Semantic networks for improved access to biomedical databases

Istituto di Linguistica Computazionale
"Antonio Zampolli" CNR – Pisa

Sassolini Eva, Cucurullo Sebastiana, Picchi Eugenio

Biomedical domain main features

- large amount of information available
- several information sources
- problematic exploitation of knowledge due to unstructured textual format

State of the art

- risk of proliferation of disorganized information, difficult to find and to interconnect
- demand for tools that suggest a new modality of content access
- Internet and in particular social networking tools allow to create networks of people sharing common interests

SUBITO (Unique Social Network for Biomedical Innovation in Tuscany)

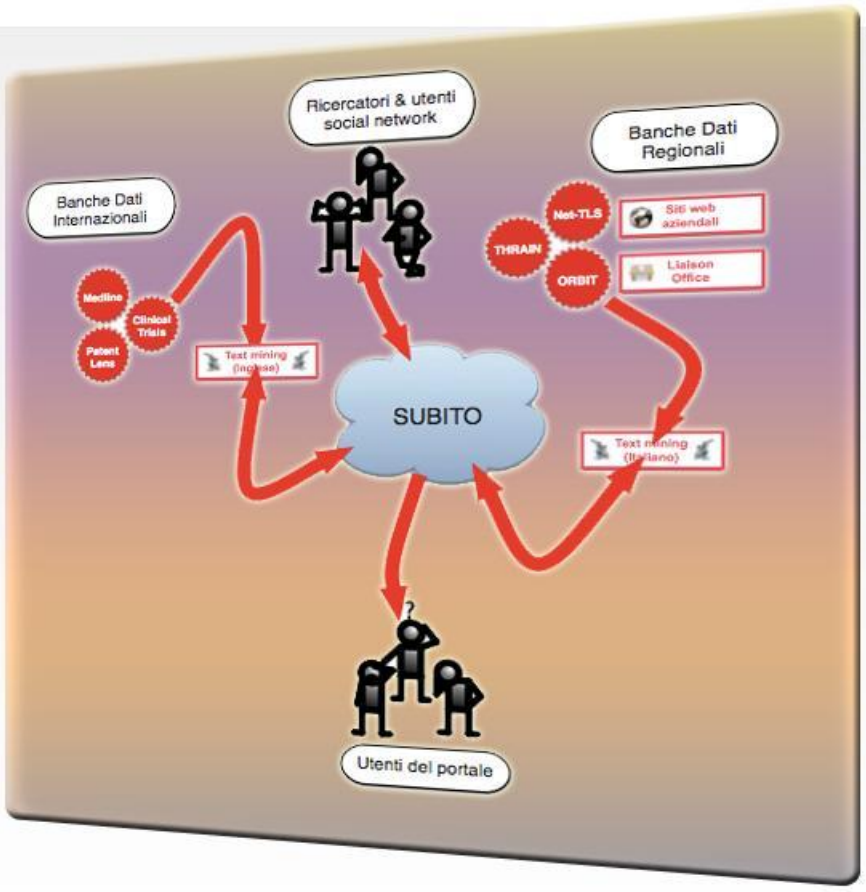
the project allowed to specialize an intelligent browsing system: "DBT-Faccette"

Explore Tuscany | Person & Enterprises | Research & Innovation

SUBITO

rete Sociale Unica per l'innovazione Biomedica TOscana

Il proliferare di tecnologie innovative ha consentito negli ultimi anni uno sviluppo esponenziale delle conoscenze in ambito biomedico. La mole di informazioni disponibili e l'eterogeneità delle fonti informative costituiscono un serio limite al pieno sfruttamento di tali conoscenze. E' diventato prioritario pertanto mettere a punto sia dei sistemi di raccolta e aggregazione dei dati, sia dei sistemi di analisi che consentano il massimo sfruttamento di tali conoscenze, in modo da sostenere sia la saluta pubblica sia una crescita economica basata sulla conoscenza (Knowledge Based Economy).



EN

Legal Disclaimer Term of Use FAQ Contacts SUBITO Quick Start

http://subito.ifc.cnr.it/

Project partners

OBJECTIVES

- (GENERAL) development of a website and a database for the collection and correlation of information on public-private subjects operating in the medical, biomedical and pharmaceutical sector within the Tuscan regional area
- (SPECIFIC) development of techniques for the extraction and classification of textual data in order to enable a more efficient browsing

Sources of abstracts

- PubMed.gov
- Espacenet.com
- ClinicalTrials.gov

Search approach

- Top-down:
  - the traditional search systems adopt a priori knowledge of the material, that can be combined to form user-defined keywords/ queries
- Bottom-up:
  - the categorization systems allow the user to dynamically discover the concepts that are semantically relevant to a particular domain, and to carry out the search refinements on the basis of semantically related concepts, but virtually unknown

DBT-Faccette

- labeling and textual analysis system as customization of the traditional faceted classification system
- "auto-adaptive" categorization that allows for automatic reorganization of content on the basis of semantically relevant concepts
- identification of the texts related to a given topic thanks to an automatically recognized terminological lexicon

Search example