

Net Technologies

building quality in telecom networks

Profile

Net Technologies offers Infrastructure Dimensioning Tool (IDT) specialized for dimensioning of different TETRA/TETRAPOL networks and services, which will support the decision-makers for the fast and reliable actions in case of emergency situations, disasters and proactive identifications of various PPDR scenarios due to crisis situations. Additionally the Infrastructure Dimensioning Tool can be used as a preliminary radio planning simulation tool which can estimate all network elements required for covering the coverage and traffic needs.

Infrastructure Dimensioning Tool

Key Features

- System design
- Preliminary Radio Planning
- Coverage and Traffic Analysis
- EIRP Calculator: Equivalent isotropically radiated power (EIRP) calculations for both UpLink (UL) and DownLink (DL) directions
- Path Loss Calculator: Calculations of Path Loss as a function of various parameters (e.g. Distance, Mobile Station height, Base Station height, area type etc)
- Link Balance Calculator: Quick and reliable link balance estimations and proper selection of equipment in both BS and MS sides
- Cell Range Calculator: Calculations of ES cell range taking into account numerous BS, MS and related technical parameters.
- Traffic Calculator: Performs different types of traffic calculations according to the selected technology.
- Usage of DataBase with various network equipments
- Cost estimation
- Generating Network Report Summary.
- Project reports showing configuration and network parameters.

The screenshot displays the Infrastructure Dimensioning Tool (IDT) interface. The top navigation bar includes 'Station Mode' and 'Network TPL'. The left sidebar contains a 'Dense stations' section with 'Tetra/TetraPCL calculator', 'Pre calculation', 'Traffic calculation', and 'Import coverage layer'. Below this is a 'Mobile stations' section with 'Mobile Station - GSM' and 'Mobile Station - UMS'. The central map area shows a geographical area with two radio coverage circles. The right sidebar contains three data tables: 'Results Dense Urban area', 'Mobile Station', and 'Handheld device'. Below the map, there are sections for 'Project Report', 'Cost Estimation', and 'Traffic Calculation'. The 'Project Report' section shows a table with columns for Name, Date/Time, Base Station, Base Station Area, and Base Station Line. The 'Cost Estimation' section shows a table with columns for Name, Base Station, Base Station Area, and Base Station Line. The 'Traffic Calculation' section shows a table with columns for User Profile, Number of users, and Base Station.

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Advantages:

- Can be used anytime, anywhere due to web-access functionality (PC, Tablet etc).
- Can be used as a proactive tools for simulations of different scenarios and networks' deployments.
- No need of any additional maps (clutter, vector or elevation models).
- Based on Google Maps API solution.
- Estimating the cost of a new network elements.
- Decrease the reaction time and organization initiatives
- Providing in a time-efficient manner, accurate network dimensioning estimations for complex wireless network deployments.
- Simple and Fast Operations
- Friendly Graphical User Interface (GUI)
- Takes into account the networks in proximity
- Using existing TETRA/TETRAPOL equipment with provision for future developments

Output Overview:

- EIRP UL/DL
- Path Loss
- Received Isotropic Power
- Maximum Allowable Path Loss for UL/DL
- Link Balance
- Cell Range
- Grade of Service (GoS)
- BS Traffic Capacity

- Minimum Number of BS required for a certain area
- Minimum Number of Transceivers required for a certain area
- Indicative BS locations visualization
- Preliminary Equipment Cost estimate

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