



Towards quickly deployable Sensor Networks

State of art for WSN deployment:

- Pre-deployment tools and simulators
- Post-deployment tools and simulators
- No real-time deployment facilities available!

Goals:

- Real-time interaction with the user
 - Signal strength
 - Noise level
 - Connectivity level
 - Redundancy level
- Minimize the number of users needed to 1
- Self-configuration on the best radio channel
- Adjust redundancy and connectivity based on the current status of the network

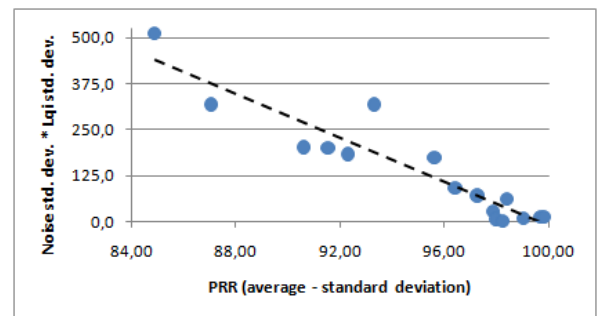
Outdoor deployment

- Study on the impact of weather conditions on the radio signal using the Scatterweb MSB430
 - Height from the ground, ...
 - Leveled land, uphill, downhill, ...
 - Rain, wind, sun, etc...



Channel quality estimation in indoor WSN

- On the fly
 - Minimize transmissions and save energy
 - LQI values and noise variance are exploited



- Based on the last 48 hours log information
 - Logging silently the information about signal strength, noise and link quality and creating the history of each channel.
 - Always available on the Coffee file system

