Optimal Services for the Mobile Tourist

By Vassili Loumos

A few words about us

Vassili Loumos

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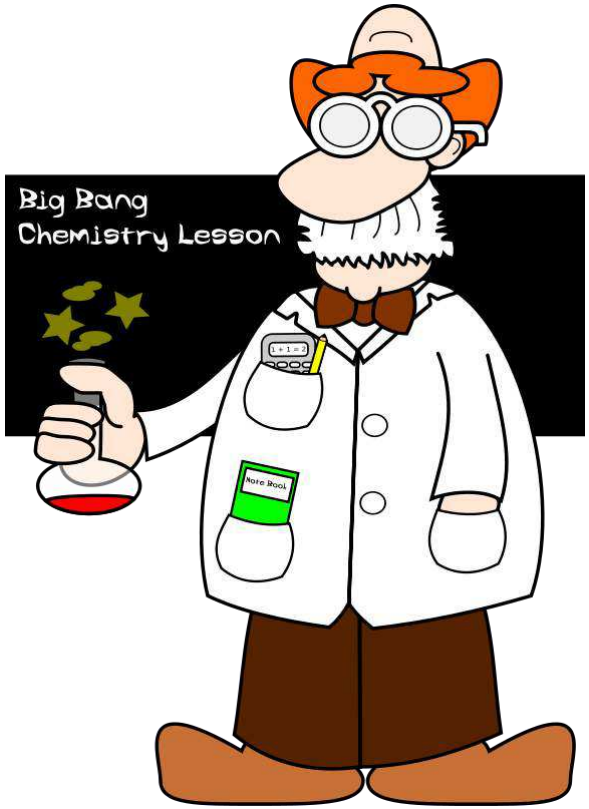
- Director of Multimedia Technology Laboratory



The challenge

Best match between

what a tourist wants

and

what is available

at a specific place and time

An example scenario

John, a jazz fan, is on holiday in the island of Santorini.

An example scenario

A live Jazz music event will take place this evening in a café, in the town of Oia.

John receives a notification about the event.

Inform, Attract and Serve the Tourist

John has the *Mobile Tourist Application* installed on his smartphone and he has “jazz music” high on his preferences list.

The town of Oia, that he is currently visiting, has a jazz café, which tonight will be holding a live jazz music event.

The owner/manager of the café has registered the event in the *Mobile Tourist Application* and John receives a notification about the event.

Our approach

The Mobile Tourist Application is a Recommender System composed of three separated and interconnected modules

1. Available events
2. Tourists' interests
3. Matching mechanism

Event categories and sub-categories

ART (A)	SPORTS (B)	SCIENCE (C)	RECREATION (D)	COMPUTERS (E)
Architecture (a1)	News (b1)	Technology (c1)	Tourism (d1)	Internet (e1)
Cinema (a2)	Football (b2)	Physics (c2)	Sea (d2)	Software (e2)
Museum (a3)	Basketball (b3)	Mathematics (c3)	Entertainment (d3)	Hardware (e3)
Music (a4)	Organizations (b4)	Biology (c4)	Car (d4)	Education (e4)
Theater (a5)	Volleyball (b5)	Medicine (c5)	Motorcycle (d5)	Companies (e5)

Event Registration

Event Registration Form

Event Name
Category
Message
Start Date
End Date

Location

Street Name
Street Number
Area
Town
Post Code

Find Location

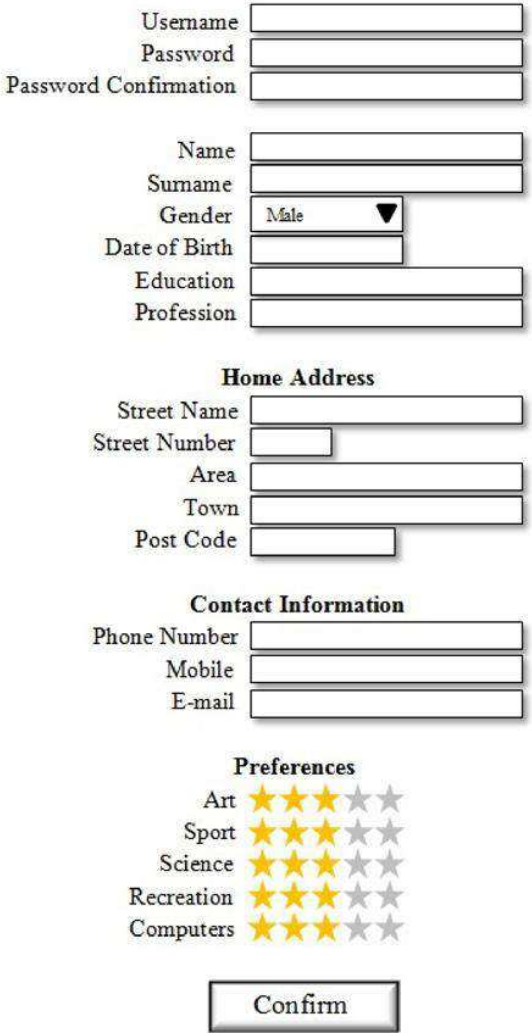
Ranks

Priority Low
Art
Sport
Science
Recreation
Computers

Location Weight 1
Preferable Age Group ☐ 18-24 ☐ 25-34 ☐ 35-49 ☐ 50-64 ☐ 65
Preferable Gender Male

Confirm

User Registration

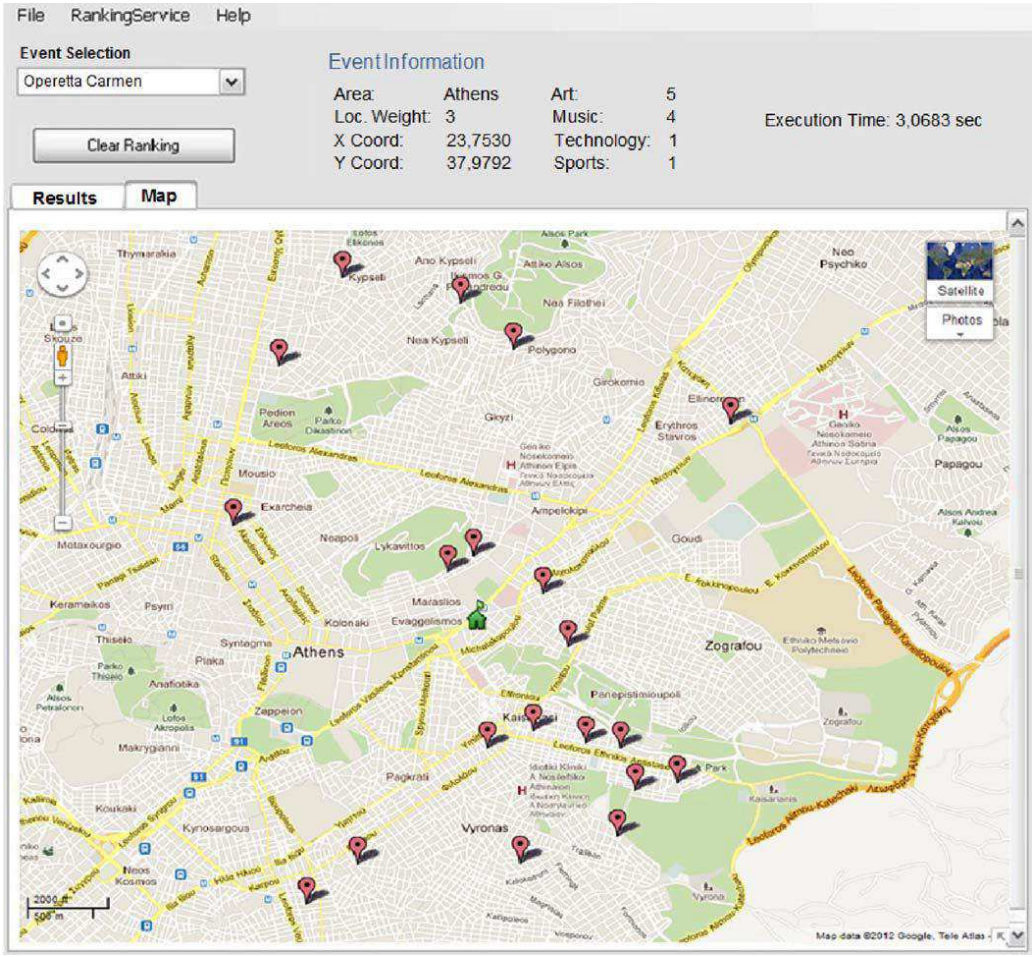


Matching mechanism

- Neural Networks for selection, classification and best match between tourists and events

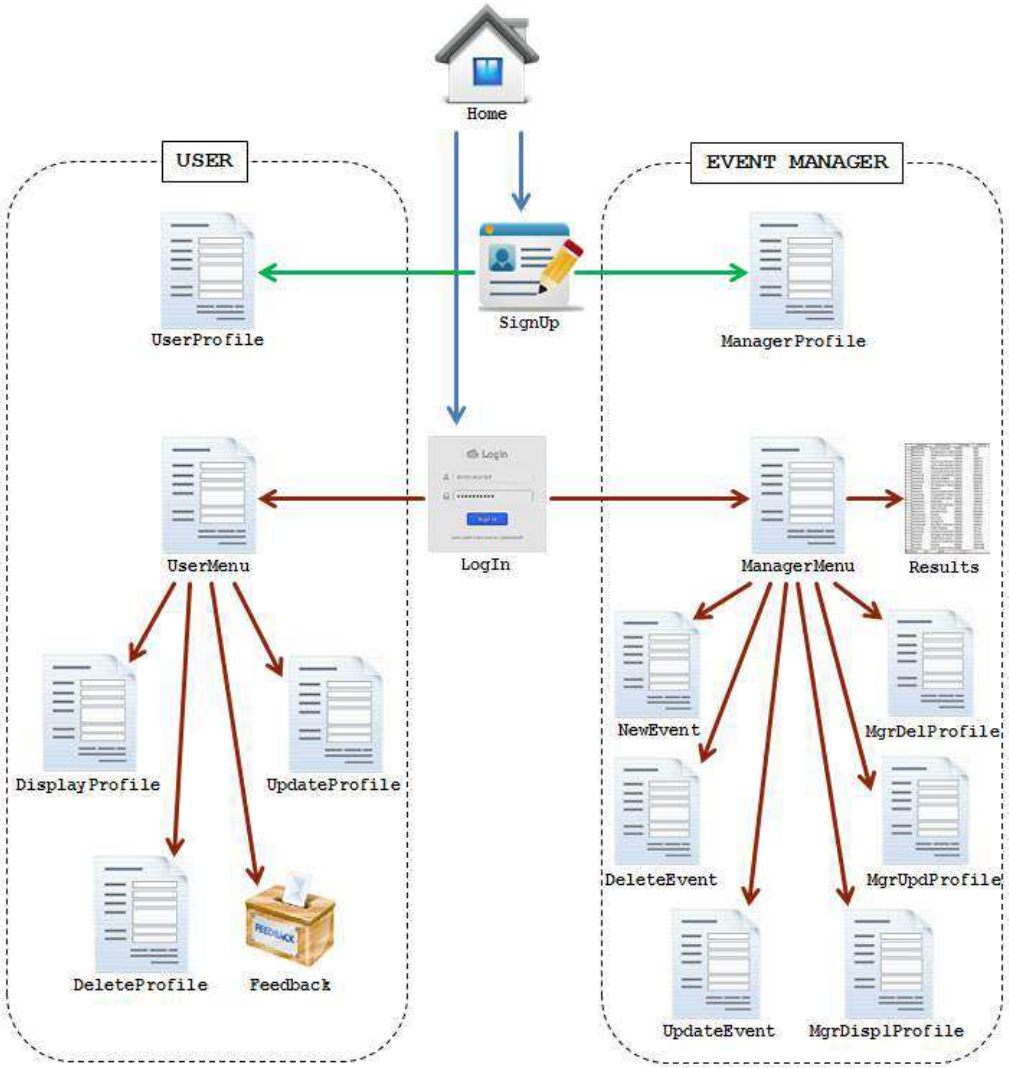
- Google maps for location and navigation

The ranking service



System Architecture

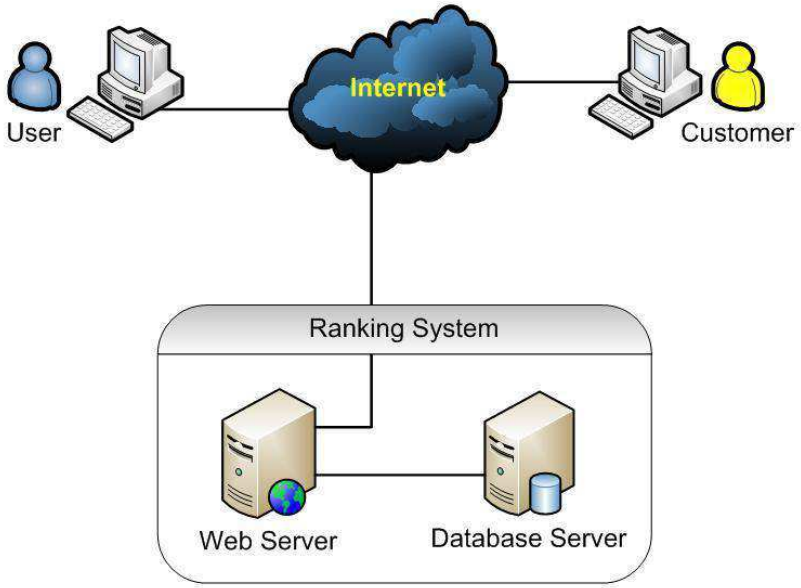
WEB site



System Architecture

Windows Service

Database Server



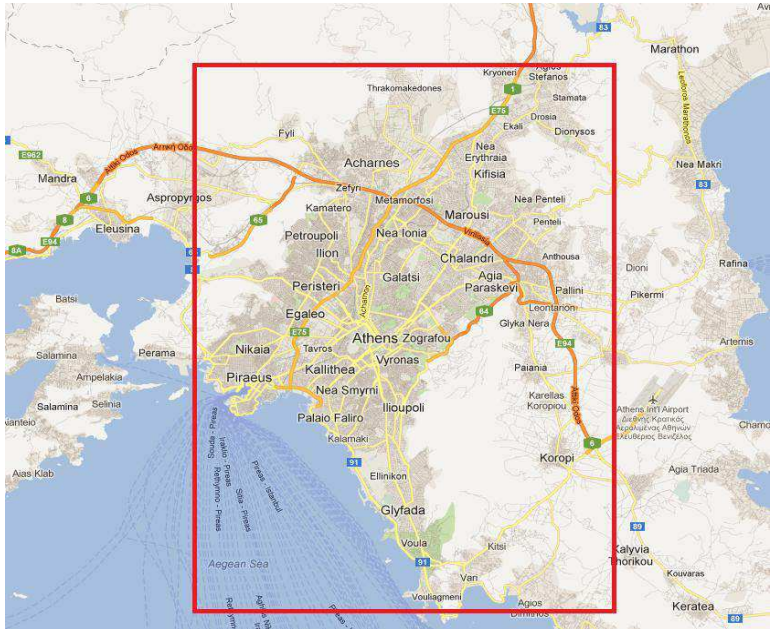
System Analysis

Geolocation

- Longitude:
  from 23,60 to 23,90 degrees east

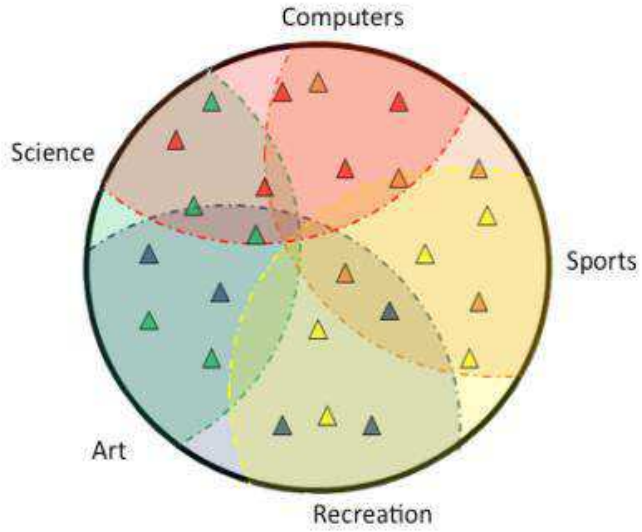
- Latitude:
  from 37,80 to 38,10 degrees north

- Length of each square in the grid
  500 meters



System Analysis

Classification Algorithm – Proximity Estimation



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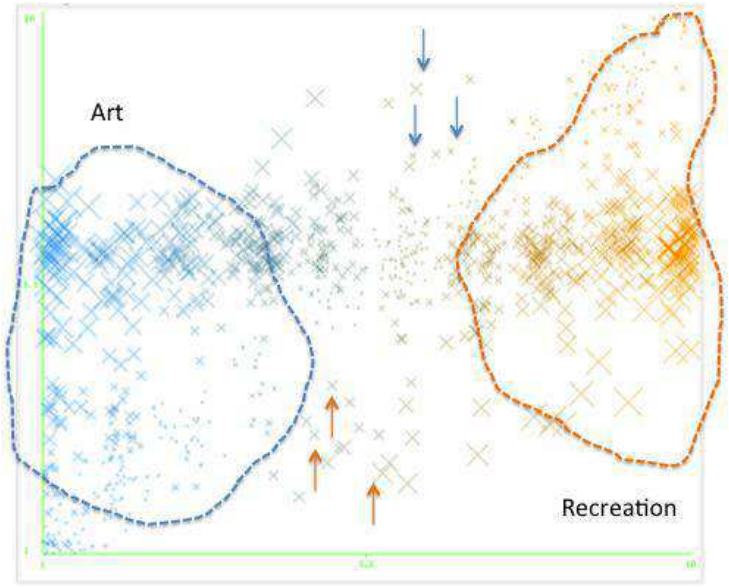
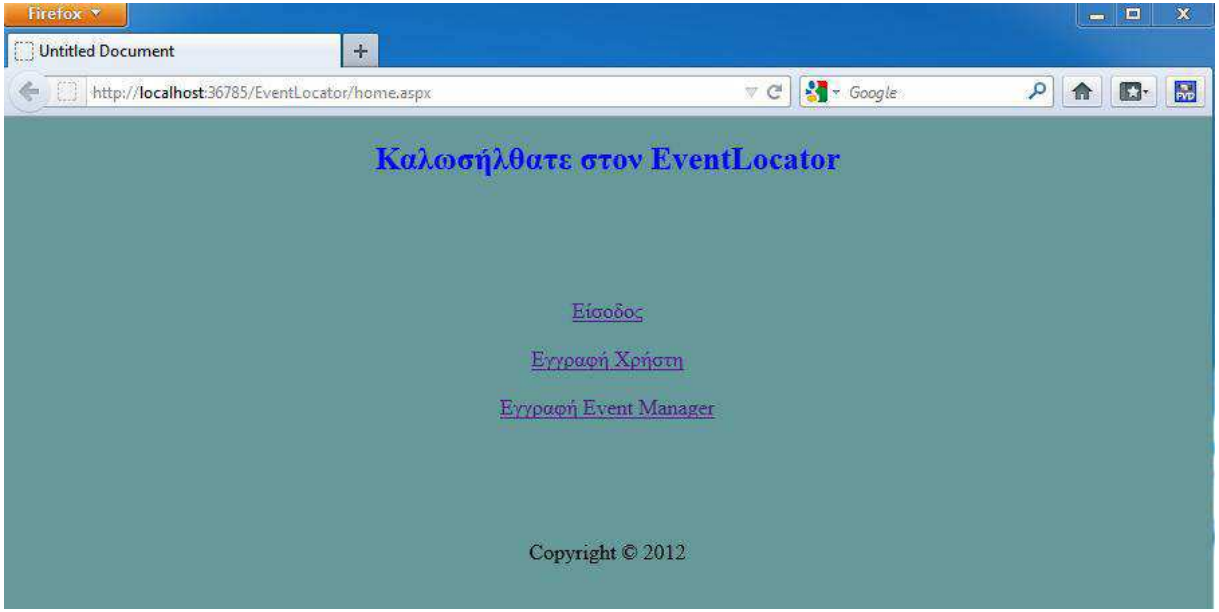


B

Probabilistic Neural Network

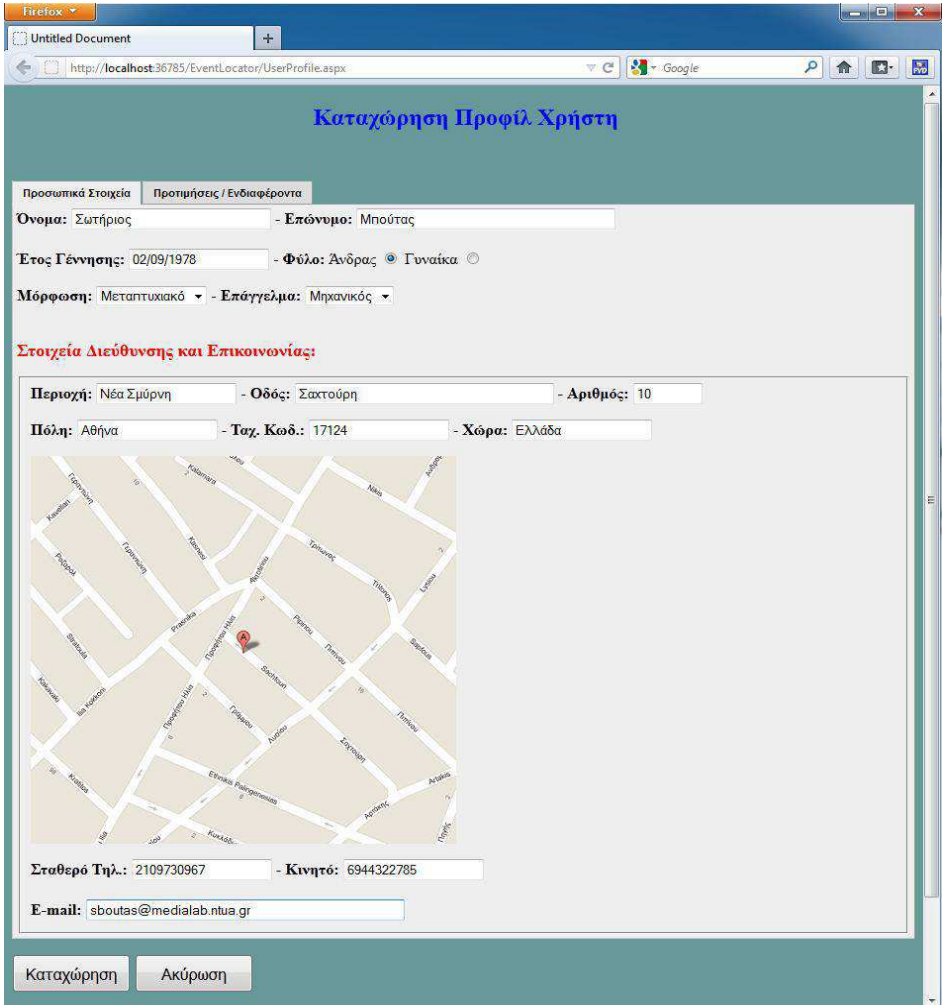
User Interface

WEB development and operation



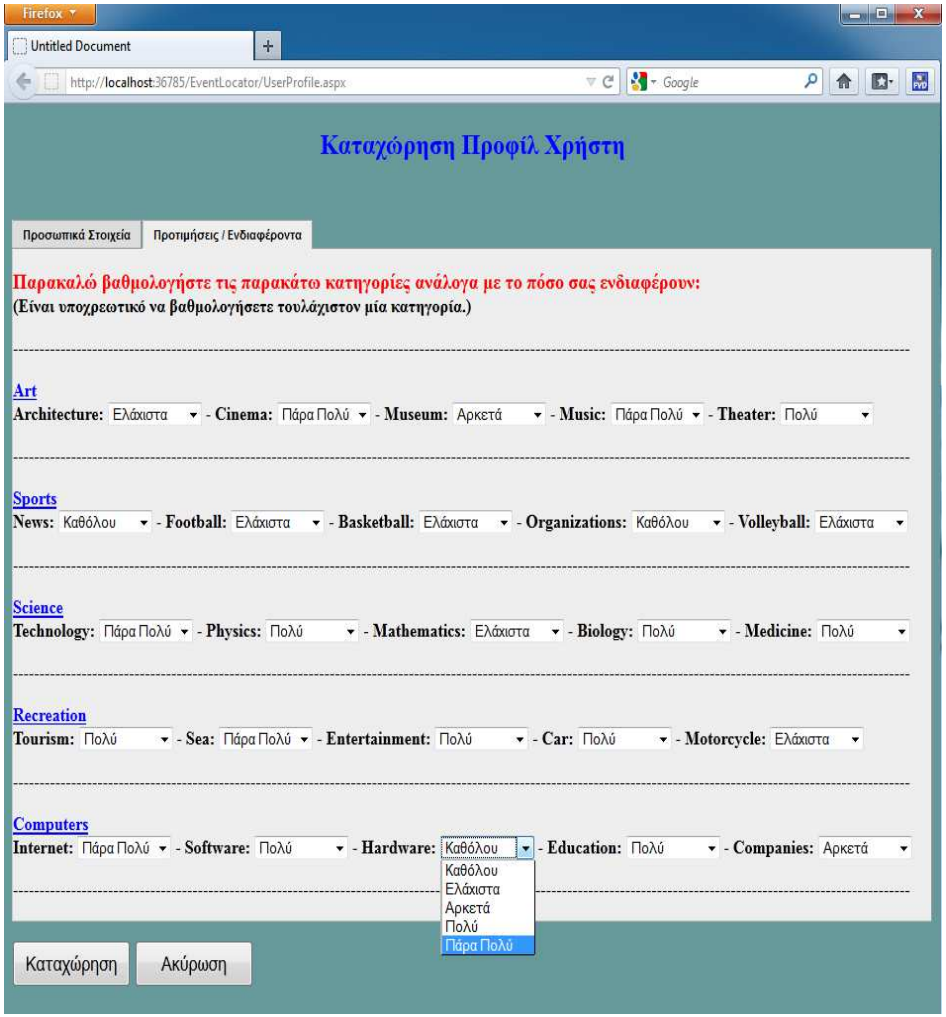
System development

WEB development



System Development

WEB development and operation



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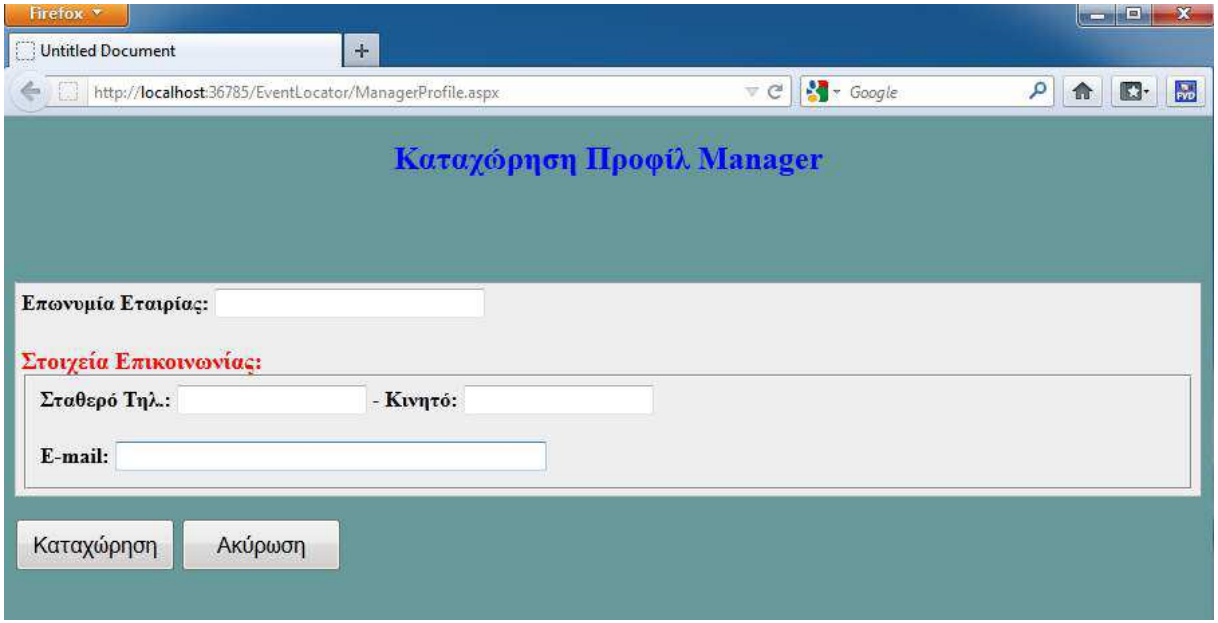
WEB development and operation



System Development

WEB development and operation

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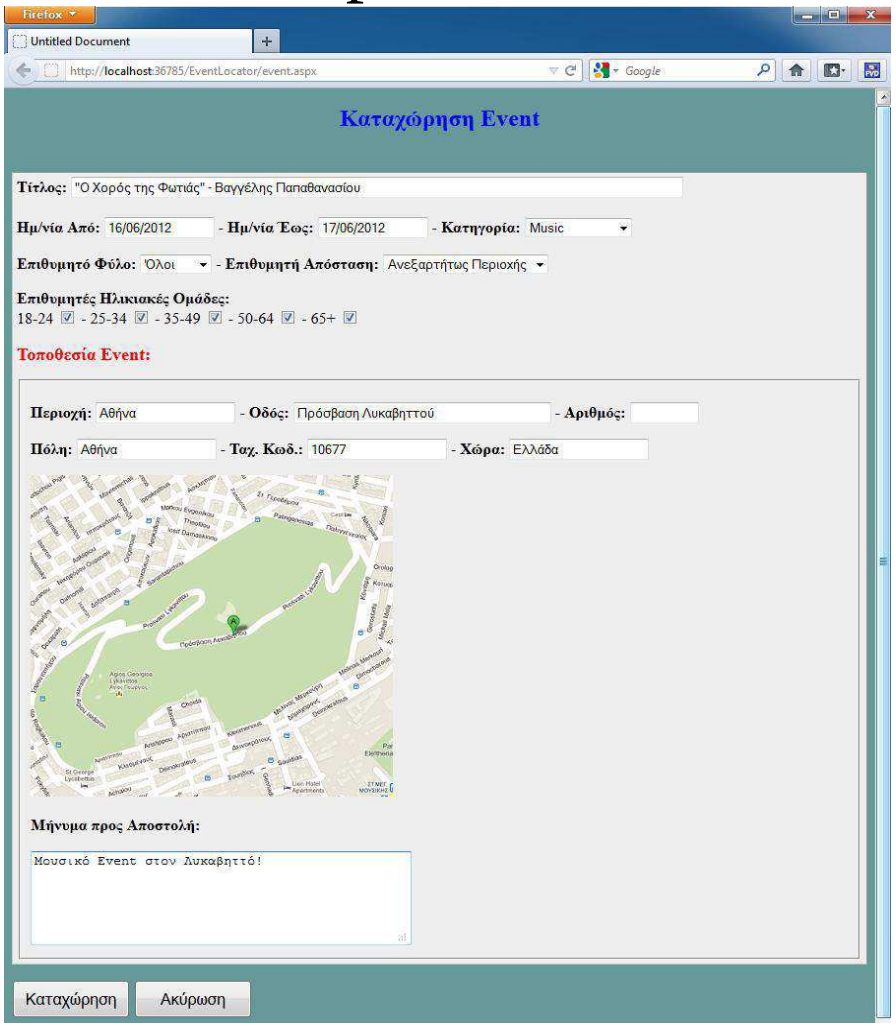
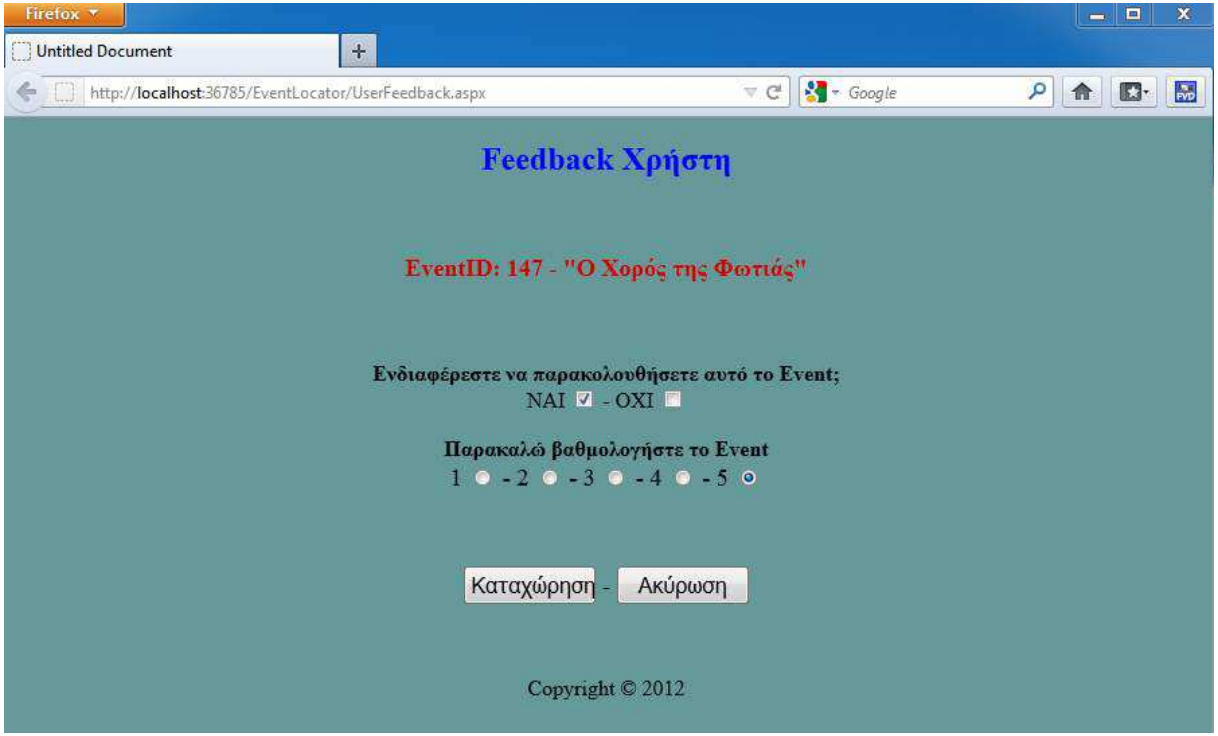


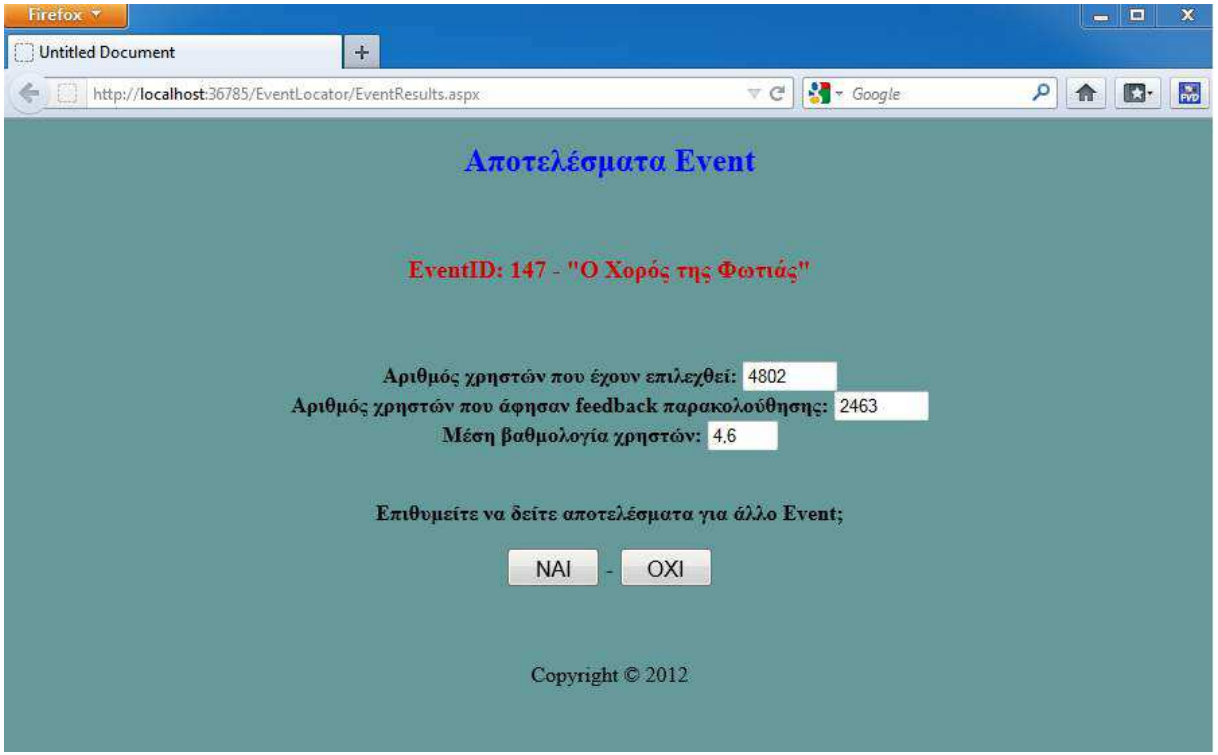
System Development

WEB development and operation



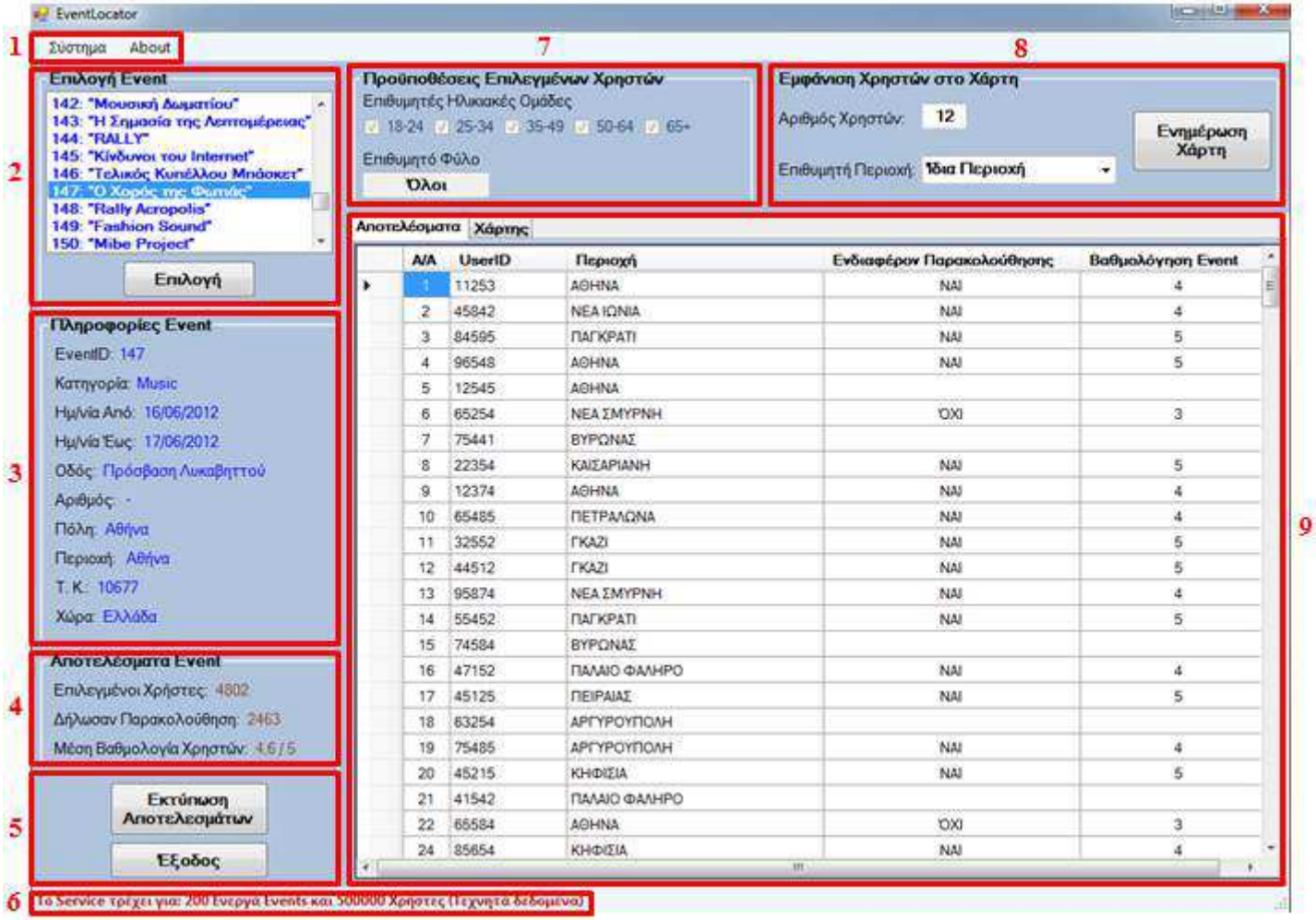
Υλοποίηση Συστήματος

Ανάπτυξη και Λειτουργία Ιστότοπου



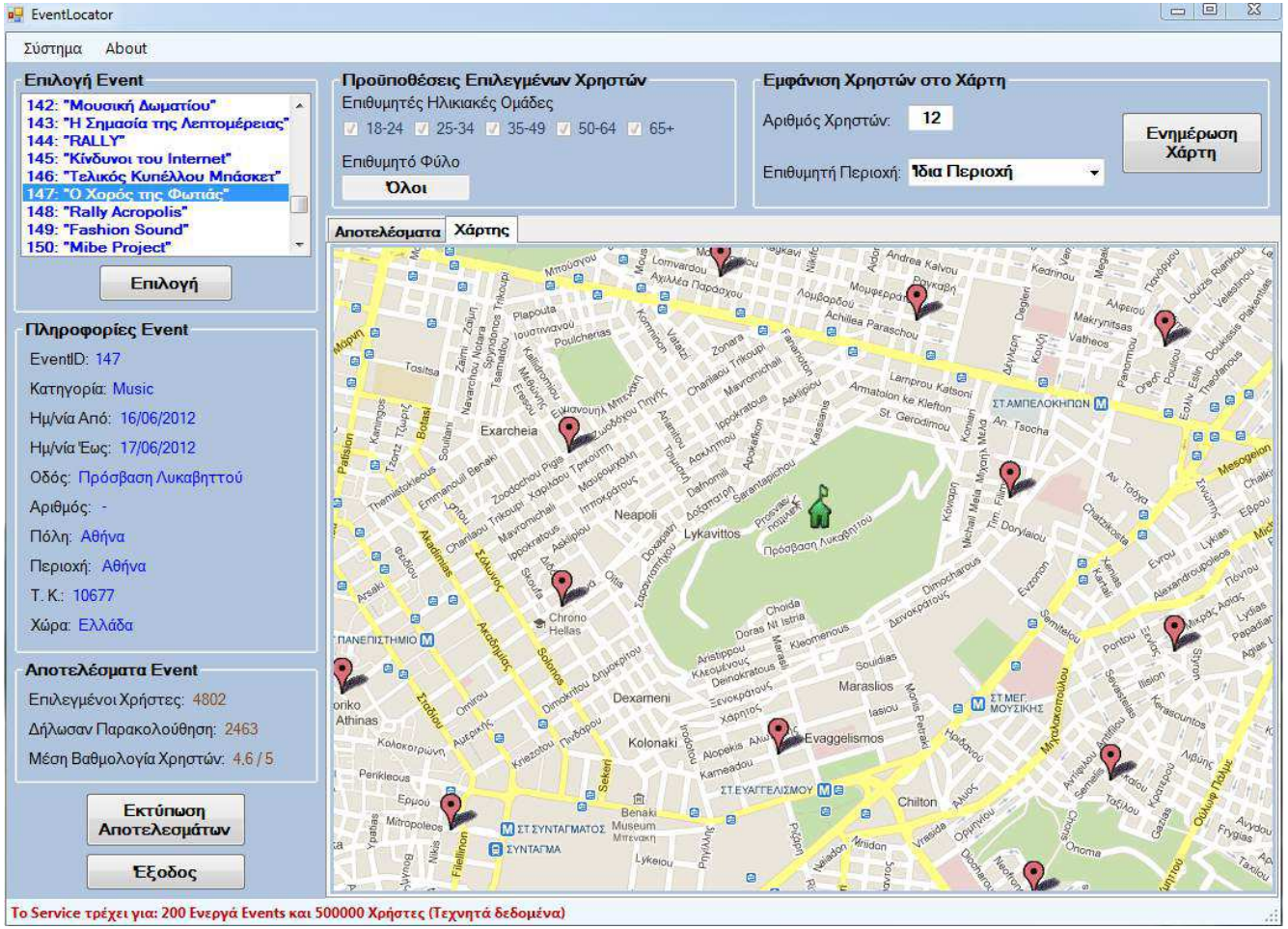
System Development

Service



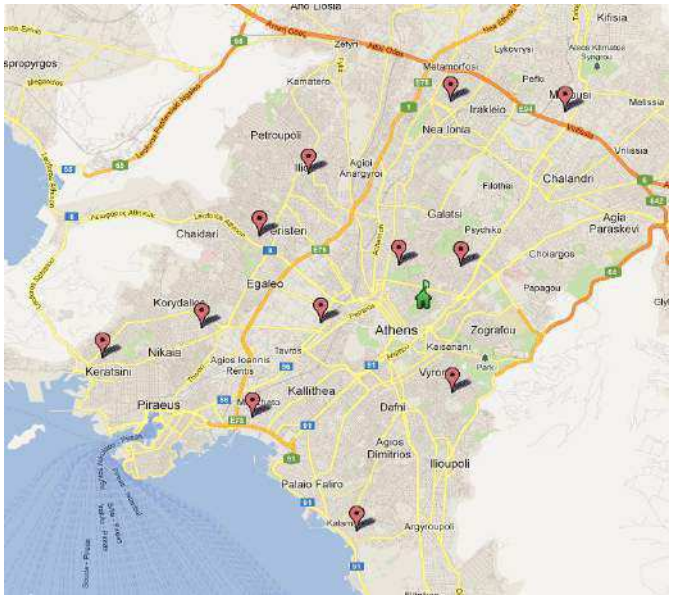
System Development

Service



System Evaluation

Ranking efficiency and evaluation



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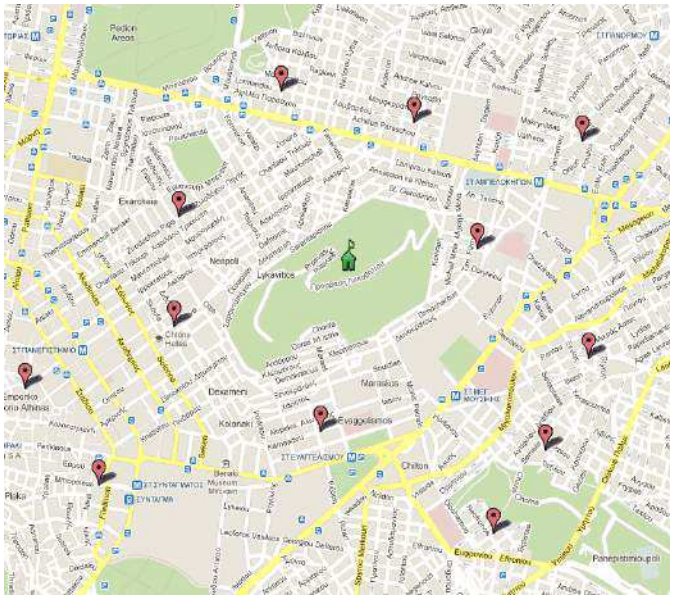

B

- Event Characteristics
  - Event type: Concert
  - Category: Art (A)
  - Sub-Category : Music (a4)
  - Location: Lycabetus Hill , Athens, 10677

The next step in Tourist's Profiles

By analyzing Big Data from Social Media

with advanced Natural Language Processing Techniques

we expect, in the near future, to achieve High Accuracy in Users' profile design

Thank you for your attention

For additional info please contact

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