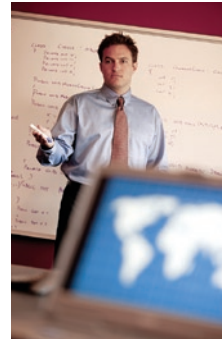


Spectrum Clearing And Relocation Services

/// MANAGING THE COMPLEX PROCESS OF SPECTRUM RELOCATION ///



SPECTRUM CLEARING AND RELOCATION SERVICES

Spectrum is the most valuable asset in any wireless operator's or service provider's portfolio. Many have paid billions of dollars to acquire spectrum in anticipation of delivering new and enhanced services to their customers. The steps between winning new spectrum and rolling out enhanced service offerings, such as streaming video, high end data services, and internet-based data services, can be a series of complex and challenging tasks. Often the government regulator requires new licensees to clear or relocate the existing spectrum from the incumbents before they utilize that band in a new network. In some cases, the new licensees are required to help the incumbents relocate to different frequencies so that the incumbents may stay in service.

LCC has the resources to support all spectrum clearing and relocation needs. Our spectrum team has performed every type of wireless project support from troubleshooting a single cell site to designing and optimizing nationwide wireless systems around the world. In the U.S. market alone, LCC has been involved with the relocation of over 3,000 microwave paths. A unique resource that LCC can provide through its partners is a diligently maintained comprehensive database of all incumbents in the AWS, MSS and BRS frequency band. This database resource saves our clients time, money and research effort, in that it can help us identify relocated paths before they are noted within the FCC database, as well as highlight those paths that are in negotiations and likely to be relocated.

CLEARING AND RELOCATION PROCESS

LCC offers end-to-end spectrum clearing and relocation services for all licensees and incumbents. The following represents the key areas/activities in LCC's spectrum clearing process.

Market and Interference Analysis

- > Market & Spectrum Study
- > Preliminary RF Design
- > Interference Analysis

System Verifications

- > Signal Verification/Path Audits
- > Incumbent Notification/Kickoff
- > Detailed Interference Analysis using Final RF Design
- > Path Verification and Prioritization

Negotiation and Relocation Planning

- > Site and Equipment Surveys
- > Relocation Negotiations
- > Comparable Cost Appraisal and Development
- > Sign Agreement
- > Government Relocation Planning

Relocation and Market Clearing

- > Prior Coordination Notice Filing
- > Regulatory/FCC Tracking & Filing
- > Equipment Installation & Acceptance

Cost Sharing

- > Cost Sharing Development
- > Final Documentation and Complete Path Relocation

At the beginning of the clearing project, LCC will work with the client to customize the scope of activities and timeline for each market. At the end of the relocation process, LCC will provide the client with documentation showing that the path has been relocated to the incumbent's satisfaction and that the licensee has released the frequency per regulatory process.

LCC allows licensees to focus on the major tasks associated with network deployment and provides relief from the concerns of spectrum clearing and relocation issues by offering a task based outsourced spectrum relocation solution.

LCC enjoys a good working relationship with the vast majority of incumbents within this frequency band due to our extensive involvement in supporting varied telecommunications efforts. These relationships enable LCC to negotiate very favorable relocation settlements that provide for the incumbents communications needs, while meeting or coming in below budgeted relocation cost estimates.

LCC has assembled a team of industry veterans with extensive experience in microwave relocation and spectrum management. Our technical know-how and proven performance allows our clients to be one of the first in market with clear acquired spectrum. LCC's value is in its ability to lead our clients through the complex and numerous processes required to go from a license grant to on-air interference free operations on the new acquired spectrum.

Celebrating 25 years in the wireless industry, LCC continues to bring innovation and expertise in advancing wireless network services. From developing the industry's first RF planning tool to measuring and monitoring End-User Quality of Experience today, LCC provides advanced network services to achieve higher quality of service under the growing network demands of tomorrow. Building on 25 years of designing, optimizing and maintaining advanced wireless networks, LCC is ideally poised to help deliver the next generation of networks to the market.

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