Cellular / CDMA Module

The new EDX Cellular/CDMA Module&#153 is an add-on module to our multi-purpose tool, EDX SignalPro&#153. This module incorporates and significantly expands upon the cellular/PCS capabilities previously found in EDX's Network Design Module&#153 v3.2.
The following technologies are supported in any frequency band: AMPS, TACS, NAMPS, TDMA (IS-136), GSM, CDMA (IS-95), iDEN&reg, GPRS, EDGE and 1XRTT (CDMA).
You have full control over system operating parameters including handoff and all relevant CDMA parameters. Support for overlay systems with mixtures of different technologies at cell sites (ie: AMPS+TDMA or GSM+GPRS).
EDX's Monte Carlo analysis can take into account adaptive &quotsmart&quot antenna C/I ratio improvements using EDX's exclusive adaptive antenna DLL.
Comprehensive CDMA PN offset planning makes assignments to avoid co-offset and adjacent offset conflicts using real sector service areas.
Circuit-switched traffic distribution with QoS based on blocking percentage. The packet-switched traffic distributions includes individual control of your service mixes such as voice, e-mail, web browsing, audio streaming, and video streaming.
Monte Carlo analysis is available to determine loading and performance for CDMA systems. Random mobile placement is controlled by selected traffic distribution. Loading limits are determined by total mobiles or soft-blocking rates.
Calculate total data traffic per sector with more accuracy using uniform loading, land use database, demographic database and traffic database.
Run specialized studies for cellular and PCS systems to produce maps showing C/(I+N) ratio with channel assignments, non-CDMA handoff regions, CDMA best and second best server based on Pilot Ec/Io or traffic, CDMA handoffs (hard, soft, softer, soft+ softer, 3-way soft, 4-way, 5-way, 6-way), CDMA downlink Eb/No, CDMA uplink Eb/No, CDMA uplink BER, CDMA uplink mobile power, CDMA number of mobiles per sector for target Eb/No and CDMA PN offset conflict analysis (signal ratio and time delay).
This product supports multiple access, including: FDMA, TDMA, CDMA, FDD, and TDD and also supports many different modulation types, including: QPSK, QAM, OFDM, W-CDMA, and frequency-hopping.
Not only do you have access to specialized cellular/CDMA studies, but you will also have a powerful collection of coverage and interference study types for accurate details about your service area, including signal levels (received power, field strength, etc.),most likely server (MLS) and second most likely server, shadowing, minimum pathloss, time delay.
Calculate traffic loading on individual sectors based on real service areas and a selection of traffic distribution types. You can generate a report on sector loading or use the information for use in channel assignment calculations.
A comprehensive selection of propagation models is included or you can use custom or user-defined models. Sector-specific models are also available.
Unique EDX 3D &quotPathloss Surface&quot approach explicitly stores sector specific measured pathloss values instead of model prediction pathloss values

Automatically tune a propagation model using actual measurement data.
Automatically layout your cell sites within your system using criteria such as: fixed hexagon/rectangular grids, land use types, and data traffic demand density.
Automatically set up your frequency planning using standard or user-defined channel plan templates. Select EDX's simulated annealing algorithm for optimum channel assignments or utilize your own algorithm via an external DLL. Supports frequency-hopping technogies so that you can assign hopping sequences, rather than channels, to cell site sectors.
Design your own area study analysis via an external DLL using a customized or proprietary study algorithm.
Neighbor list calculations are included based on most likely server and handoff criteria. Support for Comarco (CWT) drive test hardware, measurement log files and export network sites to CWT cell site database file (CDB) format.
A Virtual Drive Test feature allows a simulated drive through the network with 3D visual display from the driver's perspective. Signal levels, serving sectors, handoffs, etc. are displayed as the drive progresses.

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