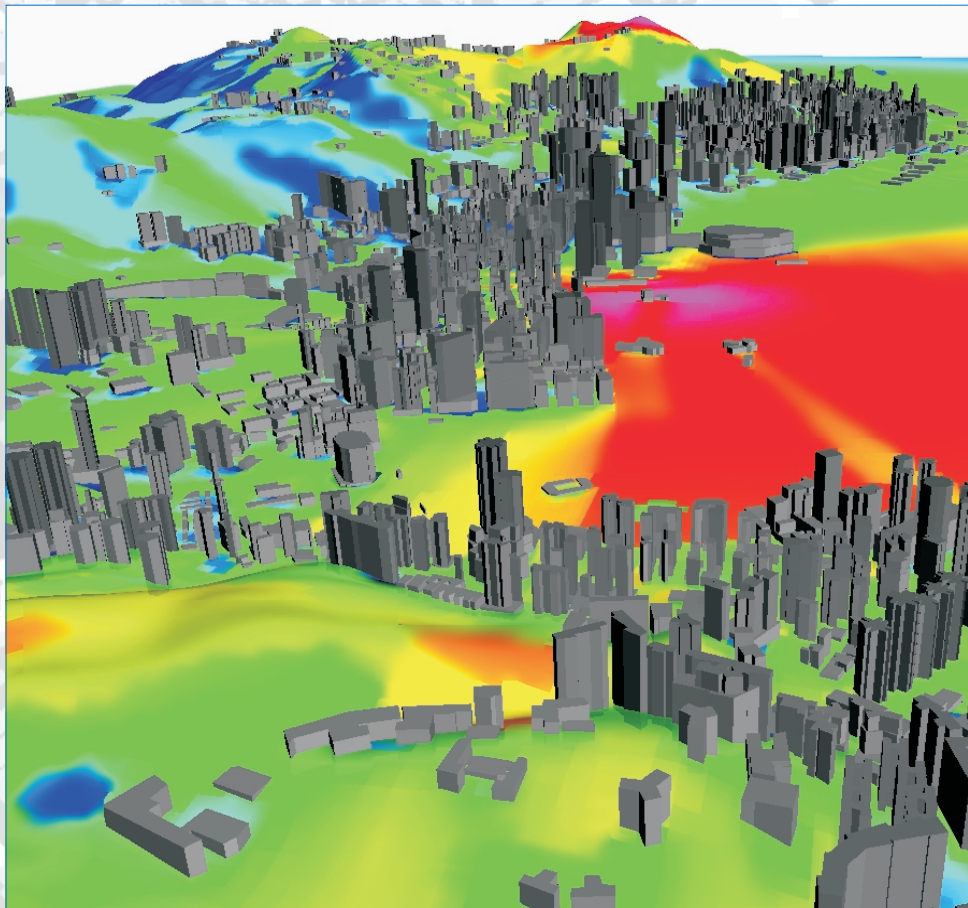


AVE

COMMUNICATIONS

*Enter into a new dimension
of wave propagation and
radio network planning*



WinProp

Company



We help you to explore the world of wireless communications

AWE Communications

AWE Communications is one of the world's leading suppliers of wave propagation models and radio network planning tools.

Founded in 1998, AWE Communications accompanied the evolution of wireless and cellular mobile communications including the migration from 2G to 3G cellular networks. During the last years, AWE Communications developed various innovative software products which contributed significantly to the success of AWE's customers.

Today AWE Communications offers additionally consulting, support and services in the area of wave propagation and radio network planning.

WinProp - Software Suite

WinProp, the main software suite of AWE Communications, is today a standard software in the domain of wireless propagation and radio network planning.

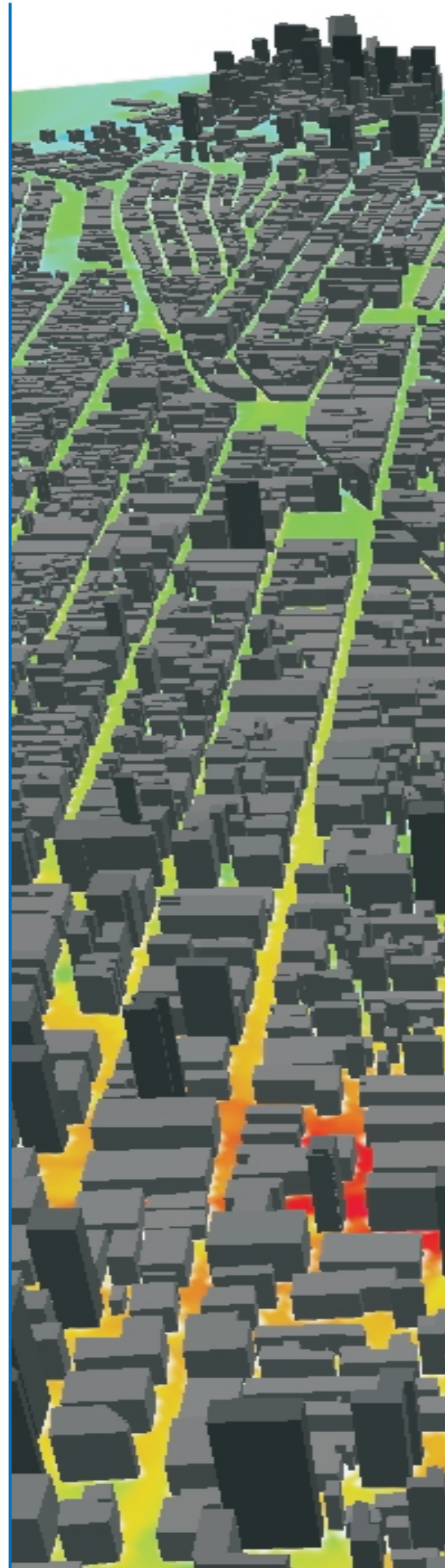
Wave Propagation Models

Innovative wave propagation models combine accuracy and short computation time to provide a performance which is outstanding in wave propagation modeling.

The range of applications stretches from satellite to terrestrial and from rural via urban to indoor radio links.

Radio Network Planning and Simulation

Network planning is more than only coverage and capacity. The products of AWE Communications provide enhanced tools to plan and simulate 2.5G, 3G and B3G cellular networks as well as W-LANs, WiMax and broadcasting services. Static network planning modules and dynamic network simulators are available to support engineers in their daily work of building and optimizing wireless networks.

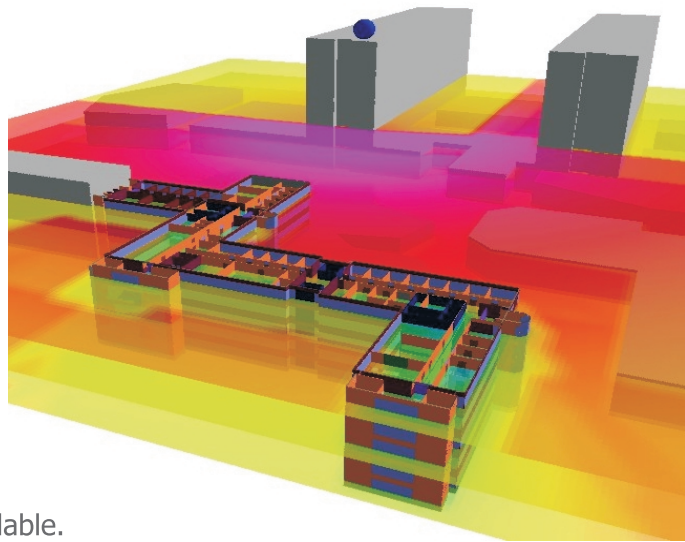


Wave Propagation

WinProp includes wave propagation models for the following scenarios:

- rural
- suburban
- urban
- indoor
- tunnel

The propagation models are either empirical or ray-optical/deterministic. Besides these classical models the unique and innovative Dominant Path Model and the fast 3D Ray Tracing models (IRT) are available.



Path loss prediction in hybrid urban/indoor scenario

WinProp's CNP (Combined Network Planning) allows the combination of different scenarios (propagation models and databases) for hybrid analysis (e.g. urban/indoor or rural/urban).

Network Planning

Based on the accurate propagation models, network planning modules are available for

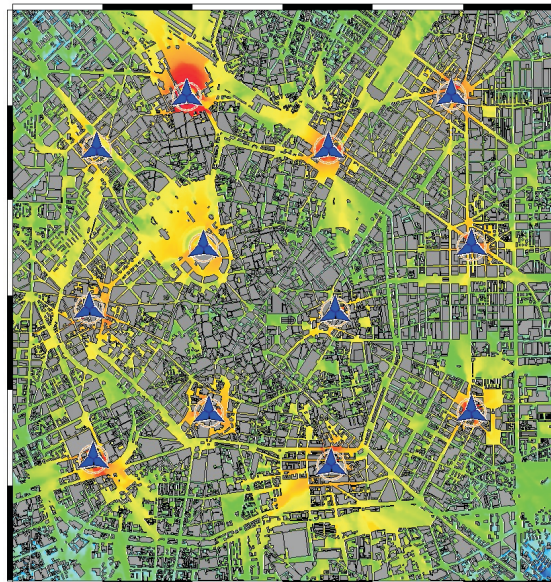
- 2G (GSM, IS 95,...)
- 2.5G (GPRS, EDGE)
- 3G (UMTS FDD & TDD, HSDPA, TD-SCDMA)
- B3G (OFDM)
- Satellite networks (GPS, S-DMB,...)
- W-LAN
- WiMax
- user defined standards (configurable by user)

Coverage plots, best server predictions, reception probability and SNIR maps, MS and BS Tx power estimations, neighbor cell lists as well as capacity are determined (based on traffic assumptions).

Variable bitrates due to adaptive channel coding and modulation schemes are considered.

Interference is determined and capabilities of different types of mobile stations can be defined for a realistic modeling of the scenarios.

Additionally the electromagnetic compatibility (environmental aspects and health issues) due to the superposition of multiple carriers can be analyzed.



Max received power in downlink in 2.5G network (City of Milan)

Dynamic Network Simulation

WinProp offers dynamic system simulators for 3G (UMTS-FDD, TDD, HSDPA and TD-SCDMA) cellular networks.

Especially the QoS and blocking/dropping analysis for packet switched services requires a time slot based evaluation and configurable mobility models.

The simulator allows as well the evaluation of different RRM algorithms to see their impact on the performance of the 3G network.



SNIR of CPICH in UMTS network (City of Paris)

*Wire telegraph is a kind of a very long cat.
You pull his tail in New York
and his head is meowing in Los Angeles...*

*And radio operates exactly the same way...
The only difference is that there is no cat.*

Albert Einstein



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