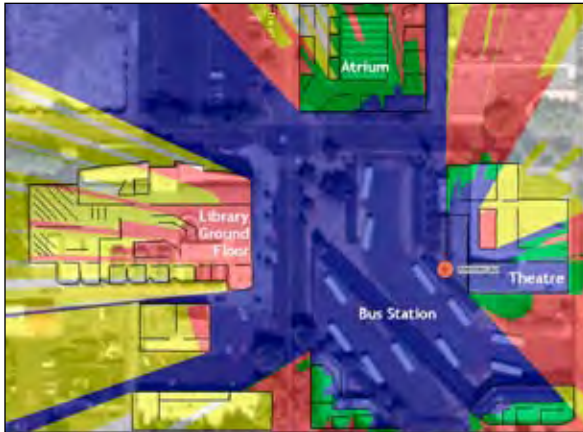


The power of smart planning



Outdoor-to-Indoor Propagation Analysis

Features

Point Studies

The point study mode displays the ray trajectories to a particular point in the propagation environment. This allows you to view the effect on the ray amplitude and phase for each wall reflection and corner diffraction.

RMS Delay Spread

You can calculate time dispersion/multipath studies (RMS delay spread studies), angle of arrival, and angle of departure.

Multi-Story Studies

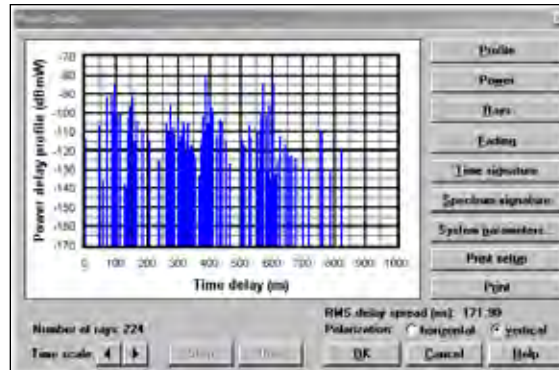
Calculate attenuation between multiple floors/ceilings.

Spectrum Signature Displays

Spectrum signature displays use the FFT of the time signature to display frequency-selective fading channel characteristics. Pseudo-animation mode shows the dynamic nature of the frequency-selective spectrum response.

Time Signature Displays

Time signature displays are available to show the waveform of the received data pulse as a function of time. Pulse shape distortions and echoes due to multipath are easily visible. Pseudo-animation mode shows the dynamic nature of pulse distortions.



Studies

Accurate Propagation Models

This module offers the most accurate propagation predictions available using several selectable models, including:

- 2D and 3D ray-tracing models for outdoor microcell and indoor wireless LAN/PBX/cell-extender studies
- EDX® Simplified Indoor Model (ESIM™) for rapid, site-specific indoor signal strength calculations. Takes into account:
 - Line-of-sight rays
 - Wall transmission
 - Corner diffraction
 - Attenuation due to partial Fresnel zone obstruction
 - COST-231 Walfisch-Ikegami propagation model for simplified outdoor microcell studies.

Study Environment

Propagation models explicitly account for the location of structures within the study environment and their electrical properties (conductivity, permittivity, and transmission loss).

System Parameters

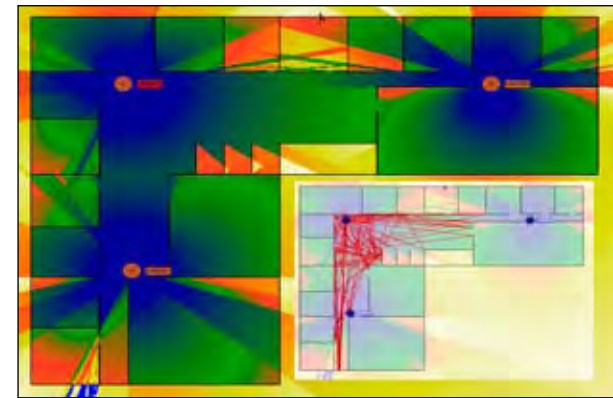
Considerations are made for:

- Free-space propagation
- Specular reflection
- Diffraction
- Diffuse wall scattering
- Wall transmission

Additionally, the digital system parameters control pulse shape and data rates. Parameters include modulation type, data rate, and roll-off factor.

Technologies

The Microcell / Indoor module can be used to enhance and/or increase the accuracy of studies supported by the EDX family of products. These types of studies include radio systems such as Wi-Fi and those used in campus networks and urban areas.



Area-Wide & Ray-Tracing Studies



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Building Editor

Features

EDX .mcs Files

EDX has developed a robust and efficient file format for outdoor building databases and indoor floor plans – the .mcs format.

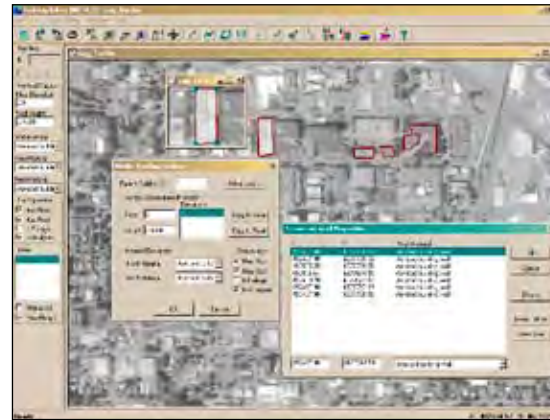
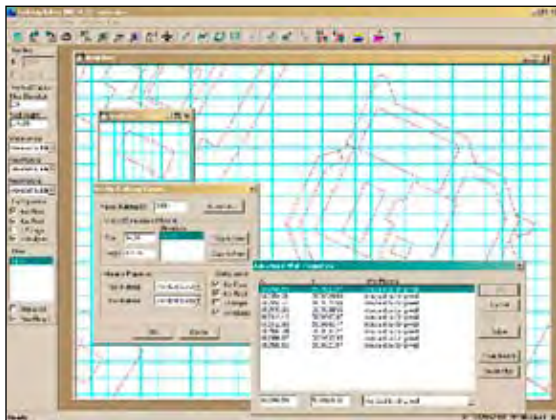
The .mcs files produced by the Building Editor can be used with the EDX wireless planning tools. The detailed parameters stored in the .mcs files, such as wall material, electrical characteristics, wall height and location, provide vital details that can greatly enhance the RF propagation prediction accuracy for microcell and indoor wireless systems.

Edit EDX .mcs Files

Building Editor makes it easy to manage indoor floor plans and outdoor building databases. With its familiar Windows graphical user interface, it gives you the convenience of mouse and toolbar functionality to create, import, and edit your building databases. You can easily modify wall height and material type, group walls together, and, with a single click, copy a floor plan to another floor.

Customize Your Display

Choose from several different display types for viewing your map. Most views can be shown either separately or simultaneously within distinct map windows.



Display types include:

- An entire .mcs database
- A selected building or structure
- Selected elements within a building, e.g. all elements at a particular elevation or floor level

Create & Display Databases from Scanned Images

You can also import raster images as background layers, then use the intuitive drawing tools to trace the elements you want to include in your building database, assigning wall height, wall material and electrical characteristics as you go.

Rotate & Scale Images

Make directional changes by rotating or using linear scaling on images. Re-scale images by selecting two points and dragging them to new locations on the map or by entering new coordinates for each.

Create EDX .mcs Files from AutoCAD Files

You can easily import AutoCAD® .dxf and .dwg files (file formats through AutoCAD 2002). The Building Editor displays the files then you decide which layers you want to import for your building database. The relevant layers can be imported one at a time, with each layer having independently defined height and wall material characteristics.

Snap-to-Grid

Enhanced accuracy is provided with the Snap-to-grid feature. It ensures that lines are straight and connected. You can specify your own grid spacing and orientation.

Grid Spacing

The grid can be viewed to illustrate spacing requirements and show distances between points, walls, or buildings.

Easy to Use with Windows®

All EDX software utilizes the Windows 98, 2000, NT, or XP graphical user interface, toolbars, right-click functions, and drag and drop features. You can print to any Windows compatible printer or plotter.

Export Files

Export files from the Building Editor as geo-coded .tif images for use with GIS mapping or other software.



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