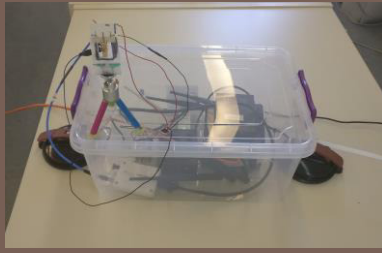
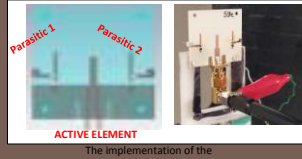
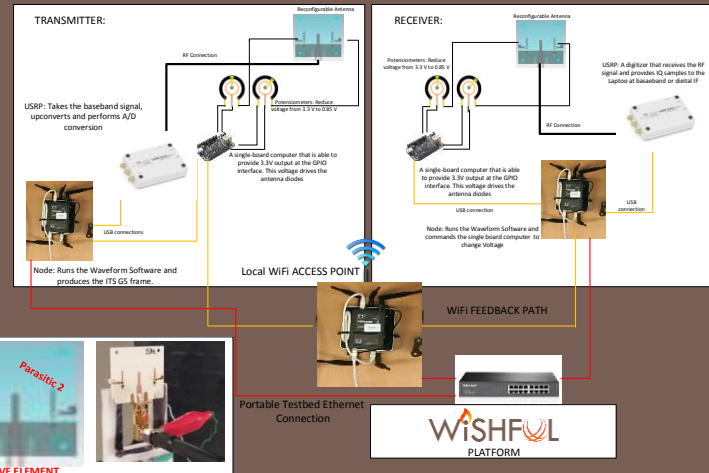


- SteeringWheel showcases the benefits of novel compact reconfigurable antennas in Vehicle-to-Vehicle (V2V) links.
- SteeringWheel experimentation tracks were implemented with exploitation of resources and services provided by the WiSHFUL portable testbed.
- Performance of V2V real-world measurements – transforming the WiSHFUL portable nodes to vehicular nodes



- SteeringWheel, the ITS-V2V use case for WiSHFUL.
- Development & evaluation of SDR modems for the ITSG5 (IEEE802.11p) standard in broadcast mode.
- Development of a WiSHFUL compatible SDR coding procedure for GNUradio.
- Extended 4-days measurements with vehicle mounted WiSHFUL nodes in Athens – Greece.
- WiSHFUL nodes used as
 - V2V modems
 - Reconfigurable antenna controllers

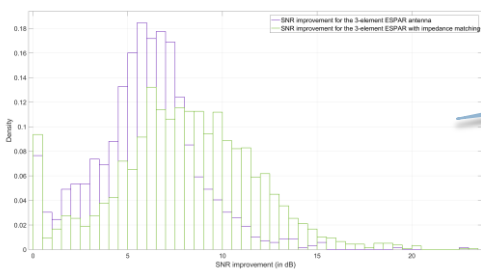


- Design and incorporation of reconfigurable, steerable antennas on both Tx and Rx.
- Implementation and evaluation of two types of 3-state antennas.

Antennas were based on the Electronically Steerable Passive Array Radiator (ESPAR) concept.

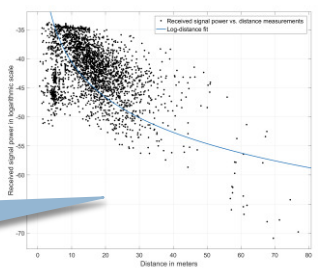
SteeringWheel results demonstrated and proved under real-world conditions that the use of reconfigurable antennas offers great gains in V2V system performance.

In addition, SteeringWheel proposes several recommendations in order to convert the WiSHFUL portable testbed in an easy-to-use mobile and vehicular measurement system.



Average SNR improvement of 5-8 dB

Pathloss modelling through measurements. Extension (more than 2x) of coverage area



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