# Roger E. LeClair

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## CAREER PROFILE – Engineering Consulting for Spectrum Management

Experienced professional with proven ability to successfully represent clients throughout regulatory processes aimed at ensuring access to frequency spectrum. Specialist in technical and regulatory aspects of frequency management. Seeking to apply technical and regulatory experience to expand use of spectrum resources. Excellent educational background. Demonstrated project management, organizational and leadership skills.

- Spectrum Management
- Satellite Coordination
- Client Representation
- Licensing and Regulations
- Interference Modeling
- Project Management

## PROFESSIONAL EXPERIENCE

### 2007 to Present – Wavefront Capital, LLC.

An independent, professional consulting and services firm

**Co-founder** -- Established firm to provide services, analytics, consulting, and training for satellite interference coordination and regulatory process management.

- Developed innovative web-based applications, using MATLAB and MediaWiki, to analyze the interference condition between satellite networks, in a collaborative framework, to help efficiently utilize radio spectrum resources.
- Supported NBNCo, an Australian Government Business Enterprise whose goal is to deliver Australian's first national "open access broadband network to all Australians, regardless of where they live."

### 2001 to Present – Roger LeClair, Inc., dba LeClair Telecommunications

An independent, professional consulting firm

**Founder** -- Established firm to assist clients in regulatory activities addressing the use of radio frequency spectrum. Attracted clients include United States Army, Intel, Google, SpaceX, SES, Shared Spectrum Company, Boeing, Hughes Network Systems, Cornell University, AeroVironment, SpectrumFive, XM Satellite Radio, MetroPCS, American Radio Relay League, and others.

- Represented United States government agencies throughout the preparations for and at WRC-03 and WRC-07. Prepared and advanced technical contributions in appropriate national and international fora.
- Provided technical analysis for, and participated in, the international coordination of proposed new satellite systems for two large satellite operators.
- Conducted research and development on adaptive spectrum management algorithms and software in support of the Defense Advanced Research Projects XG Program.
- Developed custom MATLAB tools to simulate and analyze interference environments.
- Provided regulatory guidance and assistance, including the preparation of material for Federal Communications Commission (FCC) filings, the preparation of input contributions to ITU-R study groups, and the analysis of inter-system interference, to several satellite and terrestrial telecommunications providers and users.

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### 2003 to 2012 – RMT Spectrum Associates, Inc.

An independent, professional consulting firm

**Co-founder** -- Established firm to assist government clients in regulatory activities addressing the use of radio frequency spectrum. Attracted clients include United States Department of Commerce and ITT Industries.

- Represented United States Department of Defense (DoD) in the 2007 Radiocommunication Assembly (RA-07) and 2007 World Radiocommunication Conference (WRC-07) through support provided to the department's Defense Spectrum Organization.
- Provided regulatory guidance and assistance, including the preparation of input contributions to International Telecommunication Union Radiocommunication Sector (ITU-R) study groups, in support of the National Telecommunications and Information Administration Office of Spectrum Management.
- Obtained General Services Administration certification for company.

### 1998 to 2001 – Leslie Taylor Associates, Inc.

A telecommunications legal and consulting firm

**Senior Engineer** – Represented clients before the FCC, the ITU, and non-US regulatory bodies.

- Coordinated satellite systems both within the United States and between the United States and other administrations.
- Conducted analysis of electromagnetic compatibility among various types of RF systems including satellite and terrestrial networks. Advanced intra-service and inter-service sharing concepts. Developed custom MATLAB tools to analyze complex interference situations.
- Prepared contributions for ITU-R study groups and World Radiocommunication Conferences.
- Conducted studies of the use of orbit and spectrum resources. Developed strategies for clients seeking to implement satellite systems.

### 1983 to 1998 – Hughes Space and Communications Co.

An aerospace manufacturing company

**1994 to 1998 – Member of the Technical Staff, Technical Operations** – Applied spectrum management planning in support of commercial and government new business activities.

- Acting Manager (1997-1998) for department responsible for frequency issues company-wide.
- Actively participated in domestic and international regulatory activities including FCC's 28 GHz Negotiated Rulemaking and ITU-R study groups.

**1983 to 1994 – Member of the Technical Staff, Systems Analysis Laboratory** – Provided systems engineering for satellite systems.

- Performed systems engineering, integration and test, and analysis tasks in the production of satellite systems in the areas of meteorological sensors, RF communications, and government programs.
- Responsible for coordinating system integration and test activities.

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**1979 to 1981 – Bechtel Power Corp.**
An engineering and construction company

**Engineer** – Provided systems engineering for nuclear power stations.

- Performed systems engineering, analysis, and licensing tasks in the design and construction of large nuclear power reactors.

## INTERNATIONAL AND NATIONAL REGULATORY EXPERIENCE

Over seventeen years of active involvement at all levels in ITU and FCC processes:

- Member of United States delegation to WRC-95, WRC-97, WRC-2000, WRC-03, WRC-07, WRC-12, and WRC-15.
- Received Special Government Employee status at WRC-07 and was assigned to act as the Inter-American Telecommunication Commission (CITEL) spokesperson on agenda item 1.4 (IMT issues).
- Participated as DoD representative in domestic and international proceedings related to the introduction of new mobile services. Performed technical studies of sharing between radiolocation systems and proposed wireless access devices.
- Developed MATLAB simulation software for determining interference levels between satellite networks using various types of orbits. Performed studies on the efficient use of the satellite orbit resource.
- Represented a satellite manufacturer in replanning of the Appendices 30 and 30A Broadcast Satellite Service plans for WRC-97. Developed methodologies for optimizing plan assignments.
- Participated in activities related to the development of unwanted emission limits for space services and to the introduction of Ultra Wide Band devices.
- Conducted studies in support of the introduction of aeronautical mobile-satellite service in the 14 GHz band.
- Experienced in preparation of ITU-R advance publication and notification filings, examination of pending filings, and coordination of satellite systems.
- Member of United States delegation to the ITU-R Radiocommunication Assembly, Conference Preparatory Meeting, Radiocommunication Advisory Group, Special Committee on Regulatory and Procedural Matters, and many study groups and working parties.
- Represented clients in FCC rulemaking proceedings and in the resolution of interference issues with other applicants and licensees. Prepared technical component of FCC filings for proposed satellite systems.

## EDUCATION

**MS, University of Southern California, 1982**
Department of Electrical Engineering

**BS (Highest Honors), University of Illinois, 1979**
Department of Nuclear Engineering