

**STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL**

**RE: APPLICATION OF SBA TOWERS II, LLC
FOR A CERTIFICATE OF ENVIRONMENTAL
COMPATIBILITY AND PUBLIC NEED FOR
THE CONSTRUCTION, MAINTENANCE AND
OPERATION OF A TELECOMMUNICATIONS
FACILITY AT ONE OF TWO ALTERNATE SITES
AT RABBIT HILL ROAD, WARREN, CONNECTICUT**

DOCKET NO. 378

Date: May 14, 2009

PRE-FILED TESTIMONY OF ANTHONY WELLS

Q1. Please summarize your professional background in telecommunications.

A. My career in the wireless industry has spanned the past nineteen years initially for wireless service providers including NYNEX Mobile, now Cellco Partnership (d/b/a Verizon Wireless) and Sprint PCS, now Sprint Nextel. In August, 2000, I started my own RF consulting and design business called C Squared Systems ("C Squared"). C Squared currently provides RF design services to the wireless industry throughout New England. I have extensive experience appearing and testifying before the Connecticut Siting Council. A copy of my resume is attached hereto as Exhibit 1.

Q2. What does your testimony address?

A. The purpose of my testimony is to provide general information concerning RF coverage issues, network design issues and RF emissions issues and FCC compliance information concerning the application of SBA Towers II, LLC ("SBA") for a certificate of environmental compatibility and public need at one of two alternate sites located Rabbit Hill Road, Warren, Connecticut (the "Property").

Q3. Are you familiar with the Docket 378 application?

A. Yes. I have reviewed the materials submitted in this docket and, more specifically, the materials supplied by AT&T Wireless (“AT&T”) and Cellco Partnership d/b/a Verizon Wireless (“Verizon”) in this docket for both of the proposed, alternate sites. In addition, I have conferred with the RF engineers for both AT&T and Verizon.

Q4. Have you reviewed the RF emission calculations provided by AT&T and Verizon in this docket?

A. Yes. I have reviewed the calculations submitted by AT&T and Verizon and have reviewed the propagation maps and other information supplied by both carriers. I independently calculated and verified that the formulas for calculating RF emissions provided are, indeed, correct. For Site A, the cumulative emissions total is 32.68% of the FCC limit, as provided in FCC OET Bulletin No. 65. For Site B, the cumulative emissions total is 44.92% of the FCC limit, as provided in FCC OET Bulletin No. 65.

These percentages are a worst case scenario, based on the assumptions that all channels are fully operating, that the antennas are pointing directly down toward the ground (rather than toward the horizon), and assuming no antenna pattern attenuation and no attenuation due to foliage or terrain.

5/13/2009
Date

Anthony Wells
Anthony Wells

Subscribed and sworn before me this 13th day of May, 2009.

By:


Notary

Hartford/72517.5/CLARSON/368617v1

LAURA ZAYKO
Notary Public - New Hampshire
My Commission Expires December 3, 2013

EXHIBIT 1



Resume of: **Anthony Wells**

EDUCATION: Northeastern University
Master of Science in Electrical Engineering - Communications and Signal Processing
Concentration- June 1997

University of Massachusetts, Lowell
Bachelor of Science in Electrical Engineering - December 1989

EXPERIENCE:

Managing Partner C Squared Systems

8/00 - Present

- Provide RF and software design services to the wireless industry, including preparation of RF coverage analyses to determine radio frequency signal propagation parameters for siting wireless telecommunications facilities.
- Development of custom data collection and propagation software for in-building and macro networks,
- Manage design of a digital 1900 MHz (PCS) network consisting of over 130 cell site locations in New Hampshire and Maine.
- Design and Implementation of in-building repeater systems for multiple carriers.
- Prepare documentation for and testify before Connecticut Siting Council in support of the location of new wireless communications facilities.
- Provide measurement and calculation reports to comply with conditions of approval for municipalities in Connecticut, relating to Federal Communications Commission guidelines for electromagnetic field exposure.
- Develop radio and microwave frequency electromagnetic field calculation software for use in Federal Communications Commission compliance analysis.
- Design and implement custom software applications and database solutions with mapping capability for wireless providers.
- Provide propagation analysis and optimization of propagation models for use in analysis of propagation characteristics for low antenna heights.

Radar Systems Engineer**Raytheon - 3/98-8/00**

- Developed radar systems and simulation using software languages such as C++, Matlab and FORTRAN.
- Processed radar data for use in analysis of tracking algorithms. Implemented C++ wrapper for Matlab mex-files to reduce processing time by over 70%.
- Analyzed results of tracking algorithms. Evaluated statistical cost factors and analyzed radar resource loading in relation to statistical confidence levels for tracking algorithms.
- Calibrated and modified radar simulation software to accurately represent radar hardware performance.

Radio Frequency Manager**Sprint PCS - 10/95 - 3/98**

- Technical Manager responsible for implementation of code division multiple access technology for the New Hampshire and Maine systems.
- Designed and managed a digital 1900 MHz (PCS) network consisting of 70 cell site locations in New Hampshire and Maine.
- Oversaw testing and verification of the network to insure that propagation modeling was accurate and design performed as anticipated.
- Evaluated network performance for vendor compliance with contractual obligations.
- Insured compliance with Federal Communications Commission guidelines for electromagnetic field exposure for the digital network.
- Evaluated and tested accuracy of vendor propagation models and their applicability for use in system design.

Radio Frequency Manager**NYNEX Mobile/Verizon Wireless - 5/90 - 10/95**

- Responsible for the design and performance of an analog 800 MHz communication system consisting of over 200 cell sites in New England.
- Responsible for testing and verification of over 100 cell sites to insure accuracy of propagation models and cell site placement.
- Monitored and improved system performance for the Boston and Rhode Island systems using signal measurement equipment and propagation analysis.
- Evaluated and planned deployment of 800 MHz digital cellular system.
- Evaluated feasibility and integrated high and low power repeaters into the network where applicable.
- Designed microprocessor based automated remote call processing test equipment.
- Implemented repeaters as part of in-building network.
- Managed and optimized frequency plan as part of network optimization.