STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:

APPLICATION OF MCF COMMUNICATIONS bg, INC. AND OMNIPOINT COMMUNICATIONS, INC. FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE AND OPERATION OF A TELECOMMUNICATIONS FACILITY AT 12 CARPENTER ROAD IN THE TOWN OF BOLTON, CONNECTICUT

DOCKET NO. 323

DATE: JANUARY 17, 2007

PRE-FILED TESTIMONY OF SCOTT HEFFERNAN

Q.1. Please summarize your professional background in telecommunications.

A. My career in the wireless industry has spanned the past 11 years. For the past two years, my responsibilities as a contractor for T-Mobile have included the design and integration of the T-Mobile wireless network. Prior to this period, I was responsible for the design, integration, optimization and management of network buildouts for commercial wireless carriers, including Nextel, AT&T Wireless, Cingular, and Voicestream (T-Mobile's predecessor). Additionally, I have been involved in network design for government entities such as the Department of Homeland Security, Department of the Army, Department of the Navy, and the United States Marine Corps.

Q.2. What does your testimony address?

A. The purpose of my testimony is to provide information relating to T-Mobile's existing network in this area of the state and to describe the need for a proposed facility in the area. This includes information on the general design of T-Mobile's network and the technical constraints in selecting proposed facilities.

Q.3. Please describe T-Mobile's wireless network in Connecticut.

A. T-Mobile's predecessor entities began building a wireless network to provide PCS service in Connecticut in the mid 1990s. T-Mobile is licensed by the Federal Communications Commission to provide PCS service using frequencies in the 1900 MHz range. T-Mobile operates approximately 550 sites in Connecticut. Current efforts are directed to providing signal to areas without coverage and meeting demand for additional capacity within areas already served. Each new site must be chosen to meet the need for coverage and/or capacity without creating RF interference among sites.

Q.4. What requirements does the nature of wireless technology place on T-Mobile's selection of cell site locations?

A: Like all personal communications service providers, T-Mobile's wireless network is based on the principle of frequency re-use. Cell site locations must be chosen to provide for sufficient signal strength overlap to allow call hand-off between cells without creating unnecessary duplicative coverage and frequency interference. Terrain variations and local land use policies and development further limit cell site locations.

Technological advances in service, such as the availability of data and video services through customer handsets, are also significant factors in system development. Increased customer demand and expectations resulting from those advances drive the need for additional sites.

T-Mobile's required lower limit threshold is -84 dBm, which is expected to provide reliable in-vehicle coverage. A higher threshold level of -76 dBm is the minimum required to provide reliable in-building coverage. At levels below the -84 dBm threshold, signal degradation would be expected to result in areas of unreliable service to T-Mobile customers for voice and data services. In addition, levels below -84 dBm would adversely affect T-Mobile's ability to provide reliable E-911 services as mandated by the federal government.

Q.5. Please describe T-Mobile's need for the proposed site.

A. The interrelationship between the proposed site and T-Mobile's existing system (including recently approved but not yet on-air sites) is depicted in the propagation plots included in Exhibit F of the Application. As shown, this proposed site is needed primarily to provide new coverage along Interstate I-384 from the junction of State Highway 85 in Bolton southwest approximately 1.25 miles. The proposed site will also provide new coverage along State Highway 85 and U.S. Highway 6.

Q.6. How did T-Mobile analyze the proposed site?

A. T-Mobile's RF engineers first utilized propagation prediction tools to determine the potential effectiveness of the proposed locations in meeting the identified coverage need. That analysis confirmed that a site at the proposed location would provide signal within the coverage gap along I-384, State Highway 85 and U.S. Highway 6 and would improve service generally within the area.

In order to determine the minimum height required to achieve the coverage objective, T-Mobile then conducted a drive test. The drive test allowed T-Mobile to gather accurate signal strength measurements along the target routes at various heights. The drive test process was performed at antenna heights of 147, 137, 127 and 117 feet AGL.

The drive test revealed that an antenna center line of 127 feet would allow T-Mobile to achieve the coverage objective levels in this area. At 117 feet, the area along I-384 within the targeted area falls below the -84 dBm threshold requirement of T-Mobile's design criteria.

Q.7. Please summarize the results of your analysis.

A. Based upon the results of the analysis conducted at the proposed T-Mobile Bolton facility, the minimum height required to fully cover the intended coverage objective is 127 feet AGL. At heights below 127 feet AGL, the coverage within the target area, starts to fall below the required minimum T-Mobile coverage threshold of -84 dBm.

An antenna array 127 feet in height at the Site will allow T-Mobile to provide adequate coverage within the targeted portion of I-384 and the surrounding area.

The statements above are true and complete to the best of my knowledge.

_____ /s/ Scott Heffernan_____
Date Scott Heffernan

Subscribed and sworn before me this __ day of January, 2007.

By: _____
Notary