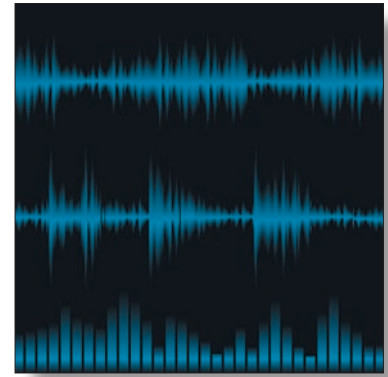


## Spectrum Management & Regulatory Assistance

**N**YSTEC engineers have extensive experience working with federal regulations on frequency licensing and helping clients manage the spectrum for their wireless communications systems. Our team works with clients to ensure that their systems are compliant with current regulations. We guide them through government processes to acquire the needed licenses and assist them with managing their licenses to stay compliant.

To assist in the management of frequency spectrum and radio-system sites, NYSTEC has developed customized database repositories that provide quick access to detailed information on spectrum, specific frequency licenses, and the status of frequency applications.

NYSTEC has provided ongoing support and management of thousands of FCC Part 90 land mobile radio (LMR) frequency licenses and performed quality assurance on issued licenses in the FCC Universal License System. NYSTEC is thoroughly familiar with Regional Planning Committee protocols for coordinating frequency use, submitting license applications, and gaining approvals. NYSTEC's LMR frequency license services include:

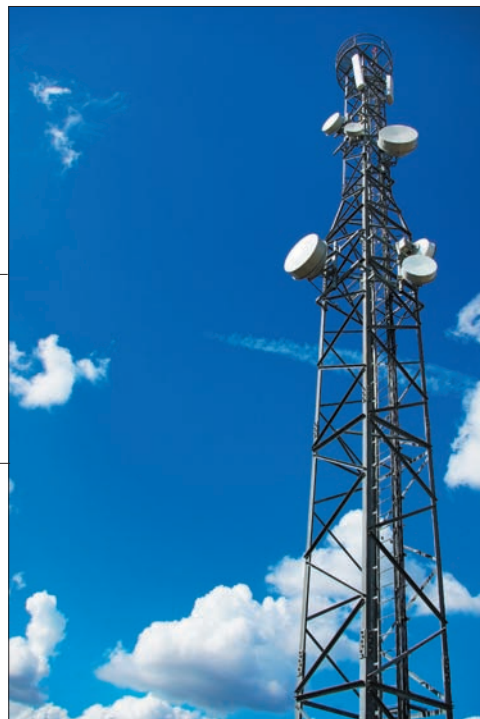
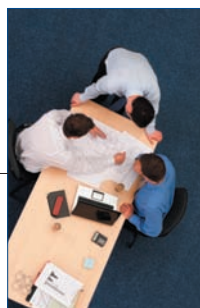
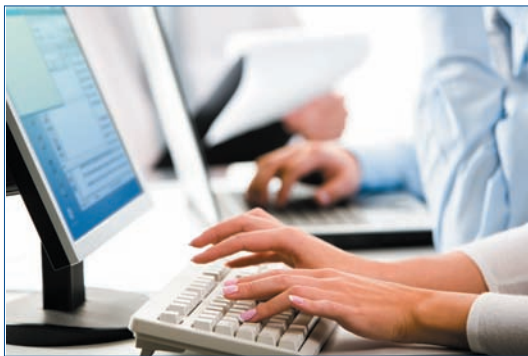


- ▶ Developing a radio-systems spectrum design that adheres to industry best practices for frequency separation between sites in the system.
- ▶ Conducting online searches of FCC databases using computer-based search tools to identify in-band incumbents, operational parameters of existing systems, antenna and tower registration numbers and their geographical coordinates, or create customized data listings for frequency spectrum as required.
- ▶ Determining whether the FAA must be notified of existing tower modifications or new tower constructions to comply with FCC Part 17 regulating antenna structures.
- ▶ Cross-checking interference analyses using computer-based radio propagation and GIS (Geographic Information Systems) tools.
- ▶ Advising client stakeholders of critical milestones such as FCC 601 Schedule K construction commitments and license expiration dates.

The microwave radio-frequency license application process is similar to LMR licensing but has some regulatory differences. The process is normally assigned to the microwave-system firm, which in turn employs the services of a microwave frequency coordinator. Proposed frequency usage must be coordinated in advance per FCC Rule 101.103, Frequency Coordination Procedures, which involves sharing technical operating information between the applicant and existing band licensees whose facilities could be impacted by interference from the new system.

NYSTEC's quality project oversight during the microwave frequency license-application process would include:

- ▶ Auditing path-engineering design documents to verify that frequency bands sought are appropriate for achieving availability objectives and that path distance, antenna beamwidth, and radiated power comply with the applicable FCC Part 101 regulations.
- ▶ Inspecting path-engineering data, prior coordination notice (PCN) data, and the FCC license database to detect errors early and identify appropriate license modifications to correct discrepancies.



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