

Monitoring Public Attention on Environment Issues with Twitter Vigilance

<http://www.disit.org/tv>

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CINI Annual Workshop on
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Twitter Vigilance Objectives

- Access at public part on <http://www.disit.org/tv>
- Monitoring twitter channels with
 - high reliability & precision in following slow, fast and explosive events
 - Multiuser managing multiple public and private channels
 - low cost automated analysis
 - Access to data, advanced search, data analytics, sentiment analysis,
- A channel is a set of search on twitter.
 - Each search can have a complex syntax according to twitter API and service
 - Each user may manage a number of channels and searchers
- Active since April 2015, over 26 Million of tweets

TV: High level purposes

- Discover and evaluate time trends vs events, facts, etc.;
- Discover and compute: who influence the communication, the community and how;
- Discover and compute: new trends and new occurrences in real time;
- Monitor and analyse competitors;
- assessments of appreciation or less of: products, people, advertising;
- Discover and compute: predictors of attendance, levels of acceptance, audience, etc.;
- Discover and compute : indirect measurements based on the perception of the population.
- Perform complex searches on all DB with special care on: channel, search, user, mentions, hashtags, geographic, language, Tweet/ ReTweet, date and time, etc. etc.

Full text and Faceted Search

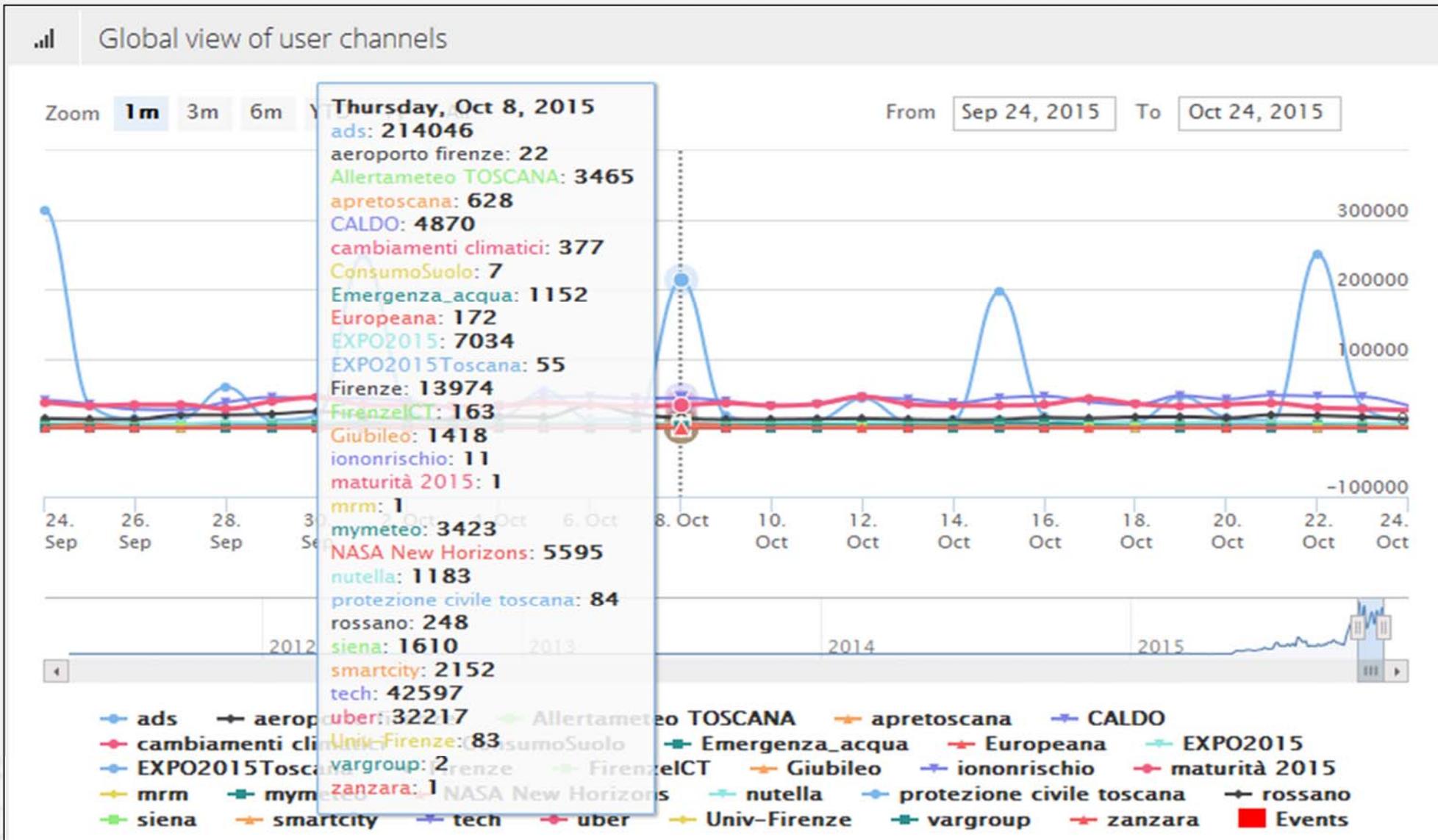
Facility of Twitter Vigilance db

The screenshot displays a search interface for the Twitter Vigilance database. It includes a search bar at the top with the query 'twitter'. On the left, there are filters for 'name' (listing terms like 'smart drugs', 'ads', 'farmacovigilanza'), 'twitterUser', 'hashtagsOnTwitter', and 'mentions'. The main area features a bar chart showing tweet volume from 2015-06-11 to 2015-10-21, with a peak of 573,732. Below the chart is a 'Marker Map' of Europe with blue location pins. A 'Filter Bar' indicates no filters are applied. The 'Grid Results' section shows a list of tweets, including one about 'rischio smog e ozono' and another about 'costes económicos de la independencia de cataluña'.

Example of TwitterVigilance channels

- <http://www.disit.org/tv> public channel results
- **Esempi di Canali:** EXPO 2015, CNR EXPO2015, Firenze, ApreToscana, ConsumoSuolo, meteo, farmaco vigilanza, laudatesi, la maturità, ECLAP ed Europeaana, allerta meteo toscana, protezione civile, advertising, etc.
- **Aree tematiche:** politica, eventi, advertising, farmacovigilanza, meteo, smart city, ambiente, etc.

Some Public Channels



Twitter Vigilance simple analysis

- distinct for Tweet and Retweet (T / RT) to characterize the communication event;
- citations of other users to understand what are the influencers, the pusher, the emerging, etc.;
- hashtags to understand which are the most used or emerging, or the answer to those used;
- keywords, verbs, and adjectives to understand what are the most used, the emerging, or the answer to those used;
- positive/negative impact, sentiment analysis .

Search related to channel EXPO2015

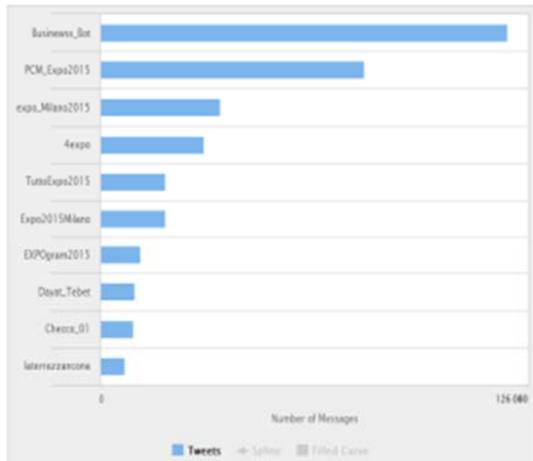
Example of EXPO 2015



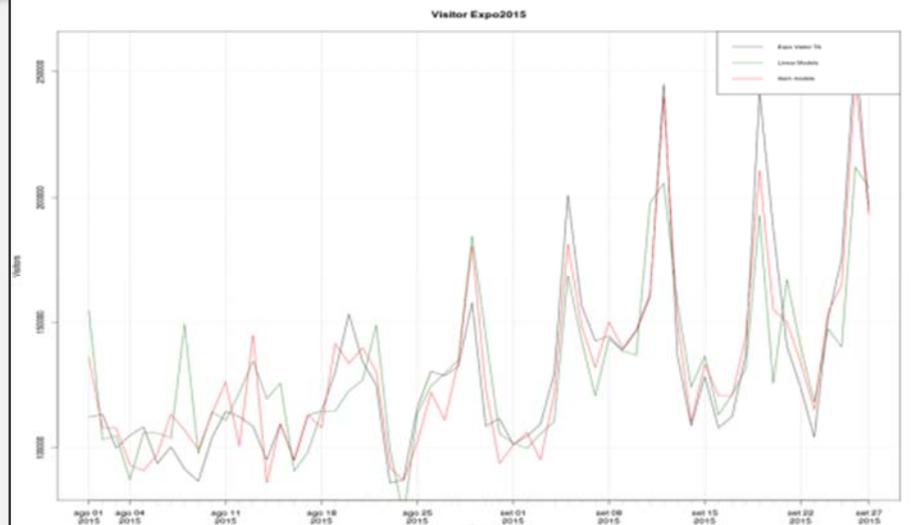
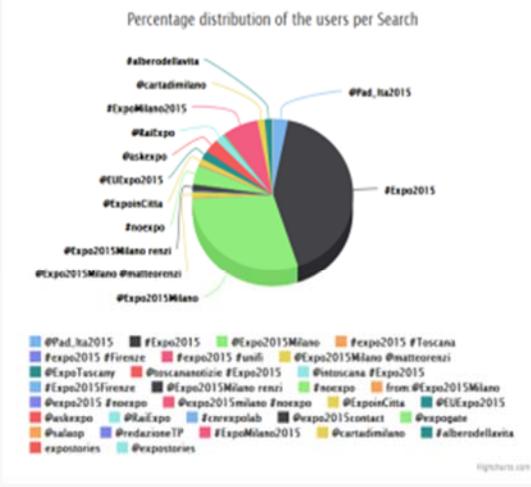
+Add Event Modify Event - Remove Event

Tweets distribution of the first 10 active users in the channel = EXPO2015*

*By clicking on the bin relative to each user you can access the user profile



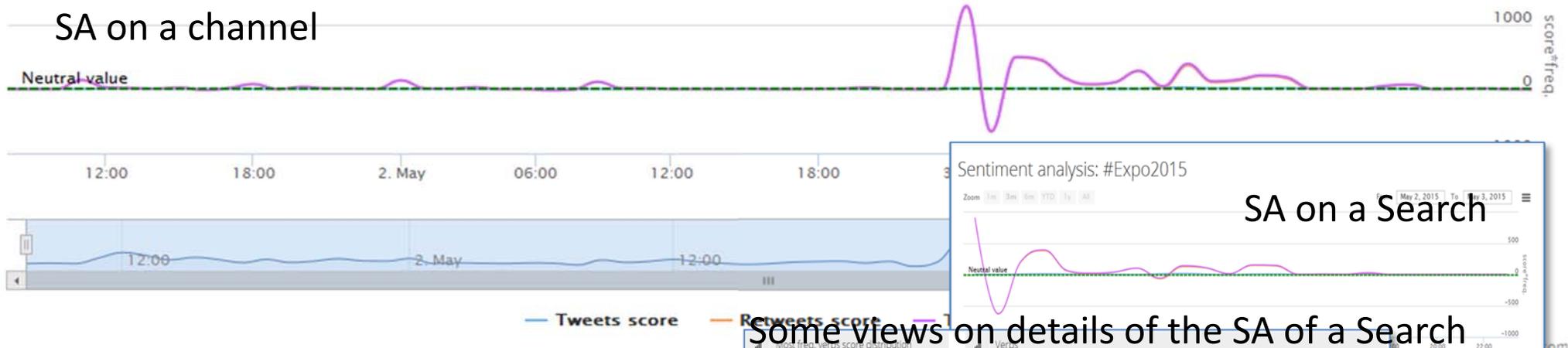
3D pie of active Search on the Channel = EXPO2015



Sentiment trends in channel EXPO2015

NLP Sentiment Analysis (early results)

SA on a channel



Sentiment analysis: #Expo2015

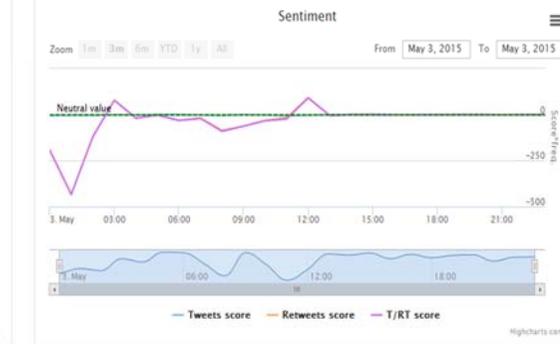
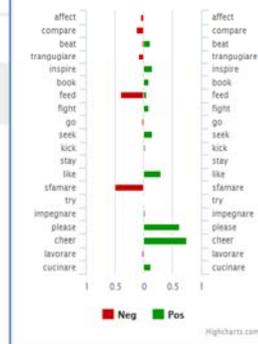
SA on a Search

Some views on details of the SA of a Search

Hashtags cloud



Twitter Vigilance



- @Storage
- @gasparripdi
- @rep_milano
- @AskExpo
- ilano
- @UKPavilion2015
- @UN_Expo2015
- @SkyTG24
- epublicait
- aiExpo

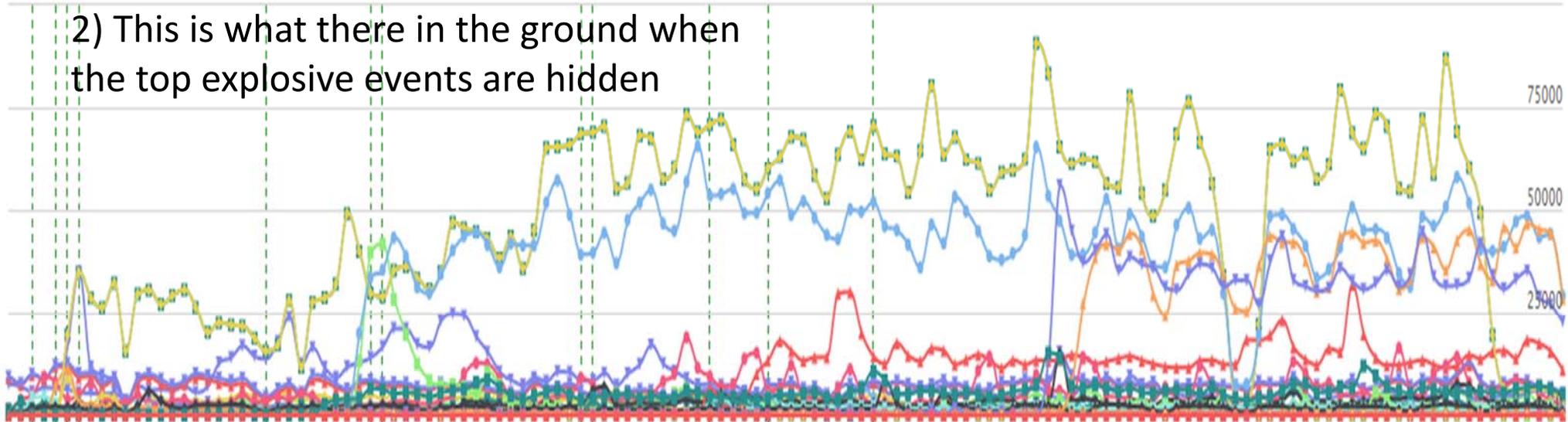
Global view of usic channels

All Channels (private information)

Zoom 1m 3m 6m YTD 1y All

From Jun 12, 2015 To Oct 24, 2015

2) This is what there in the ground when the top explosive events are hidden

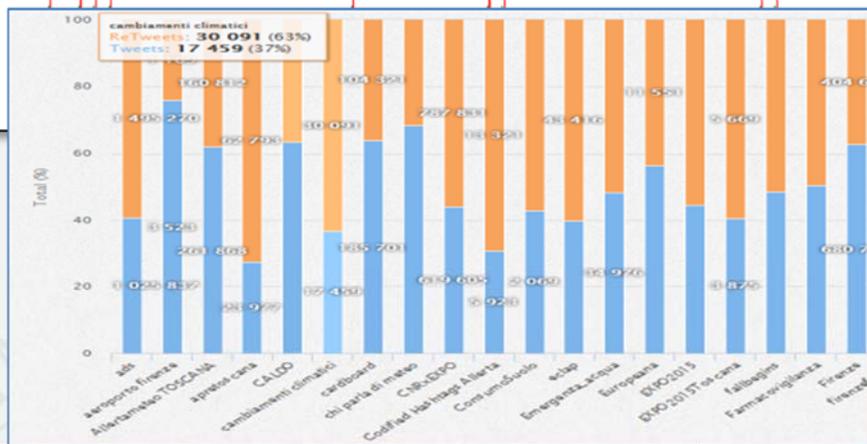


top eating nutella? cal

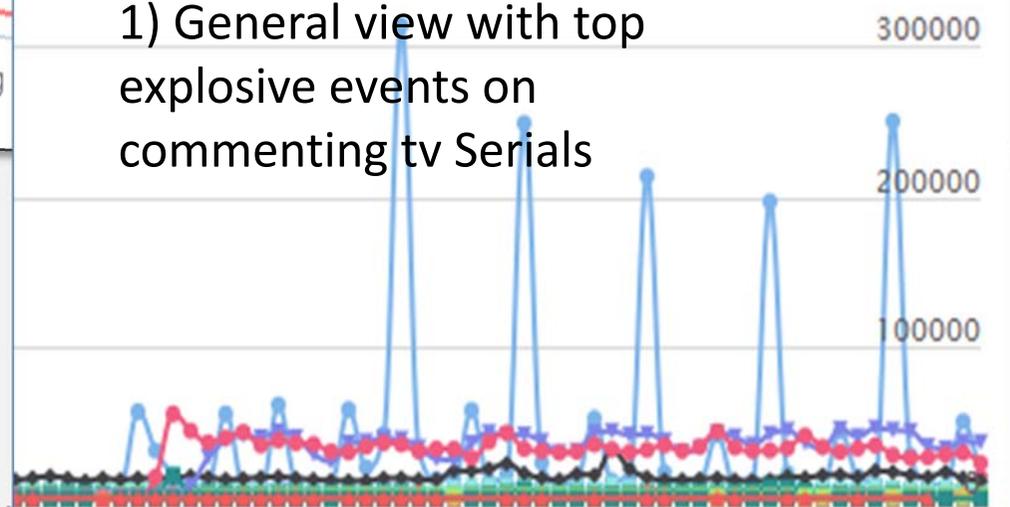
gradine a siena Ap CometWatch e

temporale a firenze

lujione in Calabria Ss



1) General view with top explosive events on commenting tv Serials

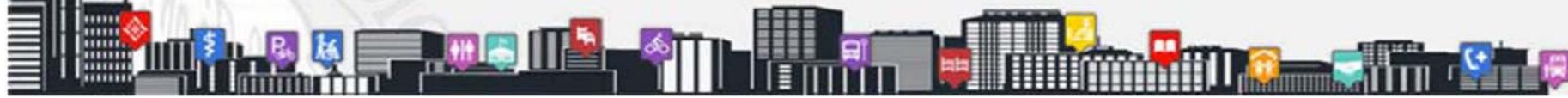


Support for the Advance users

- Programming channels and searches
- Adding annotations to channel timeline
- Printing graphics in different formats
- REST API for accessing to data with queries
- Possibility of loading processes to be executed in the back office as ETL, R, Java, etc.
 - They can access to data via rest API and Solr API
 - Parallel architecture and Hadoop with NLP (Gate-DISIT) support for massive and large processing

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Smart City and Big Data, 2015



<http://www.disit.org/smartcitybigdata2015>

13 Novembre 2015, Scuola di Ingegneria, Via S. Marta 3, Firenze

- **Progetti e strumenti/risultati:** km4city, matchmaking, RESOLUTE, REPLICATE, LOG.DISIT.ORG, Twitter Vigilance, Collabora, ApreToscana, Sii-Mobility, ...
- **Presentazioni, Dimostrazioni e info-desk**
- **Master Big Data Analytics for Business, MABIDA**

Organizzato con la collaborazione di:

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Distributed Data Intelligence and Technologies Lab
Department of Information Engineering (DINFO)
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<http://www.disit.dinfo.unifi.it>

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