

1. Research Interests

- Network planning, optimisation and performance evaluation for converged heterogeneous networks.
- Efficient deterministic propagation models.
- Use of measurements in network planning (e.g. probe data and drive test data).
- Processing of measurement data for calibration of propagation models.

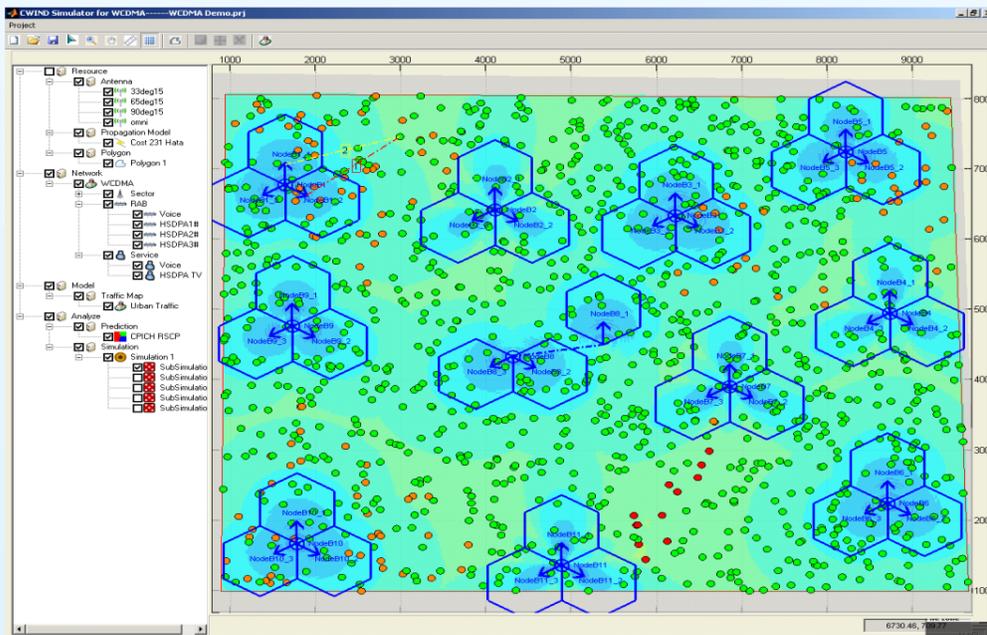
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<http://www.beds.ac.uk/research/irac/cwind>

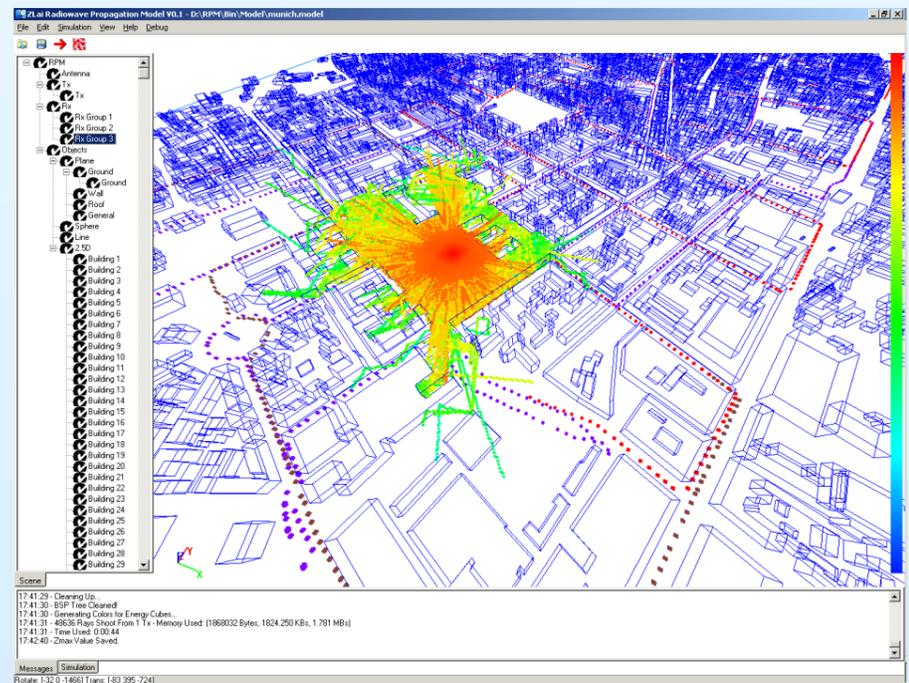
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2. Applications:

- Planning and optimisation of 3G/4G cellular networks:
 - WLAN, UMTS/HSxPA, WiMAX, LTE.
- Multi-objective network planning.



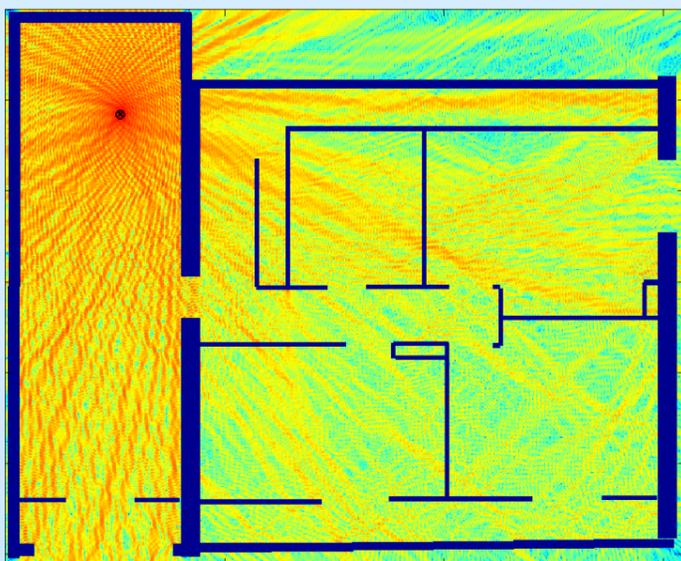
WCDMA simulator



Ray Tracing coverage simulator

3. Resources

- 3 million euros of ESPRC and EU funding
- Parallel and distributed computing for coverage prediction.
- Commercial propagation, planning and simulation tools.
- 18 researchers



FDTD coverage simulator

4. Strengths

The particular strength of CWIND lies in the interdisciplinary and inter-sector expertise possessed by its members, which covers telecommunications, operations research, high end computing, and commercial network planning tools development experience.



Parallel computing cluster

CWiND is interested in establishing collaborations with the mobile communications industry and academic institutions to make joint EPSRC and EU bids. Please contact us if you are interested.