

# Analysis of the Track Competition Vehicles with High Accuracy Positioning

Israel QUINTANILLA GARCÍA, José Luis BERNÉ-VALERO, Aurea GALLEGO SALGUERO and Juan Ignacio LATORRE ROMERO, Spain

**Keywords:**

## SUMMARY

The purpose of this project is to obtain a system to optimising track competition vehicles. Telemetric data and high accuracy GPS positioning, based in differentials corrections GPS, provide a high and effective analysis the track of the vehicle in the digital cartography in real time (or in post process). The system is composed for three subsystems: Telemetric System, Positioning System and Analysis System Software.

Racing car use several sensors to obtain approximately the position along the track, but if we use high accuracy GPS data and telemetric data with time synchronization, we will be able to study the position and his telemetric data associated with centimetric accuracy, therefore we can compare the real trajectory with a optimal theoretical track model. In this paper, we show a real practice of this system.



## CONTACTS

Quintanilla García, Israel  
Dr. Engineer in Geodesy and Cartography  
Universidad Politécnica de Valencia  
Camino de Vera s/n  
46022 Valencia  
SPAIN  
Tel. + 34 963877556  
Fax + 34 963877559  
E-mail: [iquinta@cgf.upv.es](mailto:iquinta@cgf.upv.es).

Berné-Valero, José Luis  
Dr. Agronomist Engineer,  
Universidad Politécnica de Valencia  
Camino de Vera s/n  
46022 Valencia  
SPAIN  
Tel. + 34 963877556  
Fax + 34 963877559  
E-mail: [jlberne@cgf.upv.es](mailto:jlberne@cgf.upv.es)

Gallego Salguero, Aurea  
Engineer in Geodesy and Cartography  
Universidad Politécnica de Valencia  
Camino de Vera s/n  
46022 Valencia  
SPAIN  
Tel. + 34 963879183  
Fax + 34 963877559  
E-mail: [augalsa@cgf.upv.es](mailto:augalsa@cgf.upv.es)

Latorre Romero, Juan Ignacio  
Engineer in Geodesy and Cartography. Universidad Politécnica de Valencia. Camino de Vera  
s/n, 46022 Universidad Politécnica de Valencia  
Camino de Vera s/n  
46022 Valencia  
SPAIN  
Tel. + 34 963879183  
Fax + 34 963877559  
E-mail: [latorre@topo.upv.es](mailto:latorre@topo.upv.es)