



ACC test solutions

Goal

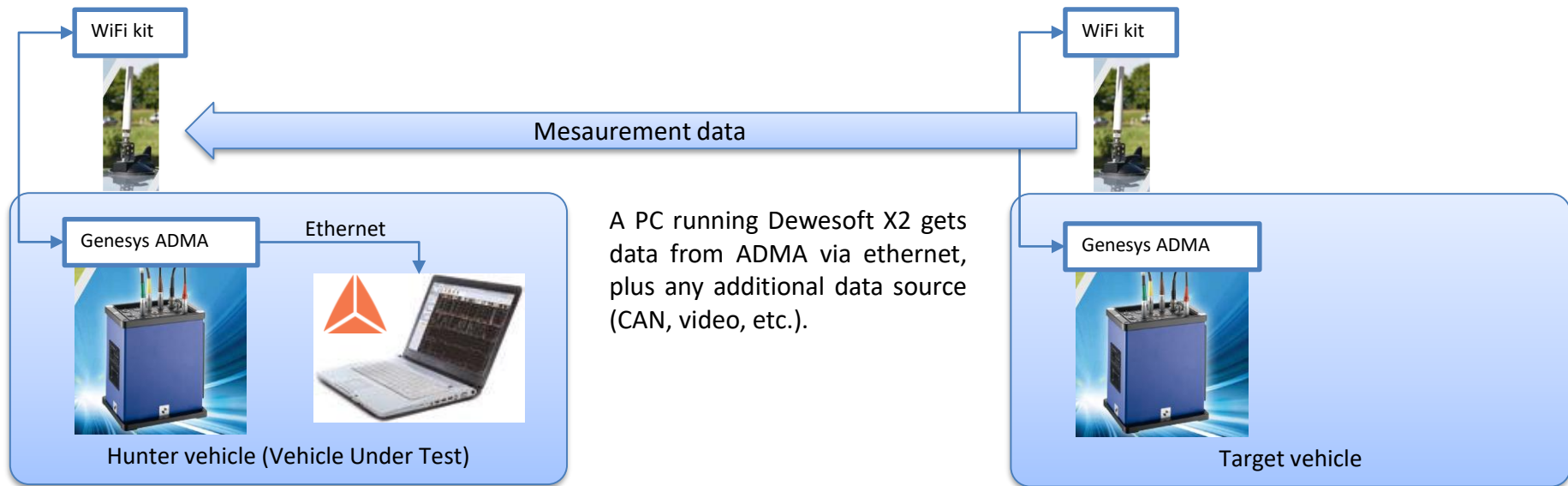
Adaptive Cruise Control (ACC) testing based on
Genesys ADMA product range and DEWESoft daq systems.

- Measurement of the location and of the motion variables of the hunter and target vehicles with Genesys ADMA
- Accurate and reliable calculation of relative speed and distance
- Testing on proving ground or on public road
- Robustness of the inertial measurements (very low drift) and quick recovery of the GPS signal in case of natural and artificial obstacles (trees, bridges, buildings)
- Possibility to acquire additional channels with DEWESoft daq systems: analogue, digital, CAN, video, etc.

System overview

The ADMA on the hunter vehicle measures its position and motion variables, it gets data from the target vehicle unit, and it calculates relative distance & speed.

The ADMA on the target vehicle measures its position and motion variables and sends all the data to the ADMA on the other vehicle via WiFi, in a range of about 1km.



RTK correction options

Track test: static base station

The base station sends RTK2 correction data to both vehicles, in a range of about 1km.

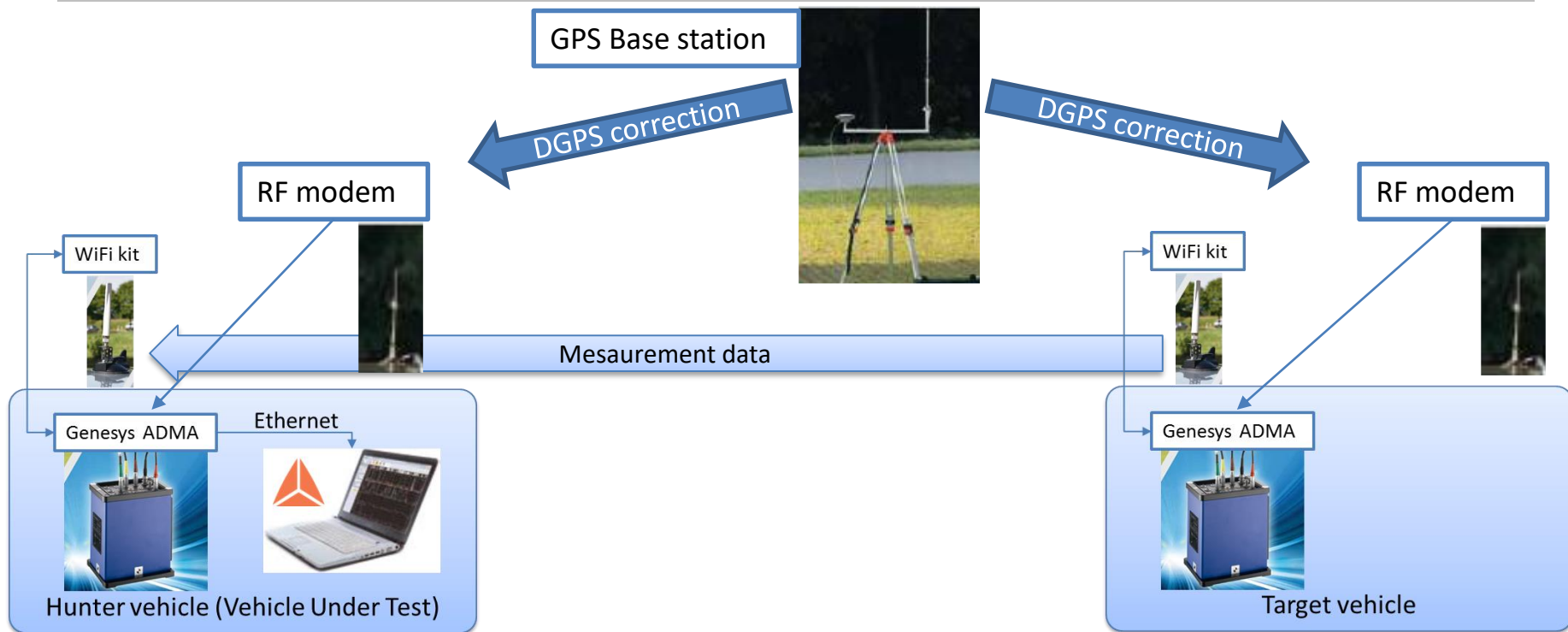


Public road: GPRS-DGPS box

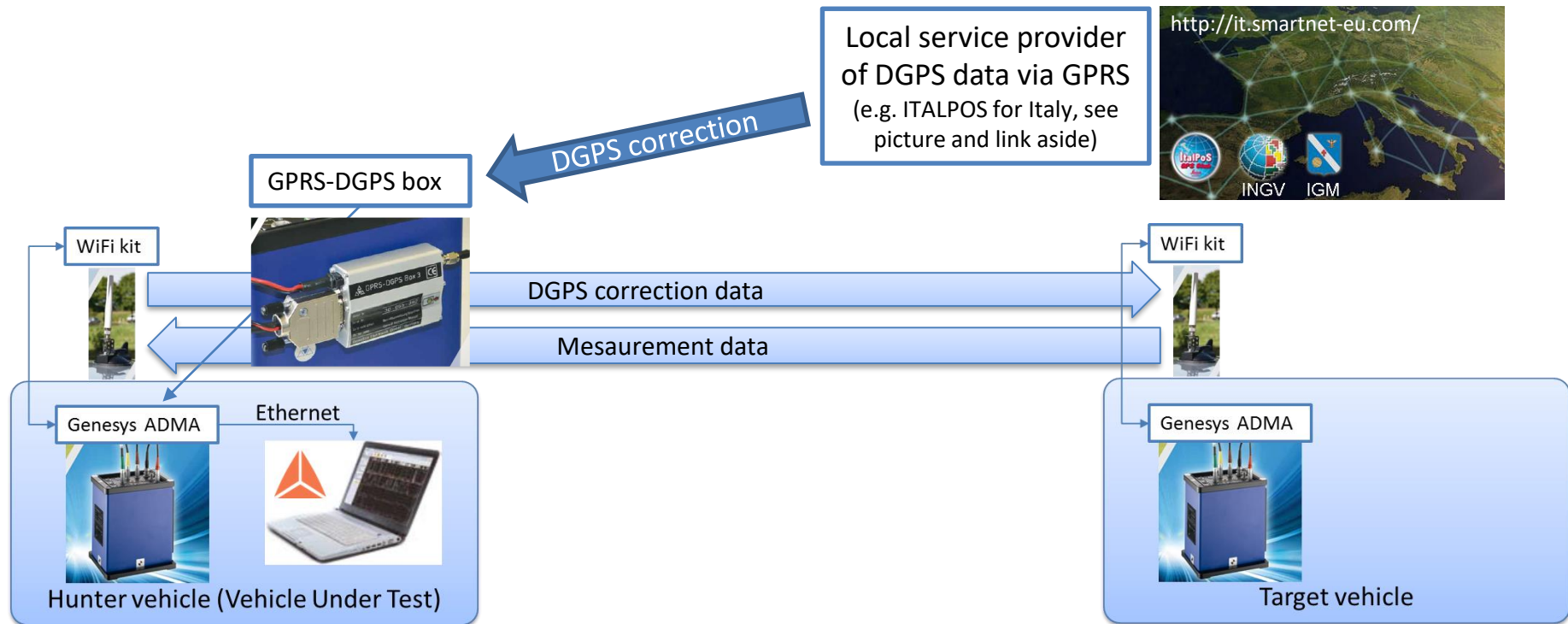
This box gets DGPS data from a provider via GPRS and sends the correction to ADMA on one vehicle. ADMA sends correction data to the other vehicle via WiFi.



RTK correction with base station

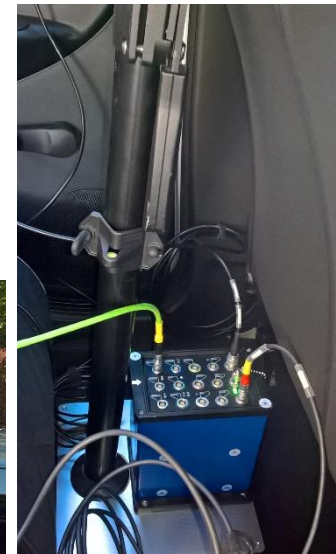
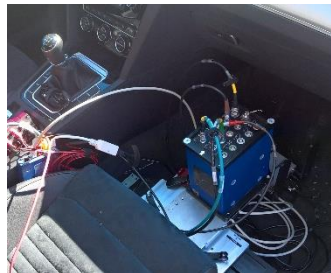


RTK correction GPRS-DGPS box



Example of vehicle setup

HUNTER	TARGET
ADMA-G-PRO+	ADMA-G-PRO+
WiFi kit	WiFi kit
GPRS-DGPS box	
	Laptop with Dewesoft X2

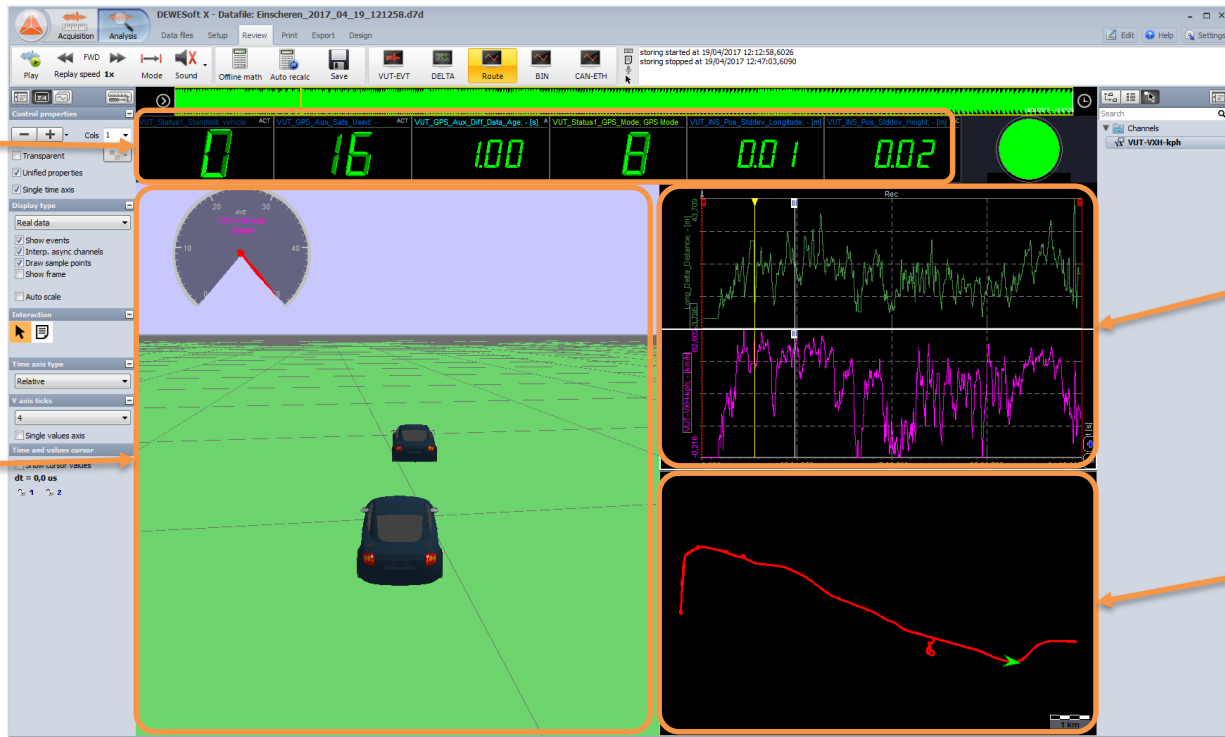


Data acquisition from ADMA via ethernet or CAN interface.
A unique test data file with synchronous data of both hunter and target vehicles, plus relative speed and distance.

Example of measurement setup in Dewesoft

Digital meters

Polygon view
Hunter vehicle
Target vehicle
Relative speed
...



Recorder plots

Vehicle path