Similarity: 0.34*

6 days before. Musharraf swears in caretaker cabinet *Similarity: 0.83*


5 days before. US envoy meets Musharraf *Similarity: 0.85*

Pakistan-India tennis series : Pakistan win second leg to level series 1-1 *Similarity: 0.34*

4 days before. US tells Musharraf to step back *Similarity: 0.86*

Pervez Musharraf

Information about this person was last updated on Friday, November 23, 2007.

Names	Key Titles and Phrases	External resources
Pervez Musharraf (Eu,sv) General Pervez Musharraf (da,sv) Gen Musharraf (en) Pervez Mušaraf (sl) Gen Pervez Musharraf (en) Pervez Musharrafs (da,sv) Pervez Musharraf (da,sv) Первез Мушарраф (ru) Perwez Musharraf (fr,sv) Pervez Moucharraf (fr) برويز مشرف (ar) Perveza Mušarafa (sl) Pervez Muscharraf (de) Pervez Muscharraf (de)	pakistani president (en - 827) president (de,sv - 3230) president gen (en - 506) président pakistanais (fr - 398) pakistaanse president (nl - 235) presidente paquistaniês (pt - 277) pakistani president gen (en - 181) presidente paquistani (es - 147) präsident (de - 617) general (en,sv - 450) präsidente (da - 210) presidente (es,pt - 589) president, gen (en - 62)	

Latest Clusters - English

[de] [pt] [es] [nl] [fr] [ar] [sv] [it] [da] [pl] [sl] [ro] [ru] [no] [bg]

Pakistan court dismisses final Musharraf challenge Struggle to help cyclone survivors in Bangladesh
euronews 22-NOV-07 cnn 21-NOV-07

Quotes from - English

[es] [ru] [sv] [pt] [nl] [de] [fr] [no] [bg] [it]

[-has said]: Where it fails to live up to those values, it needs to act with credibility and consistency. I think Pakistan is a test in that respect.
bday 22-NOV-07

[-has repeated]: The (presidential) oath can be taken ... by the weekend or immediately thereafter.

Quotes about - English

[es] [bg] [de] [pt] [ro] [fr] [no] [nl]

[said]: The m to improve the instead,

Rice [-said]: And look, a lot of that was done by (Pervez) Musharraf himself. And so for him at this point to help put his country back on the road to democratic reform is important. We're looking for him to take off his uniform,
expressindia 22-NOV-07

Brad Adams [said]: It's disgraceful that Musharraf is punishing Chief Justice Ch who challenged his power-grab, by keep judge's family under house arrest,
HumanRightsWatch 22-NOV-07

Brad Adams [said]: Rather than making

Brown [-said]: He (Musharraf) has assured

Related People

- Benazir Bhutto (910)
- Nawaz Sharif (552)
- George W. Bush (537)
- Iftikhar Muhammad Chaudhry (502)
- Osama bin Laden (430)
- Shaukat Aziz (395)
- Tariq Azeem (251)
- Ha **Other Names**
- Co Al Qaeda (855)
- Wa Supreme Court (505)
- Aft White House (312)
- (2(NATO (207)
- Ayr GEO Television (197)
- Im Lal Masjid (187)
- Abi Tautas Partija (176)
- nt Daily Times (153)

Associated People (51)

- Salman Bashir (1.9)
- Джон Нерпопonte (1.5)
- Nawaz Sharif (1.2)
- Раджа Омар Хатаб (1.2)
- Мухоммада Али Джинны (1.2)
- Зульфикара Али Бхутто (1.2)
- Iftikhar Muhammad Chaudhry (1.1)

Related Stories

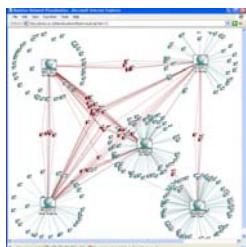
- Pakistan defends emergency rule
- 1. June 23, 2007 - November 22, 2007
- (1. Pakistan's president urges calm
- May 5, 2007 - June 23, 2007
- Troops launch hostage rescue bid
- June 23, 2007 - October 25, 2007
- Protests in Pakistan take aim at President Musharraf
- March 10, 2007 - April 3, 2007
- 42 die in bomb attacks on 'lucky' weekend
- July 15, 2007 - October 25, 2007
- Demonstrations at UK embassy in Iran

NewsExplorer – Relation exploration

Associated People

- Salman Bashir (1.9)
- Джон Нерпопonte (1.5)
- Nawaz Sharif (1.2)
- Раджа Омар Хатаб (1.2)
- Мухоммада Али Джинны (1.2)
- Зульфикара Али Бхутто (1.2)
- Iftikhar Muhammad Chaudhry (1.1)
- Christian College (1.1)
- Tariq Azeem (1.1)
- Benazir Bhutto (1.1)
- Malik Mohammad Qayyum (1.0)
- Chaudhry Shujaat Hussain (1.0)
- Furqan Bahadur (1.0)
- Javed Cheema (0.9)
- Shaukat Aziz (0.9)
- Abdul Rashid Ghazi (0.9)
- Amir Mir Lahore (0.9)
- Amin Fahim (0.9)
- Гордон Джонроу (0.9)
- Wajihuddin Ahmed (0.9)
- Mohammed Ali Durrani (0.9)
- Rashid Qureshi (0.9)
- Oazi Hussain Ahmed (0.9)

Example: Pervez Musharraf & Iftikhar Chaudhry



- Document **clustering**
- **Named entity recognition** (persons, organisations)
- Name **variant matching**, including across scripts (transliteration, string similarity calculation)
- **Geo-tagging** (recognition and disambiguation of locations)
- Multi-label document **categorisation**
- **Quotation** recognition (and reference resolution for name parts)
- **Social network generation** (based on co-occurrence, quotations, relation types)
- **Topic detection and tracking** (TDT) (Multi-monolingual cluster similarity calculation)
- **Cross-lingual cluster similarity** calculation (for cross-lingual TDT).

Importance of multilinguality



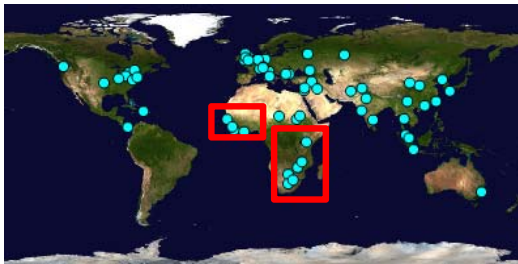
Locations mentioned in MedISys medical articles across languages – complementary coverage



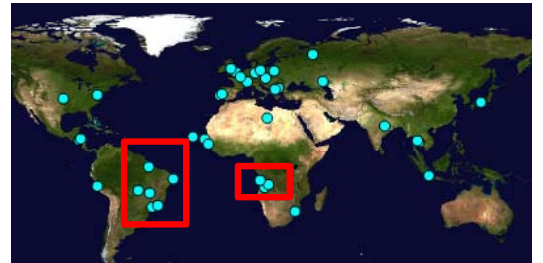
Italian - German



English - French




Spanish - Portuguese



Alexander Litvinenko

Information about this person was last updated on Dienstag, 20. März 2007.

Names	Key Titles and Phrases	External resources
Alexander Litvinenko (Eu,nl)	russo (it,pt - 349)	 <p>Image obtained automatically from Wikipedia</p> <p>Read Wikipedia entry</p>
Alexander Litwinenko (de)	agent russe (fr - 134)	
Alexandre Litvinenko (fr)	ruso (es - 208)	
Aleksandr Litvinenko (fi,no)	agenten (de,sv - 134)	
Aleksander Litvinenko (nl,sv)	kritikers (de - 79)	
Александра Литвиненко (ru)	agent (en,sv - 130)	
Александр Литвиненко (ru)	russa (it,pt - 76)	
Alexander Litvinenko (it)	agent secret russe (fr - 39)	
Alexander V. Litvinenko (en)	russe (de,fr - 73)	
Alexandr Litvinenko (it)	former russian agent (en - 20)	
Alexander Litvineko (es)	morte di (it - 45)	
Alexandre Livinenko (fr)	ryske agenten (sv - 13)	
Alexander Litvenenko (en)	kritiker (de - 19)	
亞歷山大·利特維年科 (zh)	43 ans (fr - 17)	
Oleksandr Lytvynenko (en)	russi (it - 14)	
Olexandre Litvinenko (fr)	russian (en - 15)	
Aleksandar Litvinjenko (hr)	omicidio di (it - 11)	
Alexander Litvinenk (it)	officer (en - 13)	
アレクサンダー・リトビネンコ (ja)	former (en - 16)	
Alexander Walterowitsch Litwinenko (de)		

Steinberger Ralf & Bruno Pouliquen (2007). Cross-lingual Named Entity Recognition. In: Satoshi Sekine & Elisabete Ranchhod (eds.), Journal *Linguisticae Investigationes*, Special Issue on Named Entity Recognition and Categorisation, LI 30:1, pp. 135-162. John Benjamins Publishing Company. ISSN 0378-4169.

Castro quits as president, state-run paper reports [72] de es fr it nl ar bg da et fa no pl pt ro ru sl sv tr



Fidel Castro announced his resignation as president of Cuba and commander-in-chief of Cuba's military on Tuesday, according to a letter published by state-run newspaper Granma. cnn 9:23:00 AM CET

گزارش تلویزیون فرانسه از کناره گیری فیدل کاسترو شبکه بین المللی فرانس 24 در برنامه ویژه ای به مناسبت کناره گیری فیدل کاسترو از قدرت در کوبا با تحلیلگر سیاسی خود به گفتگی پرداخت. ژان برنار کابیه تحلیلگر سیاسی این شبکه گفت دوره انتقالی پس از فیدل کاسترو در کوبا از مندی پیش آغاز شده است. در 31 ژوئیه 2006 وی زمام قدرت را به برادرش راوول کاسترو سپرد... iranpressnews 13:36:00 o'clock CET

Kuba: Fidel Castro gibt das Zepter ab en es fr it nl ar bg da et fa no pl pt ro ru sl sv tr

Der legendäre kubanische Staatsoberhaupt verzichtet laut Online-Ausgabe der kommunistischen Parteizeitung a Fidel Castro zrezygnował! de en es fr it nl

Przywódca kubański Fidel Castro po 49 latach rządów zrezygnował we wtorek z funkcji przewodniczącego Rady Państwa Kuby. Fidel Castro renunciou à presidência de Cuba de en es fr it nl

Anúncio no órgão oficial do Partido Comunista cubano Fidel Castro anunciou hoje que se retira da Fidel Castro se retrage de la presidencia CUBEI de en es fr it nl

Fidel Castro a anunțat, marți, că renunța la președinția Cubei, în editia electronica a cotidianului Fidel Castro se je odpovedal položaju kubanskega predsednika de en es fr it nl

Kubanski voditelj Fidel Castro je danes sporočil, da se odpoveduje položaju predsednika države. Kot je Castro še zapisal v sporočilu, objavljenem v spletni izdaji uradnega glasila Granma, se ne poteguje in Värnby skakade hand med Fidel Castro. de en es fr it nl

- Ja. Jag har inte tvättat högernäven sedan dess, 1983. Jag var på en stor sammandragning på Kuba med uppmaningen att USA skulle häva blockaden mot landet. smp kl 19:51 CET

Фидель Кастро отказался от поста председателя Госсовета Кубы de en es fr it nl

ГАВАНА, 19 февраля. /ИТАР-ТАСС/. Фидель Кастро отказался от поста главы государства и правительства - председателя Государственного совета Кубы. Об этом он сообщил в обращении к дство

Bir dönemin sonu de en es fr it nl

Küba Komünist Partisi'nin yayın organı Granma'ya açıklama yapan Castro, devlet başkanlığına geri dönmeyeceğini belirtti. Fidel Castro 1959 yılından beri ülkeyi yönetiyordu. Ancak 2006'da geçirdiği ağır ameliyattan beri iktidar koltuğundan uzak kaldı. Ülke yönetimine, ağabeyi Fidel Castro'ya vekalet eden Raul Castro bakıyordu. hurriyetim 10:15:00 CET

Fidel Castro går av de en es fr it nl

Fidel Castro renuncia a la Presidencia del Consejo de Estado de et no pl pt ro sl sv tr

A Cuba, Fidel Castro renonce au pouvoir de en es it nl ar bg da et ru sl sv tr

Cuba, Fidel Castro rinuncia alla presidenza de en es fr nl ar bg d ru sl sv tr

Cubaanse president Fidel Castro afgetreden de en es fr it ar ro ru sl sv tr

كاسترو يستقيل ويوش يدعو للتحول الديمقراطي في كوبا

فيلد كاسترو، بالتحتي عن منصبه كرئيس للبلاد. وقال بوش: "إن على المجتمع الدولي أن يعمل مع الشعب الكوبي للبدء بإقامة مؤسسات

Кастро се оттегли от президентския пост de en es fr it nl

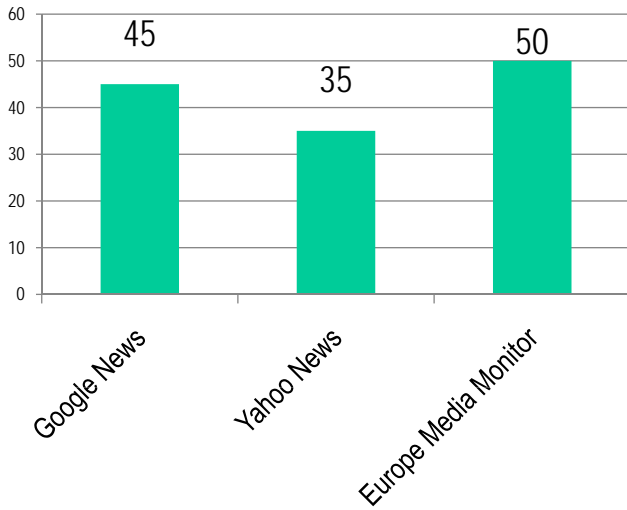
Фидел Кастро обяви, че се отказва от президентския пост, съобщава АФП.

Fogh vil ikke savne Castro de en es fr it nl

REPLIK: Castro-aja lõpu algus de en es fr it nl

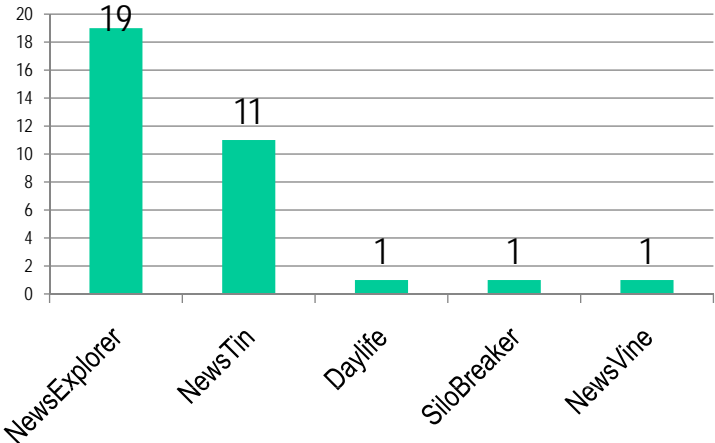
Üks 20. sajandi vabamalt vöitleja ja tuntum diktaator Fidel Castro kui Nõukogude "geronidid", kelle jaoks tähendas lahkumine võimult ka võim kestab vähemalt esitsota edasi, sest esimeseks asendajaks peeta epl 23:17:00 CET

News aggregators



in early 2008: 34, 17, 43 languages

News analysis systems



in early 2008: the same



Social networks produced on the basis of many languages are **more complete** and **less biased**.

Associated People

- Salman Bashir (1.9)
- Джон Негропонте (1.5)
- Nawaz Sharif (1.2)
- Раджа Омар Хатаб (1.2)
- Мухоммада Али Джинны (1.2)
- Зульфикара Али Бхутто (1.2)
- Iftekhar Muhammad Chaudhry (1.1)
- Christian College (1.1)
- Tariq Azeem (1.1)
- Benazir Bhutto (1.1)
- Malik Mohammad Qayyum (1.0)
- Chaudhry Shujaat Hussain (1.0)
- Furqan Bahadur (1.0)
- Javed Cheema (0.9)
- Shaukat Aziz (0.9)
- Abdul Rashid Ghazi (0.9)
- Amir Mir Lahore (0.9)
- Amin Fahim (0.9)
- Гордон Джонроу (0.9)
- Wajihuddin Ahmed (0.9)
- Mohammed Ali Durrani (0.9)
- Rashid Qureshi (0.9)
- Oazi Hussain Ahmed (0.9)



[live](#)

Pouliquen Bruno, Ralf Steinberger, Jenya Belyaeva (2007). **Multilingual multi-document continuously updated social networks**. Proceedings of the Workshop *Multi-source Multilingual Information Extraction and Summarization (MMIES'2007)* held at **RANLP'2007**, pp. 25-32. Borovets, Bulgaria, 26 September 2007. (PDF)

Hristo Tanev (2007). **Unsupervised Learning of Social Networks from a Multiple-Source News Corpus**. Proceedings of the Workshop *Multi-source Multilingual Information Extraction and Summarization (MMIES'2007)* held at **RANLP'2007**, pp. 33-40. Borovets, Bulgaria, 26 September 2007. (PDF)

EMM user requirements
EMM insights

- Many languages, more languages, depending on user group
 - Majority of EU institutions: the 23 official EU languages
 - Public Health: Asian, African
 - Nuclear Safeguards: countries with nuclear facilities or aspirations
 - Humanitarian Aid: crisis areas, e.g. in Africa, Asia or Latin America
- Multilingual, multi-document summarisation, update summarisation. But: how?

US President Obama to Set out Afghan Troop Strategy [56] de es fr it nl ar bg da et fa no pl pt ro ru sl sv tr

US President Barack Obama is set to unveil his new Afghan strategy, with an expected commitment to send thousands more troops to fight the Taliban, the BBC informs. Mr Obama will make his announcement in a televised speech to cadets at the US Military Academy at West Point. *geotimes 9:30:00 AM CET*

Nato commits additional Afghanistan troops

Story information
 Stories consist of time-linked news clusters with overlapping keywords.
Keywords: Afghanistan, United states / NATO, Hamid Karzai / afghan, taliban, troops, forces, killed, military
Importance: 7823 articles in 330 clusters
Start date: Tuesday, January 13, 2009 **End date:** Wednesday, December 2, 2009

Nato commits additional Afghanistan troops

Story information
 Stories consist of time-linked news clusters with overlapping keywords.
Keywords: Afghanistan, United states / NATO, Hamid Karzai / afghan, taliban, troops, forces, killed, military
Importance: 7823 articles in 330 clusters
Start date: Tuesday, January 13, 2009 **End date:** Wednesday, December 2, 2009

Timeline
 Story Tracking: Nato commits additional Afghanistan troops

Associated People
 Hamid Karzai (42.8)
 Barack Obama (32.7)
 Stanley McChrystal (21.6)
 Abdullah Abdullah (18.5)
 Gordon Brown (11.6)
 Sean Brown (10.2)
 Gulam Mohyuddin (10.1)
 Richard Holbrooke (9.2)
 Robert Gates (9.1)
 Marc Diab (8.0)
 Hillary Rodham Clinton (7.9)
 Qafoor Khan (6.8)
 Mullah Gustaf (6.8)

Other Names
 NATO (844)
 Al Qaeda (2120)
 White House (1162)
 United Nations (739)
 The Pentagon (712)
 International Security Assistance Forces (578)
 New York Times (326)
 Interior Ministry (214)
 Ministry of Defence (112)

Latest Clusters - English
 Obama to send 30,000 troops to Afghanistan *RTRadio Wednesday, December 2, 2009*
 US President Obama to Set out Afghan Troop Strategy *geotimes Tuesday, December 1, 2009*
 Afghan pressure mounts on Nato allies *R Monday, November 30, 2009*
 Gordon Brown announces Afghan conference to decide exit strategy *Sunday, November 28, 2009*
 Conference to explore handing control back to Afghan locals *one Saturday, November 28, 2009*
 Top NATO general to visit Ottawa next month to talk Afghanistan *ThePostStar Friday, November 27, 2009*
 Obama soon to unveil his Afghan plan (AFP) *Obama vows to 'finish job' in Afghan conflict*

- Machine Translation, including for less widely spoken languages

14:16 منظمة الصحة تحذر من تجدد ظهور فيروس أنفلونزا الطيور

elnashra 24 نوفمبر 2009 CET 01:31:00 info | إن منظمة الصحة العالمية "من احتمال تجدد ظهور مرض أنفلونزا الطيور بعد تسجيل حالات جديدة للفيروس في مصر وإندونيسيا وتايلاند وفيتنام"، مشيرة إلى مراقبتها خطورة "حدوث خليط بين فيروس أنفلونزا الطيور وأنفلونزا الخنازير مما سيؤدي إلى ظهور سلالة جديدة من المرض أكثر فتكا".



- Although even other simple CLIA methods are useful



آخر الأخبار - Avian flu

14:16 منظمة الصحة تحذر من تجدد ظهور فيروس أنفلونزا الطيور

elnashra 24 نوفمبر 2009 CET 01:31:00 info | إن منظمة الصحة العالمية "من احتمال تجدد ظهور مرض أنفلونزا الطيور بعد تسجيل حالات جديدة للفيروس في مصر وإندونيسيا وتايلاند وفيتنام"، مشيرة إلى مراقبتها خطورة "حدوث خليط بين فيروس أنفلونزا الطيور وأنفلونزا الخنازير مما سيؤدي إلى ظهور سلالة جديدة من المرض أكثر فتكا".

- MT not on demand, but pre-translated (expensive)

Avian flu - آخر الأخبار
 Articles published more than 1 day ago
 إن منظمة الصحة العالمية تحذر من تجدد ظهور فيروس أنفلونزا الطيور بعد تسجيل حالات جديدة للفيروس في مصر وإندونيسيا وتايلاند وفيتنام، مشيرة إلى مراقبتها خطورة "حدوث خليط بين فيروس أنفلونزا الطيور وأنفلونزا الخنازير مما سيؤدي إلى ظهور سلالة جديدة من المرض أكثر فتكا".

The art of - the emergence of bird flu
 The World Health Organization warned "the likelihood of renewed the emergence of bird flu after the registration of new cases of the virus in poultry in Egypt, Indonesia, Thailand and Vietnam," referring to the supervision of the seriousness of "the occurrence of a mixture between bird flu virus and avian pigs, which will lead to the emergence of a new strain of the disease more lethal."

14:16 WHO warns of the resurgence of bird flu virus

The World Health Organization warned "the likelihood of renewed the emergence of bird flu after the registration of new cases of the virus in poultry in Egypt, Indonesia, Thailand and Vietnam," referring to the supervision of the seriousness of "the occurrence of a mixture between bird flu virus and avian pigs, which will lead to the emergence of a new strain of the disease more lethal."

- **Information fusion** before presentation to the users would save time and effort

- Translating everything into one target language is good, but has drawbacks.
 - Important specific terms and names are often not translated, or translated badly, e.g.
 - Person and organisation names
 - Locations
 - Names of diseases and toxins
- Our insight: source language information extraction is better for information filtering than searching machine-translated text
 - MT as a second step

- **Keep applications simple!**

- Not only from the user's point of view, but also from the developer's point of view, e.g. multilingual EMM category definitions
 - Manually produced Boolean combinations or cumulative weights, using wild cards
 - Faster and easier than learning categorisers for hundreds of classes in 50 languages
- Ideally language-independent rules, to which language-specific resources can be plugged in
- If possible, avoid language pair-specific resources
 - $N*(N-1) / 2$ language pair combinations
 - NewsExplorer's 19 languages: 171 language pairs!

Steinberger Ralf, Bruno Pouliquen & Camelia Ignat (2008). **Using language-independent rules to achieve high multilinguality in Text Mining**. In: Fogelman-Soulié Françoise, Domenico Perrotta, Jakub Piskorski & Ralf Steinberger (eds.): Mining Massive Data Sets for Security, pp. 217-240. IOS Press, Amsterdam, The Netherlands. (Overview article explaining the design principles to achieve highly multilingual applications such as NewsExplorer) (PDF)

→ Need for **uniform highly multilingual resources** for information extraction, etc.

Similar to Multext and Multext-East, EuroWordNet, JRC-Acquis, ...

- Multilingual **gazetteers** for geo-coding
- Multilingual **dictionaries** using the same features and format
- Multilingual **taggers and parsers** producing the same output type and output format.
- Multilingual annotated text **corpora**
- **Single access point for licensing** issues
- Negative example: dependency parsers to be used for relation and event extraction
- ...

Summary

- Europe Media Monitor applications (EMM; <http://press.jrc.it/overview.html>):
 - Users
 - Functionality



- Importance of multilinguality
- EMM user requirements
- Our insights