WeKnowIt
Benchmarking Activities and Relevant Standards

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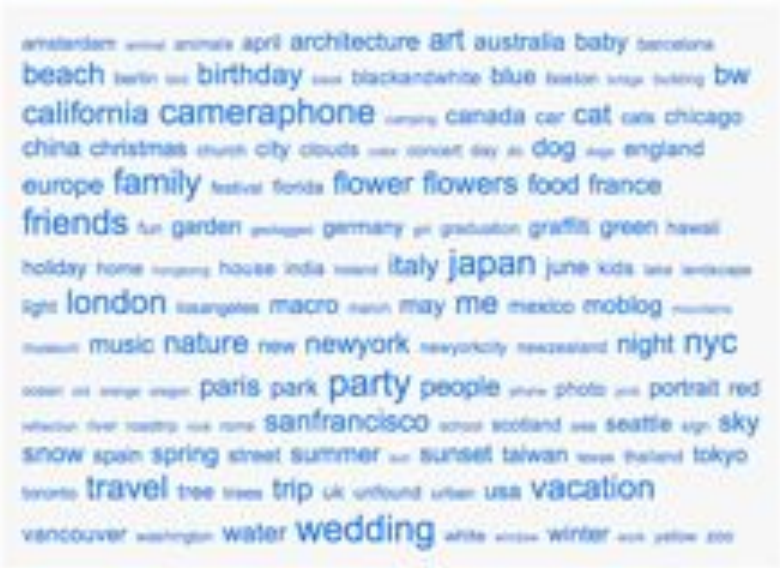
Social networks and media

- Users upload, tag, share, connect and search
- Emphasis is on applications, visualization of results and interfaces
- Shallow analysis



- Limited usage of the **Collective nature** of Social Networks

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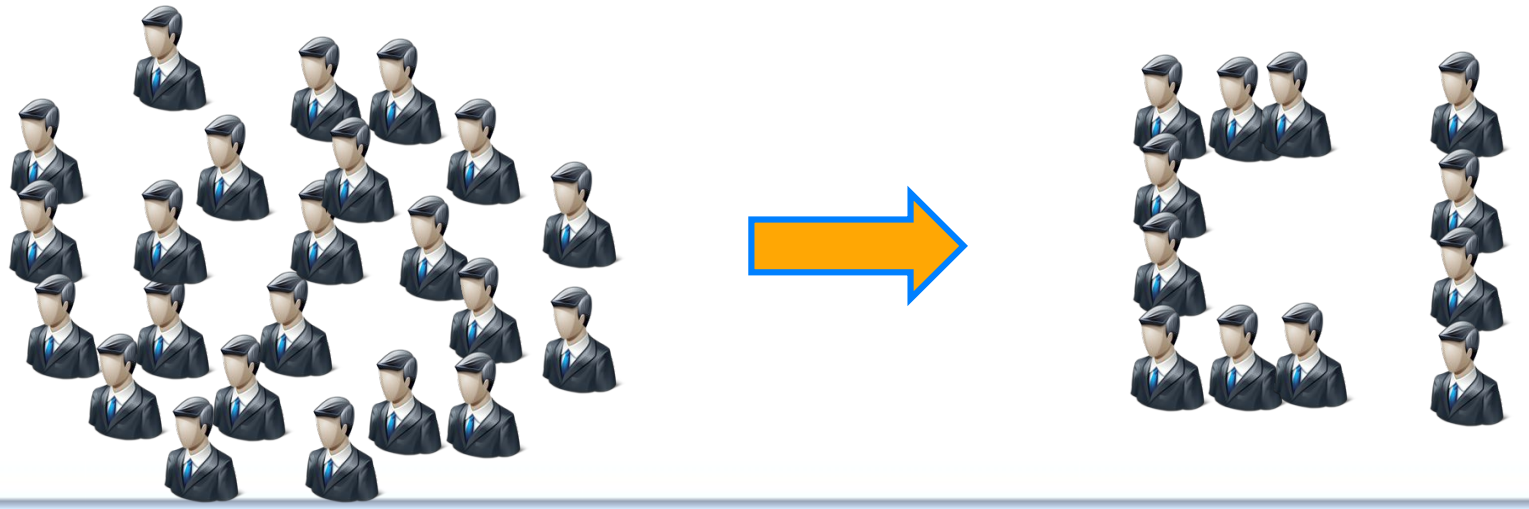
Social Networks as a Sensor

- Social Networks is a data source with an extremely dynamic nature that reflects events and the evolution of community focus
- Scalable approaches taking into account the content and social context of social networks
- Transform Social Media to a Sensor of meaningful topics, entities, points of interest, social connections and events



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Social Media aspects

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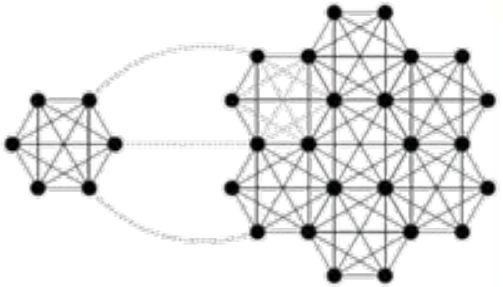
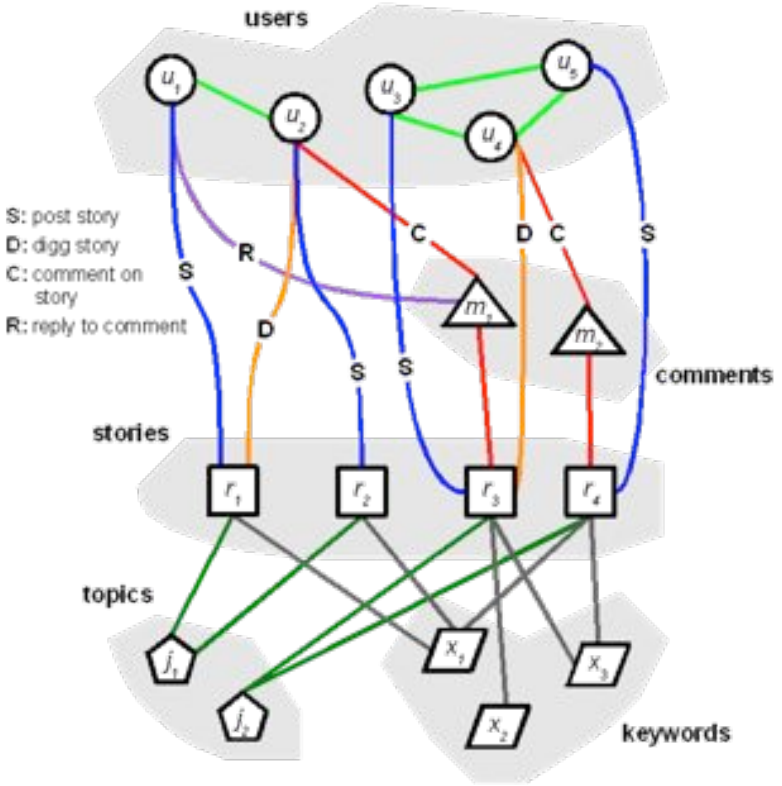
Community detection clustering



- Local and graph-based
- Highly efficient and scalable approach
- Not necessary to know the number of communities
- Noise resilience
- Not all nodes need to be part of a community
- Generic approach adaptable to many applications
  - Depending on nodes – edge representation



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Applications and Results (ClustTour)

- Automatic detection of landmarks and events through hybrid image clustering:
  - Very high geographic localization of results

LANDMARKS

http://www.clusttour.gr

EVENTS

baptism

conference

castels

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Clusttour Dataset for Benchmarking

- Photo clusters for 23 European cities
- 7,142 photo clusters containing 199,186 photos
- 935 clusters classified as landmarks
- 6,207 classified as events

- http://www.clusttour.gr/?content=dataset

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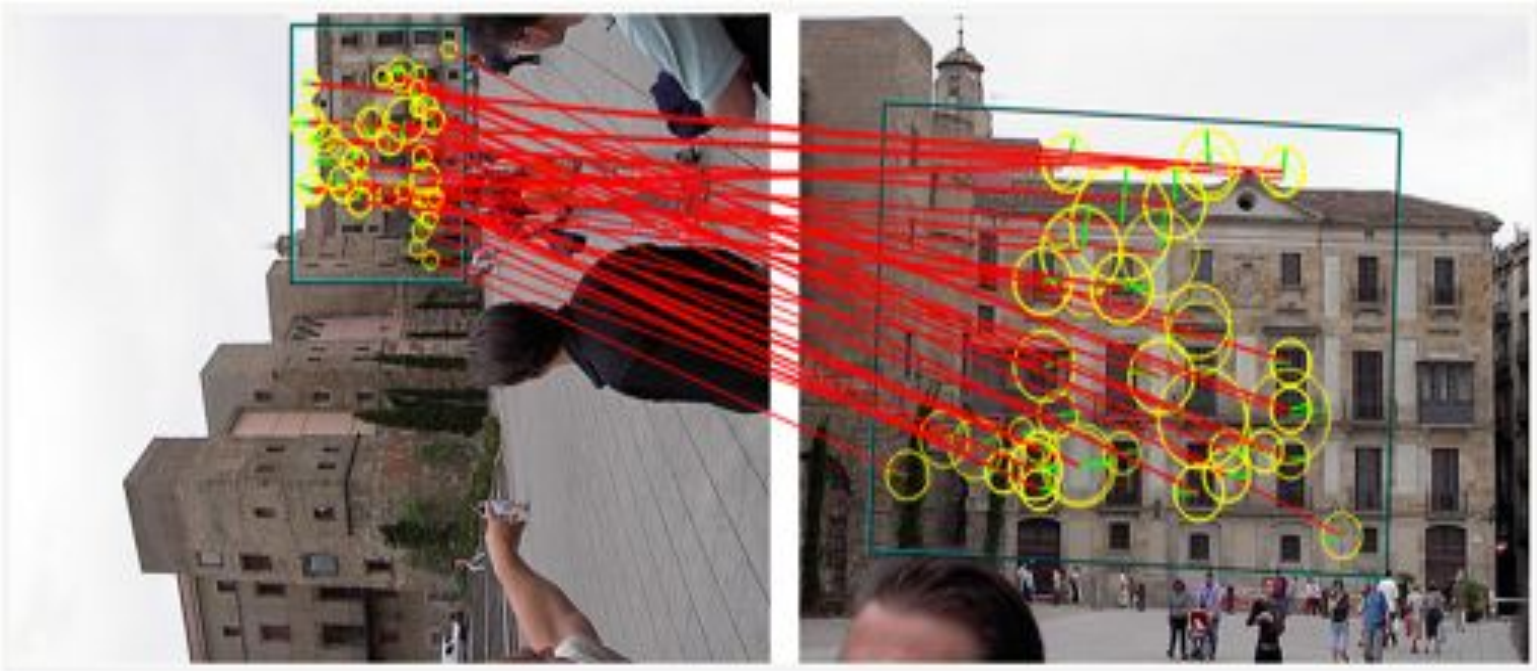
VIRal: Visual Image Retrieval and Localization

- Content-based image search engine
- Estimates location, suggests tags, identifies known landmarks and provides links to relevant Wikipedia articles



http://viral.image.ntua.gr/index.php

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VIRal Dataset for Benchmarking

- European Cities 1M dataset
- 909,940 geo-tagged images from 22 European cities
- Crawled from Flickr using geographic queries covering a window of each city center

- http://image.ntua.gr/iva/datasets/ec1m/

Event Model F: Formal representation of events

- Based on the foundational ontology DOLCE+DnS Ultralight (DUL) - OWL
- Representation for time and space, objects and persons
- Mereological, causal and correlative relationships between events
- Provides flexible means for
  - event composition
  - modeling event causality and event correlation
  - representing different interpretations of the same event.
- Available from:
  - http://west.uni-koblenz.de/eventmodel/

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Standardization initiatives

- W3C POI Working Group
- W3C Emergency Information Interoperability Framework (EIIF) Incubator Group
- W3C Social Web Incubator Group
- W3C Media Annotations Working Group

POI Working Group

- http://www.w3.org/2010/POI/charter/
- Specification of representation of Points of Interest and associated attributes
- POI = entity at a physical location about which information is available
- Recommendation for publishers to describe and serve points of interest data.

- Example use case: Augmented Reality (AR)
- Liaisons with other W3C Groups:
  - Geolocation Working Group
  - Internationalization Core Working Group
  - Web Accessibility Initiative

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EIIF Incubator Group

- Towards a framework of information interoperability in emergency management functions
- http://www.w3.org/2005/Incubator/eiif/wiki/Main_Page
- Framework final report
  - integrated overview relating to Emergency Response Management
  - http://www.w3.org/2005/Incubator/eiif/XGR-framework/

  "... the major goal to meet is the need to move towards a common ontology methodology in order to address the need for information interoperability in emergency management"
- Example use case in WeKnowIt
  - CURIO (user interaction), Veracity (trust) and Event Model-F organisational models
    - acknowledge this principle and move towards this goal.
  - Conceptualisation of the emergency information framework based on DOLCE
- Group postponed its activities in August 2009

Social Web Incubator Group

- http://www.w3.org/2005/Incubator/socialweb/
- Towards the description of Social Web ecosystem
  - survey the landscape for community-driven standards
  - how current W3C standards or Recommendation track work should take into account wider Social Web initiatives from outside the W3C
- WeKnowIt following discussions in WG
- Final report released on June 2010

Media Annotations Working Group

- http://www.w3.org/2008/WebVideo/Annotations/
- Part of the Video in the Web activity
- Ontology and API to facilitate cross-community data integration of information related to media objects in the Web
  - W3C Ontology for Media Resource
    - http://www.w3.org/TR/mediaont-10/
- WeKnowIt following discussions in WG
  - Example use case: tagging, tag analysis, visual+tag analysis
- Liaisons with other W3C Groups
  - Dublin Core Kernel Application Profile
  - MPEG group
  - Geolocation Working Group
  - Cooperation with many external organizations and associations

Thank you!

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http://www.weknowit.eu

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