

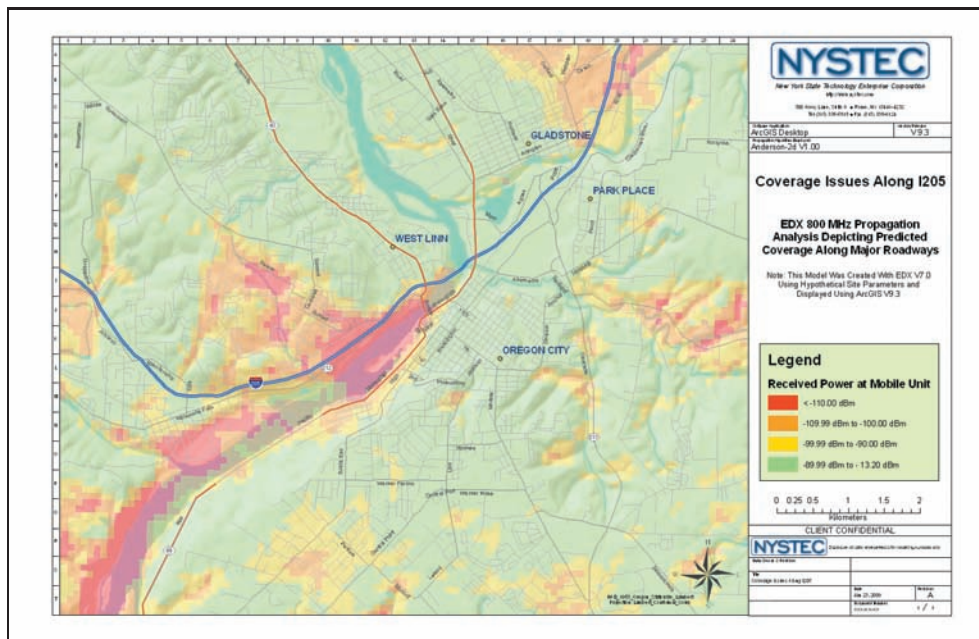
Radio Coverage: Propagation Prediction Analysis

In today's rapidly evolving radio environment, cellular providers and private radio systems offer real-time, critical and reliable communications to users. Still, even the most advanced radio systems have "holes" — areas where two-way radio coverage is lacking. During an emergency, a hole in coverage could be life-threatening, so it is essential to know where your users have radio coverage and can communicate, and where holes exist.

Through propagation measurements, analysis and mapping, NYSTEC can provide you with reliable coverage profiles. Radio coverage maps are essential for public safety, public service, and other radio and cellular users. NYSTEC uses the most advanced computer tools to perform coverage propagation, analysis and mapping for our clients. Our toolset is the same used by the two-way radio industry, and NYSTEC has calibrated these tools with measurements of radio performance to ensure a high degree of confidence in the performance results.

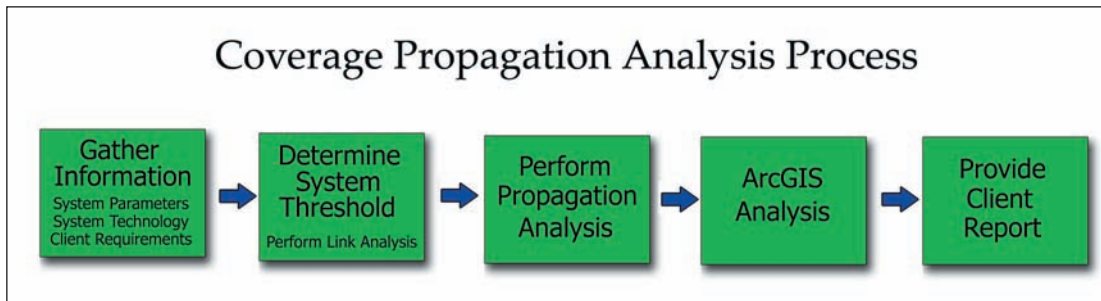
Our coverage propagation results are calculated with propagation-prediction tools, and then input into a Geographical Information System (GIS) along with other geographical information such as political boundaries, terrain data, and road information. The GIS enables geographical analyses of the coverage propagation.

The picture below is an actual coverage map created by NYSTEC. It depicts the predicted area coverage for a radio system consisting of multiple sites. The green areas predict where the radio system will provide reliable talk-out voice coverage.



Communications Engineering Experience

NYSTEC has 14 years of experience providing coverage analysis to our clients. We've developed a systematic process to perform coverage analyses that are customized to our clients' concerns, technology and requirements.



NYSTEC is a not-for-profit corporation. We are not affiliated with any radio-system provider, common carrier, or equipment vendor. Consequently, we provide truly independent analyses. In addition to coverage analyses and geographic visualization, we have a wealth of experience providing independent engineering services for private land-mobile radio and cellular systems. Our services include:

- ◆ Radio Coverage Propagation Analysis,
- ◆ Propagation Geographical Analysis,
- ◆ Creation of Coverage Test Matrices,
- ◆ Quality Assurance Oversight of Field Coverage Testing,
- ◆ Verification of Actual to Predicted Coverage, and
- ◆ Validation of System Performance.

Our communications engineers and project managers have served clients of all sizes — from those with small radio systems consisting of one or a few sites to clients with large, statewide radio systems encompassing multiple sites. We have even served clients with coverage needs in buildings or tunnels.



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