Piattaforme bioinformatiche di sorveglianza: l'esempio di MedISys

Centro comune di ricerca (CCR)

Commissione Europea

Text and Data Mining Unit

Jens Linge, Marco Verile, Eleonora Mantica, Erik van der Goot

We all do media monitoring

Favourite newspapers (browser, app, rss, print)

Google news alerts

https://www.google.com/alerts

Email alerts from expert sites (e.g. ProMED-mail)

http://www.promedmail.org

Twitter (App, Tweetdeck)

https://tweetdeck.twitter.com

Browsing blogs and dedicated websites, reddit

Scientific literature

Epidemic intelligence

Event-based surveillance:

Soft data (news reports, news wires, social media)

Indicator-based surveillance:

Hard data (indicators such as mortality rates, notifications from health care providers)

MEDISYS

Reads approx. 300k news items & 55M tweets per day

Analyze:

     categorize, filter, geolocate, statistics
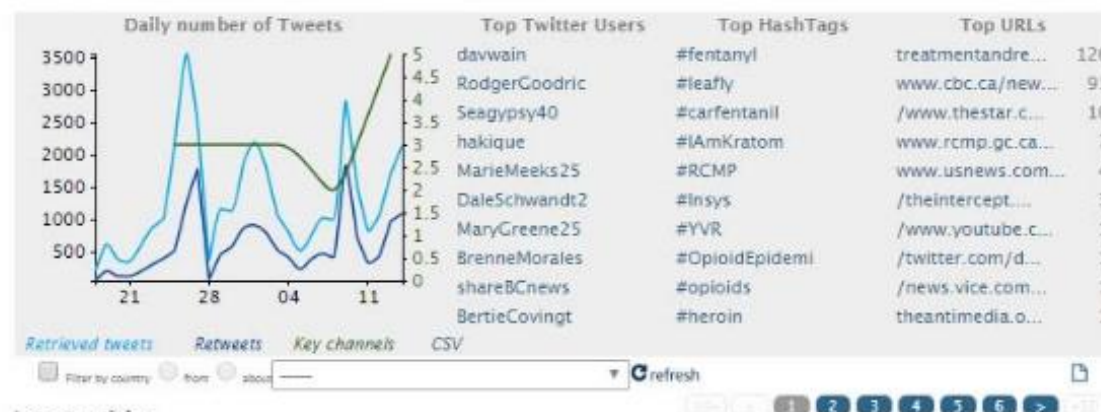
     entity and event metadata extraction

Present results:

     website, email alerts, rss, moderation tools

http://medisys.newsbrief.eu

Latest News About - Fentanyl

Daily number of Tweets	Top Twitter Users	Top HashTags	Top URLs	
	davwain	#fentanyl	treatmentandre...	126
	RodgerGoodric	#leafly	www.cbc.ca/new...	91
	Seagypsy40	#carfentanil	/www.thestar.c...	10
	hakique	#IAmKratom	www.rcmp.gc.ca...	7
	MarieMeeks25	#RCMP	www.usnews.com...	4
	DaleSchwandt2	#Insys	/theintercept...	3
	MaryGreene25	#YVR	/www.youtube.c...	1
	BrenneMorales	#OpioidEpidemi	/twitter.com/d...	1
	shareBCnews	#opioids	/news.vice.com...	1
	BertieCovingt	#heroin	theantimedia.o...	1

Retrieved tweets   Retweets   Key channels   CSV

Filter by country   from   about ———————————— ▾ C refresh

‹‹ ‹ 1 2 3 4 5 6 › ››

Latest articles

RCMP officers tell their story of being exposed to fentanyl ↪
🇨🇦 globalnews Wednesday, September 14, 2016 3:29:00 PM CEST | info [other]

By Online News Producer Global News Amy Judd ABOVE: Two RCMP officers from Kamloops are speaking out and sharing their story of accidental exposure to fentanyl. Catherine Urquhart reports. Some B.C. RCMP officers are speaking out about the dangers of fentanyl exposure after nearly overdosing on the job....

Articles published more than 10 minutes ago

Eleven SWAT officers treated for exposure to fentanyl and heroin in drug raid ↪
🇺🇸 WashingtonPost Wednesday, September 14, 2016 3:10:00 PM CEST | info [other]

HPD busts major Heroin op. 50,000 bags of heroin, 2 hand guns, 350gr raw heroin. Fentanyl, Packaging Op. 3 arrested. — D/C Foley (@LtFoley) September 14, 2016 Eleven police officers in Hartford, Conn., were taken to a hospital for possible exposure to heroin and fentanyl after drug powder blew........

Articles published more than 20 minutes ago

The teacher thought it was candy: New Jersey boy, 5, came to school with 30 packets of heroin in his lunchbox ↪
🇬🇧 dailymail Wednesday, September 14, 2016 3:09:00 PM CEST | info [other]

The boy, 5, is enrolled in kindergarten at the International Academy of Trenton Charter School; When his teacher saw him playing with what looked like candy, the boy was told to put it away; Moments later, the boy took out the packet again, prompting the teacher to give a closer look; She was.......

Articles published more than 1 hour ago

Accused in Kelowna fentanyl bust was former Hells Angels 'middleman' ↪
🇨🇦 CBC Wednesday, September 14, 2016 2:19:00 PM CEST | info [other]

A Kelowna man charged in connection with a massive fentanyl bust was a former 'middleman' for the Hells Angels, according to parole documents. Leslie John McCulloch was charged with possession for the purpose of trafficking this summer following a raid in which RCMP seized two industrial pill.......
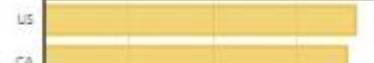
Languages ➕ ❓
Select your languages

Most reported countries (24h)
North America ▾

EMCDDA News   Email Target

Edit   Publish   **Total Articles: 15**

normal

MCDDA News (EMCDDANews)

1. Trend topics (4)

Malta still ranks second highest in the European Union for heroin use *MaltaIndependent*

Droga. Cocaina sequestrata a Fiumicino, 300 mila dosi e fruttato 5 milioni (*Drugs. Cocaine seized at Fiumicino, 300,000 doses and fruity 5 million*) *zazoom*

El temible regreso de una droga letal (*The formidable return of a drug lethal*) *rt-es*

Droga: Avramopoulos, problema non diminuisce in Ue (*Drugs: Avramopoulos, problem not decreases in eu*) *ansa-Europa*

2. Potential Serious and Urgent Events (3)

Delta Police to hold forums warning dangerous fentanyl is 'in everything now' *ckmr*

'It keeps calling my name': Fentanyl overdose in B.C. rehab centre prompts coroner's inquest *CBC*

Fears grow that powerful 'super heroin' will cause more deaths on city streets *herald-ie*

3. Cannabinoid (2)

Research provides scientific evidence for adverse effects of cannabis intake on brain development *newsmedical*

Osaka University study identifies how cannabis stunts your brain development *mailonsunday*

4. Fentanyl (2)

Un antidote au fentanyl dans l'équipement des policiers canadiens (*Antidote to fentanyl in l'équipement policemen canadians*) *francetvinfo*

Super Heroin "will cause more deaths on city streets" *sundayworld*

5. Crystal Meth (1)

One suspected meth trafficker killed as Thailand police raid drug dealers' 'thank you' party *straitstimesSG*

6. Diazepam (1)

30% Nigerian Youths Consume Illicit Drugs - NDLEA *leadership*

7. Cocaine seizure (2)

Policía decomisa 12 kilos de cocaína cristalizada (*Police decomisa 12 kilos of cocaine crystallised*) *eldiario*

Fermati con 134 chili di cocaina nell'auto (*Stopped with 134 kilos of cocaine in car*) *iltirreno*

Refresh

- Feeds
  - Medical
    - EMCDDA
      - Acetylfentanyl
      - butanehashoil
      - cannabinoid
      - cocaineseizure
      - crystalmeth
      - diazepam
      - drugrelatedhomicide
      - EMCDDA
      - EuropeanDrugReport
      - Fentanyl
      - heroinseizure
      - Opioid
      - overdose
      - PSUE
      - Drugs-Countries
    - Human Diseases
    - Bioterrorism
  - Other
- SavedSearches
- User defined Feeds
  - emcdda-test

EMCDDA > Medical > OwnCategories > cocaineseizure >

12. Aug 14. Aug 16. Aug 18. Aug 20. Aug 22. Aug 24. Aug 26. Aug 28. Aug 30. Aug 1. Sep 3. Sep 5. Sep 7. Sep 9. Sep 11. Sep 13. Sep

Chart   Local Filter >   Mark Page Visited   Accept Articles

La Policía de Salta incautó más de 20 kilos de cocaína en Salvador Mazza - *(Police seized jumps more than 20 kilos of cocaine in Salvador Mazza)*

radionalta 14 Sep 2016 15:41, Language: es en fr it de >>
Por el caso hay cuatro detenidos. El procedimiento de la Policía de Salta se concretó ayer en el barrio Mataderos de la localidad fronteriza. Tras las pruebas, el pesaje definitivo arrojó 21 kilos 200 gramos de cocaína de máxima pureza. En una equivalencia serían unas 169 mil 600 dosis de esa droga. *(In the case there are four detainees. The procedure of the police of Salta materialised yesterday in the district slaughterhouses of the border town. After the test, the definitive weighing showed 21 kg 200 grams of cocaine maximum purity. In an equivalence would be a 169 thousand 600 doses of the drug.)*
This article also triggered: EFSACommercenonelist; (more info)

Confiscan 25,6 toneladas de cocaína en lo que va del año en Bolivia - *(Confiscated 25,6 tons of cocaine in what is the year in bolivia)*

eju 14 Sep 2016 14:42, Language: es en fr it de >>
Doce paquetes, con un total de 100,7 kilos de cocaína, estaban ocultos en un motorizado. Confiscan 25,6 toneladas de cocaína en lo que va del año. En el mismo período de 2015 se decomisaron 16,9 toneladas de cocaína. Un tragón se hospitalizó por narcocápsulas. *(12 packages, with a total of 100,7 kilos of cocaine, hidden in a motorised were. Confiscated 25,6 tonnes of cocaine in the course of the year. In the same period 2015 container is 16,9 tonnes of cocaine. The Felcn requisó 107,3 kg in operational made in Guarayos and Yapacani. A tragón is hospitalizó by narcocápsulas.)*
This article also triggered: Chemicalaccidents; chemicals mediaterms; MedicalAlertPrivateAll; (more info)

Facts to know about Pablo Escobar before watching 'Narcos'

msn-uk 14 Sep 2016 12:38, Language: en fr it de >>
The much-hyped Netflix series, "Narcos" (2015-present), tells the story of the rise and fall of Colombian drug lord Pablo Escobar. Here are some facts about one of the wealthiest and most dangerous narcotics kingpins of all time. (Pictured below) Pablo Escobar (L), actor Wagner Moura (R) as Escobar in "Narcos.
This article also triggered: chemicals healtheffects; EFSACommercenonelist; ContaminationList; chemicals exposure; ImplantRisks; Commerce; (more info)

Brescia: Gdf sequestra 230.000 litri di alcolici, tre indagati - *(Brescia: Gdf has taken away 230.000 litres of alcohol, three suspects)*

zazoom 14 Sep 2016 11:03, Language: It en fr it de >>
(Di mercoledì 14 settembre 2016) Milano, 14 set. - (AdnKronos) - Nell'ambito i un'indagine per frode in commercio, i militari del Nucleo di polizia tributaria di Brescia hanno sequestra to oltre 230.000 litri tra grappa, whisky, rum e sambuca. Tre le persone indagate. Maggiori dettagli relativi all'attività effettuata dalla Gdf con. *(14 September 2016 (Wednesday) Milan, 14 sets (AdnKronos) - nell'ambito i investigations for fraud, the military police of the core tributaria Di Brescia have has taken away to over 230,000 litri orthodontics 'between grappa, whisky, rum and sambuca. The three suspected. More details on the activities carried out by the Gdf with.)*
This article also triggered: EFSACommercenonelist; (more info)

Cocaina alla Roma bene, dieci arresti tra Tor Bella Monaca, San Basilio e La Pisana - *(Cocaine to Rome well, ten arrests between Tor beautiful nun, San Basilio and the pisana)*

repubblica 14 Sep 2016 10:43, Language: it en fr de >>
Vasta operazione antidroga dei carabinieri nei quartieri di Tor Bella Monaca, San Basilio e la Pisana. Dieci le ordinanze eseguite nei confronti di altrettanti narcotrafficanti responsabili di spaccio di cocaina. L'attività investigativa, durata 6 mesi, ha permesso di infliggere un ulteriore colpo.... *(Vasta carabinieri anti-drug operation in the districts of Tor beautiful nun, San Basilio and Pisana. Ten orders executed against as many drug traffickers carrying cocaine trafficking. The investigative work, «permanence» 6 months, has made it possible to impose a further blow.)*
This article also triggered: EFSACommercenonelist; (more info)

Policía decomisa 12 kilos de cocaína cristalizada - *(Police decomisa 12 kilos of cocaine crystallised)*

eldiario 14 Sep 2016 09:37, Language: es en fr it de >>
Tenía como destino Brasil Policía decomisa 12 kilos de cocaína cristalizada. • Dos mujeres fueron arrestadas en la localidad de Desaguadero cuando trasladaban el producto. Personal de la Fuerza Especial de Lucha Contra el Narcotráfico (Felcn) procedió al decomiso de 12 kilos de cocaína.... *(Police had as a destination Brazil decomisa 12 kilos of cocaine crystallised.• two women were arrested in the town of Desaguadero when were the product. Staff of the special force for combating drug trafficking (Felcn) proceeded to the confiscation of 12 kilos of cocaine....)*
(more info)

Nigeria: Corruption Fueling Drug Trade - Analysis

eurasiareview 14 Sep 2016 06:37, Language: en fr it de >>
By Olajide Adelana* IWPR Experts say that the fight against drugs in Nigeria is being hampered by corruption among the ranks of the National Drug and Law Enforcement Agency (NDLEA). There is also growing alarm over rates of domestic usage of illicit substances in Nigeria, a country once seen primarily as a drug transit point.
This article also triggered: Pharmaceuticals; Opioid; crystalmeth; chemicals mediaterms; EFSACommercenonelist; chemicals exposure; chemicals healtheffects; MedicalAlertPrivateAll; (more info)

Policía Nacional - *(National police)*

peru 14 Sep 2016 06:31, Language: es en fr it de >>

European Monitoring Centre
for Drugs and Drug Addiction

EMCDDA News

14 Sep 2016 - Edition No. 1

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Annex I A I of the Council Directive 2000/29/EC
Insects, mites and nematodes

Spodoptera frugiperda

War on armyworms as ministry declares 'agric state of emergency'

[fr] [de] **08.05.2017**

Parliament has been asked to declare an 'agricultural state of emergency' as an armyworm invasion puts a GHC560m agricultural project at 'serious' risk. Describing the invasion as requiring urgent response, the Agriculture Minister Dr Owusu Afriyie Akoto wants to rope in parliament to wage a war.... (more)

Plan d'action R&D contre le ravageur du maïs

Science and Development Network - Afrique Sub-Saharienne

[en] [de] **08.05.2017**

Researchers call for a strategy against armyworm

Un groupe de scientifiques estiment qu'une recherche sur l'interaction entre les modèles de vie des larves de la chenille légionnaire d'automne et le calendrier de pulvérisation d'insecticide est urgemment nécessaire pour lutter contre ce ravageur qui fait des dégâts dans les champs de maïs en Afrique. (more)

A group of scientists believe that research on the interaction between the life patterns of Fall Armyworm larvae and the insecticide spray schedule is urgently needed to control this damaging pest in maize fields in Africa.

Monthly Summary of Articles on Food Fraud and Adulteration

Retrieved mainly from the JRC tool Medisys (http://medisys.newsbrief.eu/)

Selected Food Fraud Cases

01/03/17 – 35 000 eggs seized near Parma

About 35 000 eggs were seized in the region of Parma by the anti-fraud unit of the local Carabinieri. The declaration of origin and other labelling information were either missing or incomplete.

Ansa

Italy
Eggs
Origin masking

03/03/17 – 5000 bottles of fake Barolo and other quality wines seized near Asti

Fraud inspectors seized 5000 bottles of prestigious wines (Italian DOC and DOCG denominations), including Barolo, in a wine cellar near Govone. They also found false labels and thousands of fake marks, worth tens of thousands of euro. Tests are on-going to determine the origin of the sold wine.

La Stampa

Italy
Wine
Counterfeit

05/03/17 – Results of the operation "Sardina Pilchardus"

The operation Sardina Pilchardus took place in February in Calabria to control the local fish market. Notably, 116 000 euro in fines were imposed and 1254 kg of fish seized for lack of or incomplete traceability labelling.

Quotidiano del Sud

Italy
Fish
Mislabelling

What are we looking at?

Human communicable diseases => ECDC, WHO

Syndromes

CBRN threats => G7

Mass gatherings (**EXPO 2015**, Olympics, FIFA, UEFA, etc.)

Food & Feed contaminations including GMOs => EFSA

Animal health => EFSA
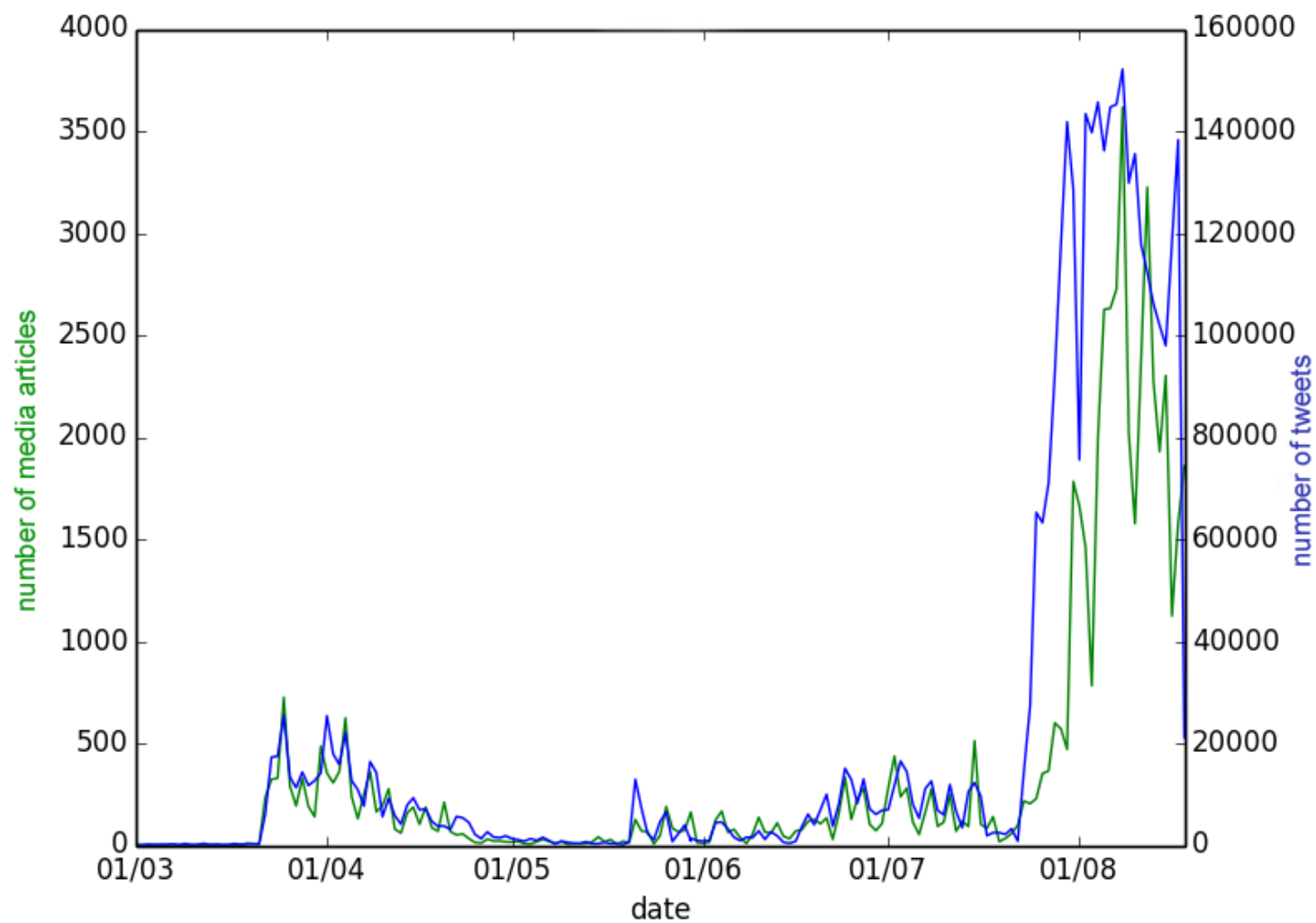
Plant health => EFSA

Medical Devices

Psychoactive Substances / Drugs => EMCDDA

Example - Ebola in West-Africa

Events in March 2014:
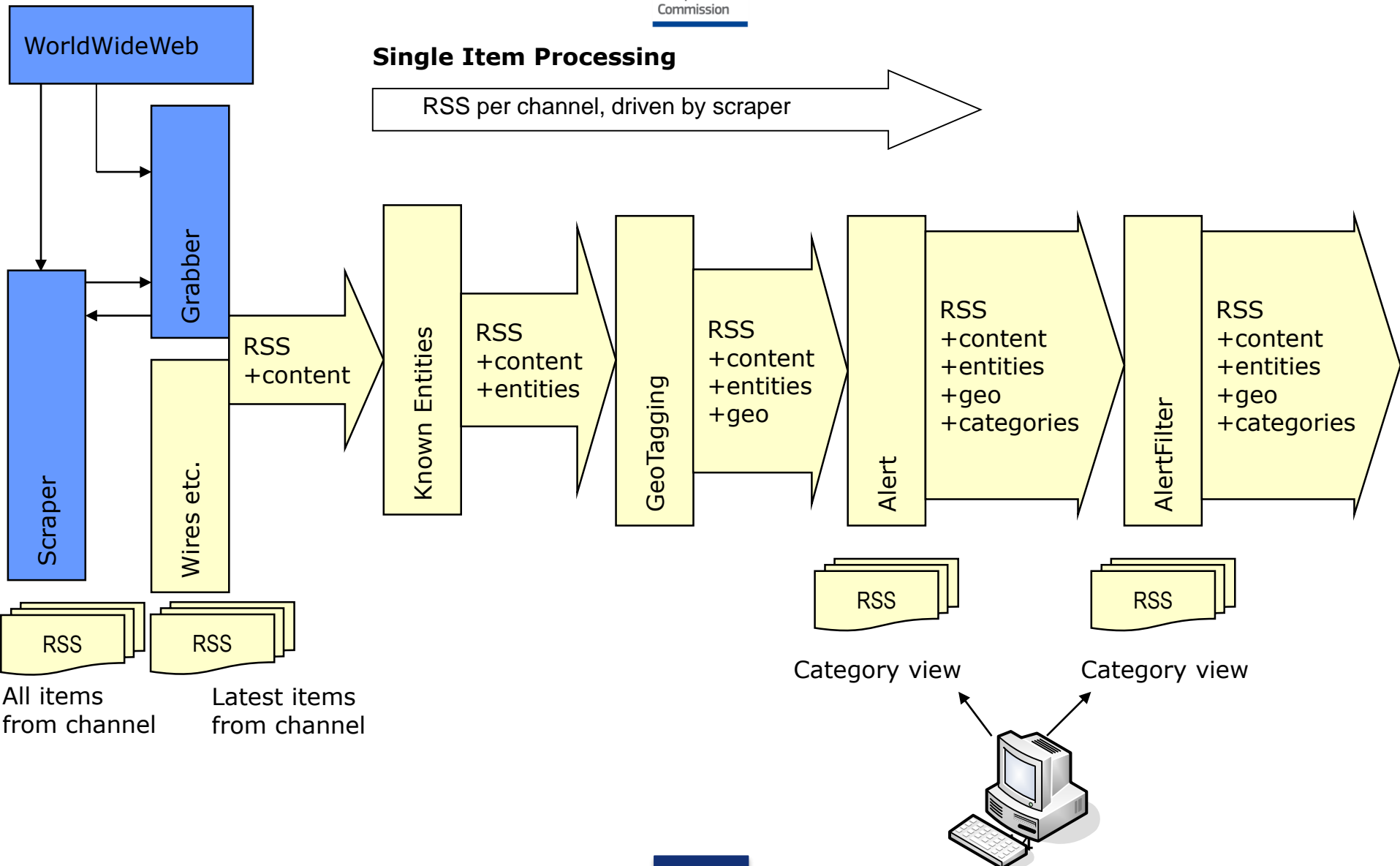
14/3 Une étrange fièvre fait 8 morts à Macenta
$\Rightarrow$ triggered UnknownDisease

18/3 Mystery hemorrhagic fever kills 23 in Guinea
$\Rightarrow$ triggered EbolaHemorrhagicFever

Technical background

Processing chain

Multi-lingual approach

Single Item Processing

RSS per channel, driven by scraper

WorldWideWeb

Grabber

Scraper

Wires etc.

RSS
+content

Known Entities

RSS
+content
+entities

GeoTagging

RSS
+content
+entities
+geo

Alert

RSS
+content
+entities
+geo
+categories

AlertFilter

RSS
+content
+entities
+geo
+categories

RSS

RSS

RSS

RSS

All items
from channel

Latest items
from channel

Category view

Category view

Multilingual keyword patterns

Patterns for <u>unknown disease</u> comprise:
mysterious+disease
unidentified+disease
неизвестн%+инфекц%
новый+смертельный+вирус
непозната+болест
未知的疾病
ناشناس+بیماری
etc.

Boolean operators (AND, OR, NOT) and proximity

How can you profit?

Email alerts, e.g. Coronavirus

RSS, e.g. Measles

Website can be further customized

Newsletters with human moderation
*   => Newsdesk training*

Create categories using your own keywords
*   => CategoryEditor training*

Customers

European Commission

  DG COMM, DG HOME, DG GROW,

  DG SANTE, DG RESEARCH, etc.

European External Action Service

European Council

European Parliament

EU agencies: ECDC, EFSA, EMCDDA, FRONTEX

UN, WHO

EU member states (ISS, INVS, RKI)

G7 countries

Italian - German

English - French

Spanish - Portuguese

Twitter analysis

Twitter data are noisy, high-volume and mostly (90%) not geo-located

BUT:

Twitter data can be used to give additional information on events extracted from traditional media:

- additional sources that we don't cover

- news items which are often cited

- blog and forum entries which are often cited

Data retrieval

Converts dirty html with adverts, menus, html tags, 'related stories', etc. into clean and standardised UTF-8 encoded RSS
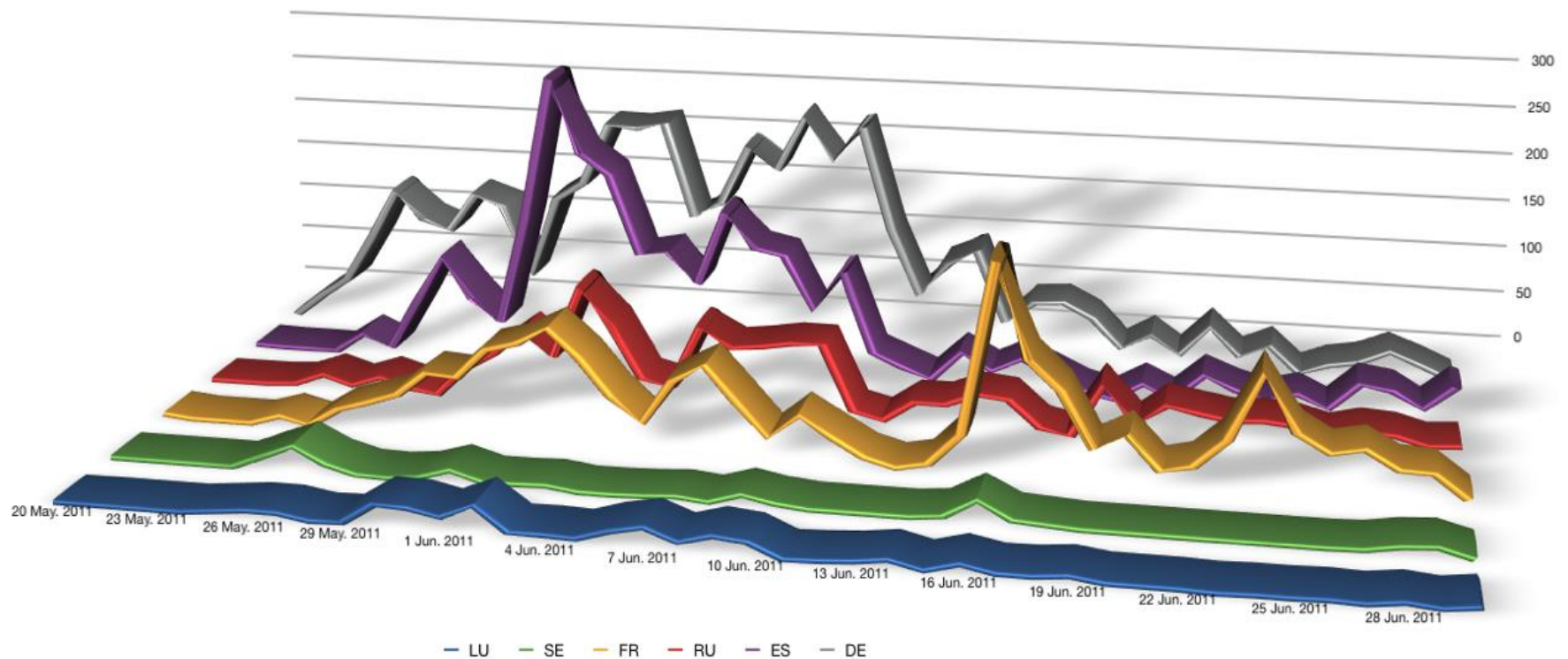
RSS, XML feeds

Crawling of sites

Example - EHEC outbreak in Germany

Early alerting via German media (May 2011)
Tracking of a known outbreak with high reporting:
  clustering
  analysis by country

Number of articles in the *E. coli* category that also mention one of the countries
Luxembourg (LU), Sweden (SE), France (FR), Russia (RU), Spain (ES) and Germany (DE)