

Friends Tracker: A mobile social network application

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Introduction

Mobile Social Networking

One or more individuals of similar interests or commonalities, conversing and connecting with one another using the mobile phone.

Global Positioning System

Provides reliable location and time information from GPS satellites.

“Develop a social networking application for mobile phones, to collect and provide information about the geographical position of each member of a community, using Global Positioning System”

Functionality

- ❖ Developed in Java
- ❖ Uses location information from GPS enabled devices.
- ❖ Client/Server application
 - ❖ Users register to a community.
 - ❖ Client Sends location information via Wi-Fi or GPRS to the Server depending on availability.
 - ❖ Server stores user location information and timestamps.
- ❖ If authorized, users can obtain other user location information.
- ❖ Location visualization on Google Maps or OpenStreetMap (OSM)

Technical Details: Server – Side

➤ Server is multithreaded

➤ Start the Server:

- ❖ Open a socket
- ❖ Wait for a client to connect

➤ On Client connection:

- ❖ Retrieve user's information
- ❖ Perform authorization and friend matching



➤ Send location data

- ❖ Retrieve and store location information
- ❖ Visualize user location on map
 - ❖ Retrieved from Google Maps or OSM



➤ Get location data of a user:

- ❖ Retrieve the stored location information data (longitude, latitude)
- ❖ Convert longitude and latitude to place name
- ❖ Send to the user the name of the place and the longitude, latitude values

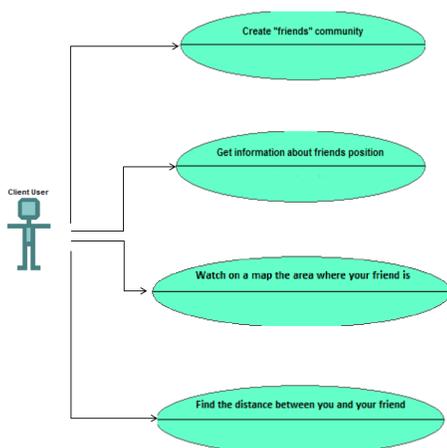
➤ User mobility visualization:

- ❖ Show a map or satellite picture on a window
- ❖ Works with Google Maps and OSM
- ❖ Create the trace on the map

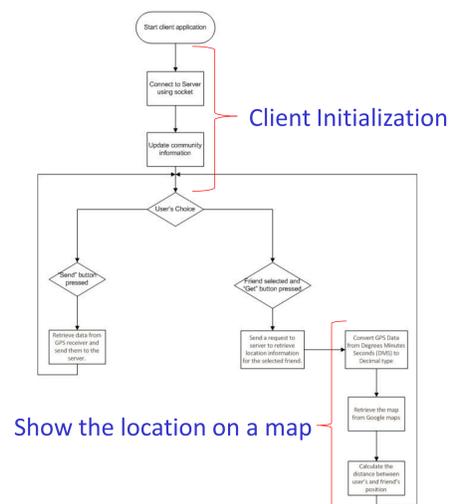


Technical Details: Client – Side

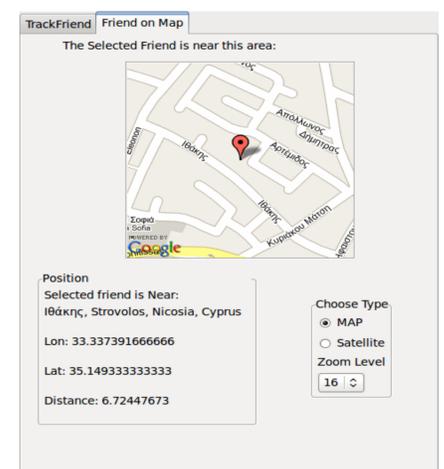
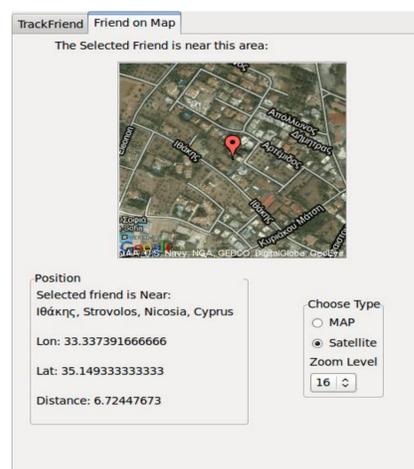
➤ User can:



➤ Client application runs on mobile device



➤ Visualization on mobile device



The user choose to get the position of a friend. The position is shown on a map or a satellite picture, with a zoom level that user choose

Achievements

- ❖ Create and manage communication between members of the same community
- ❖ Utilization of Google Maps and OpenStreetMap API
- ❖ Show the position of a friend on a map (not only as longitude and latitude values)
- ❖ Show the name of the requested friend place, using reverse geocoding
- ❖ Watch the trace of a device which uses the application
- ❖ Platform independent application