

# **GPS Car Tracking System GCTS**

Ola Mohammad Rashed & Samah Rateb Al-badawi

Electrical and Computer Engineering Department  
College of Engineering and Technology  
Palestine Polytechnic University  
Hebron, Palestine  
e-mail:ola\_rashed\_89@yahoo.com, samah\_al.badawi@hotmail.com

Depending on the high usage of mobile phones, and the large services that it provides, and the needs to always be connected to others and share information with them, we built mobile based tracking system.

GPS Tracking System, which will give system users the ability to track anything they want, or any valuable assets, or even for parents to track their sons while they are away from them. The concentration in our project was on tracking cars and plot it's movements on a geographical maps periodically with acceptable accuracy.

It uses the mobile built-in GPS receiver to determine the coordinates and speed of the moving cars or objects, then sends them periodically over the GSM network via GPRS service, to a central server, in order to be processed and plotted on the map, with complete and clear system interface. Also, it provides an accessible database for the history of movements and other data of the users that can be retrieved any time, and displayed clearly.

We used the Android operating system for the mobile application due to the accuracy in determining the locations; we built an application on the mobile to get the users data then start tracking them and determine their speed. The tracking process has two modes either walking or driving. Also, we built a desktop application; ready to receive the sent data and process them, plot, then store in database.

The used technique to connect mobile with central desktop is the HTTP connection technique. Where we consider each mobile in the system as a client, sending data to the central computer, which consider to be the server in the system.

We built our system, by choosing the best available techniques, using the hardware components and the software programs that needed to achieve our goals, in an efficient way, with low cost for the mobile and server users. It can be used in different fields and area, to get different purposes.