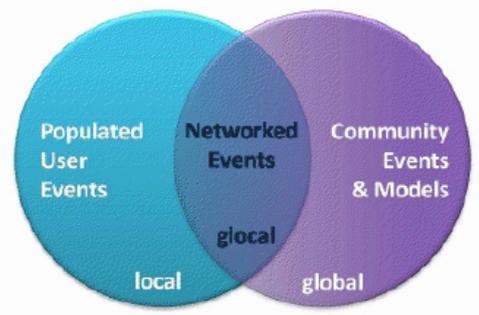# GLOCAL

We describe the world by using words. Yet, words usually bring to mind different mental views of the world in different individuals, because of their personal experience and context. This is the reason why the ?semantic gap? between our conceptualizations of the world, expressed using language, and our experience of the world, whose most direct representations are media, is far beyond the reach of current systems; and it is also why, so far, a universal solution of the problem of contextualizing search, navigation, and media management in general to the user needs and the operating environment has not been found.

The first key intuition of **GLOCAL** is to use **events as the primary means for organizing and indexing media**, e.g., photos, videos, journal articles, and email exchanges. Instead of starting from media and seeing, **a posteriori**, how we can meaningfully understand their contents (e.g., by tagging them), we organize **a priori** our knowledge in terms of events and use media to populate them with memories, thus providing their experiential dimension.

Events provide the common framework inside which the local experience-driven contextual information can be not only coded, but also shared and reduced to a common denominator. Events have both a local and a global dimension. The local dimension enables the mapping of tags (conceptualizations) to media (personal experiences), while the global dimension enables the sharing of event descriptions (thus enabling social sharing and networking of events, media, and tags) but also of event structures across similar events, thus providing a common way to index media (social sharing and networking of event structures). In turn, the networking of events and event structures enables the creation of networked communities inside which common (global) descriptions of the world can be built and continuously enriched by the continuous flow of individual (local) descriptions.

The second key intuition of **GLOCAL** is **to exploit the local and global (GLOCAL) knowledge about events and related contents to locally index media and experiences** and later to globally share them within networked communities, thus lessening the impact of the semantic gap. The idea is to define suitable models that describe and share the semantics at various levels, so that each user can organize their personal experience into events, share the description of events with other peers in a networked community, and make the local system evolve in time, benefiting from and enriching universal knowledge constructed in time via agreements.
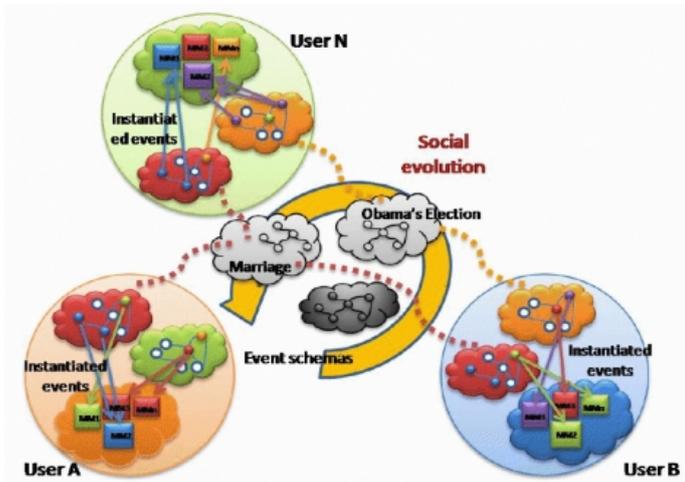
On the basis of the above concepts, GLOCAL introduces a new approach to media search that we call **GLOCAL** search. The key ingredients of GLOCAL search can be summarized as follows:

 A **common indexing schema** based on models of events designed a priori;
 A local **indexing and tagging methodology** and algorithms used to populate event descriptions with media;
 Global sharing and search algorithms based on the common event-driven understanding of user experience inside the same event and across events.
 A new type of search query, which can contain any subset of the following three components:

 A set of **keywords** (thus reducing, when used in isolation, to standard keyword search)
 One or more **example media**, e.g., photos (thus reducing, when used in isolation, to standard media search). The intended meaning is that the media provide the experiential dimension to the set of keywords, thus making it possible to localize search
 One or more **event-dependent contextual parameters** (e.g., a location or a person or a property of a person), which make it possible to fully exploit the explicit contextualization of an experience, as well as the words used to describe it.

With two leading search companies and four content providers, the GLOCAL consortium is able to realize and evaluate the GLOCAL approach in several application domains, involving professional and amateur users who deal with professional and generic contents.
The project is about to be ended in November 2012, and the key scientific and technological objectives that are going to be reached are the following:

 to support a user in **managing media according to context and events**, to facilitate successive access and sharing
 to **catch the media semantics in a natural way**, without the need for complex user-system and/or user-community interactions
 to allow users **sharing consistent event schemas**, built upon local and global interaction, to better access the requested media
 to allow networked communities to **exchange in a seamless and contextual way media-populated events**
 to **provide advanced indexing and retrieval tools** fully exploiting the contextual information

to **customize the developed instruments** to fulfill specific application-oriented requirements in different user scenarios.

Download the project's brochure here.

Contact

University of Trento
DISI, Via Sommarive 14 - 38123 Trento - Italy
Project email address: glocal-project@disi.unitn.it
Project website: www.glocal-project.eu/

Partners

COORDINATOR
Università degli Studi di Trento (ITALY)

Intelligent Software Components S.A (SPAIN)
Alinari 24Ore SpA (ITALY)
Centre for Research and Technology Hellas (GREECE)
Yahoo Iberia SL (SPAIN)
Agence France Presse (FRANCE)
Deutsche Forschungszentrum fur Kunstliche Intelligenz GmbH (GERMANY)
Exalead (FRANCE)
Gottfried Wilhelm Leibniz Universitat Hannover (GERMANY)
Institut National de Recherche en Informatique et en Automatique (FRANCE)
Brno University of Technology (Czech Republic)

Latest news from the project

Trzyletni edukator Bitcoin przemawia na konferencji kryptograficznej]US$1bn in assets under management]Money Laundering & Bitcoin: Misconceptions]Bitcoin, the flagship of the post-Covid financial revolution?]La capitalisation boursière dépasse celle des services]