

CONNECTICUT SITING COUNCIL

APPLICATION OF CELLCO PARTNERSHIP)
d/b/a VERIZON WIRELESS TO THE) DOCKET NO. 448
CONNECTICUT SITING COUNCIL FOR A)
CERTIFICATE OF ENVIRONMENTAL)
COMPATIBILITY AND PUBLIC NEED)
FOR THE CONSTRUCTION MAINTENANCE)
AND OPERATION OF A TELE-)
COMMUNICATIONS FACILITY LOCATED)
AT ORANGE TAX ASSESSOR MAP 77,) SEPTEMBER 8, 2014
BLOCK 3, LOT 1, 831 DERBY MILFORD)
ROAD, ORANGE, CT)

PRE-FILED TESTIMONY OF – DAVID MAXSON, WCP

Q1. Please state your name, profession and position with your employer.

A1. David Maxson. I am co-owner and CEO of Isotrope, LLC, 503 Main Street, Medfield MA 02052.

Q2. What services does Isotrope, LLC provide?

A2. Isotrope, LLC provides consulting services in the field of radio frequency communications.

Q3. What is your professional background?

A3. I design, build and maintain radio and other electronic communications facilities. I also serve as a wireless facility siting consultant to numerous municipalities and non-governmental entities. I am experienced in radio propagation modeling, signal test and measurement, radio frequency emissions safety assessment, radio communications facility design, construction and maintenance, as well as in the processes that regulate wireless facilities. My work is known to the Connecticut Siting Council. Since 1995, I have from time to time testified before the Council on matters relating to the placement, construction, and modification of personal wireless service facilities in Connecticut. I have appended as Exhibit 1 my *curriculum vitae*.

Q4. Are you affiliated with any professional or industry organization?

A4. Yes, I am a Senior Member of the Institute of Electrical and Electronics Engineers. I also represent my company, Isotrope, LLC, as a member of the PCIA (the wireless infrastructure association) HetNet Forum. The HetNet Forum is an organization of stakeholders in the heterogeneous networking segment of the wireless industry. Heterogeneous networking is a term that refers to the growing deployment of combinations of radio facilities to address coverage and capacity needs of wireless subscribers. Heterogeneous networks consist of generalized coverage from macrocells supplemented by various forms of small cell such as distributed antenna systems, picocell, femtocell, and similar implementations of compact wireless facility technology. As a participant on several HetNet Forum working committees, I am involved in the Forum's work to reduce regulatory barriers to the use of small cells to supplement wireless service, particularly in places where one or more new towers may not be the most effective solution.

Q5. Do you hold any licenses or certifications?

A5. Yes, I have earned by examination the only independent certification available for experts in wireless communications engineering and technology—the IEEE Wireless Professional (“WCP”) certification issued by the Communications Society of the International Institute of Electrical and Electronics Engineers. This certification demonstrates my expertise in seven subject areas of wireless communications engineering technology. I also hold a General (formerly known as First) Class Radiotelephone Operator's License issued by the Federal Communication's Commission and a Certified Radio Broadcast Engineer certification issued by the Society of Broadcast Engineers. I am also a licensed construction supervisor in Massachusetts.

Q6. Have you authored any recent articles on wireless technology?

A6. Yes, in the December 2011 issue of Above Ground Level magazine (“AGL”), I published an article explaining the federal State Broadband Initiative (“SBI”) in the context of an extensive field survey of wireless data communications I conducted for the State of Utah that was supported by federal broadband funding. AGL is the industry trade journal of wireless infrastructure.

Q7. Have you performed any prior consulting work in the geographic area of the proposed facility?

A7. Yes. When the Derby North facility was proposed as a new tower in Docket 307, I evaluated alternatives to the proposed facility and testified before the Connecticut Siting Council on behalf of the City of Derby in the matter.

Q8. What is your involvement in the present proceeding?

A8. As an expert on radio frequency coverage analysis and on the placement, construction and modification of personal wireless service facilities, I was engaged by the neighbors who moved the Council to intervene in this matter, Albert Subbloie, Jacqueline Barbara, Glenn Macinnes and Jill Macinnes (the “Intervenors”), to review the pending application filed by Cellco Partnership d/b/a Verizon Wireless (“Cellco” and/or the “Applicant”) and to review the facts alleged in the application and provide facts, analysis and/or opinions for the public record related to the application and Cellco’s request to construct and operate a wireless facility on the farm land located at 831 Derby-Milford Road, Orange, Connecticut.

Q9. Did you prepare a report for this matter entitled “Report on Analysis of Proposed Cell Tower at 831 Derby-Milford Road, Orange, Connecticut”?

A9. Yes, a copy of my report is attached hereto as Exhibit 2.

Q10. Did you review the Application and all related paperwork filed by Cellco Partnership d/b/a Verizon Wireless in this matter (Docket No. 448)?

A10. Yes. I reviewed all paperwork submitted by Cellco in detail, and the hearing transcripts.

Q11. What work did you perform to prepare your Report?

A11. I modeled radio frequency propagation of the existing and proposed Verizon facilities on EDX software, which is professional radio propagation modeling software. I evaluated the claims of the Applicant against the evidence on the record and against my own analysis of the radio frequency propagation. I performed due diligence to verify my assertions about LTE coverage and capacity and to provide suitable footnote references.

Q12. Did you consider the applicant’s coverage claims in preparing your report?

A12. Yes.

Q13. Will you please summarize your findings regarding Cellco’s coverage claims?

A13. Yes. In addition to the Applicant’s admission on the record that coverage is not the primary factor prompting the proposed Orange North facility, I noted that if there were a critical coverage claim to support the proposed facility, it would be demonstrated by evaluating the 700 MHz frequency band. This is because the applicant has no concrete plans to install the 850 and 1900 MHz bands at Orange North, largely because these are presently used to support the legacy 3G CDMA network. This renders the 850 and 1900 MHz CDMA coverage maps submitted by Cellco in support of its application irrelevant to the proceeding.

Similarly, the 2100 MHz coverage map is pointless for two reasons. First, 2100 MHz is a capacity overlay to the 700 MHz LTE service and is not a coverage resource for the Applicant in this area. Second, both the 700 MHz and 2100 MHz coverage maps are prepared using CDMA

assumptions even though the frequencies are being used exclusively by the Applicant to provide LTE services. Hence, the Applicant has provided specious evidence to support its coverage claims.

Q14. What does this mean in terms of Celco's coverage claims?

A14. As stated in my report in greater detail, given that the Orange North facility has no concrete planning for 850/1900 MHz, it is self-evident that there is no pressing need for new CDMA facilities and therefore no coverage gap of any consequence to CDMA voice service. Moreover, for the reasons given, none of the coverage maps submitted by Celco – the 850 and 1900 MHz coverage maps, the 2100 MHz coverage maps and the 700 MHz coverage maps – support the Applicant's claims of a gap in LTE coverage.

Q15. Did you consider the Applicant's claims regarding the need for the Orange North facility to relieve present or future capacity shortfalls?

A15. Yes.

Q16. What were your conclusions?

A16. I concluded that the proposed Orange North facility does nothing to address Celco's system requirements. The Applicant initially averred in its application that 8 sectors of 6 cell sites would obtain "significant capacity relief" from Orange North. Upon further inquiry by the Council, the Applicant provided additional documentation that identified three purportedly Stressed Sectors and three Unstressed Sectors, and no further support regarding two other sectors. The measure of stress on these six sectors is in the form of capacity utilization trend data solely with respect to the 700 MHz LTE service. No information was provided to verify whether the capacity overlay 2100 MHz service is on line and is being similarly stressed. The 2100 MHz license has twice the bandwidth of the 700 MHz license and should be able to support substantial capacity demand.

Moreover, it is contradictory to assert that significant capacity relief is provided to facilities that show no need for relief. The three Unstressed Sectors were documented by the Applicant as having no tendency to need relief for at least the next three years. Further underscoring the unimportance of any potential trend extending beyond a two-year horizon, I note that the Applicant, in testimony in Docket 446, stated

MR. ASHTON: Having done a little long-range planning in the past, what is your planning horizon? How far out do you go?

THE WITNESS (Ulanday): Like I said earlier, we do two years. [Transcript, April 29, 2014, 3PM, p.34]

Moreover, the Applicant's use of conventional coverage maps to infer where and by how much a proposed facility will provide capacity relief is unsound. The Applicant simply took a coverage signal strength map of the proposed facility and laid it across the coverage footprint on a map of the existing well-penetrating network. This is simply an incorrect use of coverage mapping technique. It does not show where the new facility provides dominant service and it does not show which existing sectors will have their service areas reduced by the proposed facility.

In my Report, I prepared Most Likely Server ("MLS") maps of the existing and existing-plus-proposed conditions. These maps show that the six documented sectors said to obtain "significant capacity relief" from Orange North in fact receive no relief at all, or at best a smattering of replacement service here and there. The result is that the Orange North Facility is planted squarely within the Derby North Beta sector where it fails to achieve the Applicant's stated objectives. Only the Derby North Beta sector obtains any material capacity replacement from the three Orange North sectors. Yet, Derby North Beta has no documented exhaustion trend. Derby North was one of the two sectors that were not even documented for capacity issues.

Q17. What does this mean in terms of Cellco's capacity relief claims?

A17. As detailed in my report, Cellco completely overstates the claimed benefits of the proposed facility. The capacity relief claims are grossly excessive and unsubstantiated.

Specifically, and as detailed in my report, Orange North has no material impact on and will not provide "significant capacity relief" to the Milford NE Alpha Sector. Orange North has no material impact on and will not provide "significant capacity relief" to Derby North Gamma. Orange North has no impact on and will not provide any capacity relief to the Derby Beta Sector. Orange North has no impact on and will not provide "significant capacity relief" to Orange 2 Gamma, Orange 3 Alpha and Shelton 2 Beta.

Finally, according to the MLS maps, the only existing sector whose service area would purportedly be relieved by the proposed facility is the Derby North Beta Sector. However, the Derby North Beta Sector is one of the two sectors withdrawn from consideration by Cellco. Cellco submitted no capacity information for this sector. There is no demonstrated need for relief to be provided to the sole service area, Derby North Beta, that Orange North would provide service to.

Q18. Do you make any other significant observations about Cellco's application for Orange North?

A18. Yes. My testimony here is not intended to be all-inclusive, because my report speaks for itself. But, I find it astonishing that the Applicant provided so much incorrect, irrelevant and overstated information to support its application. If the Applicant had performed the due

diligence it described in its submittals as being the customary way to identify capacity needs and solutions, I do not believe Orange 2 would have been proposed in the first place.

While capacity analysis is more complex to document than coverage analysis, it is not rocket science and can be cogently presented and explained.

Further, Cellco makes nearly identical claims as it does here for Orange North in a proposed facility for 111 New Haven Avenue, Derby, Connecticut, referred to as “Derby South.” Derby South is the solution to the purported problem in the Derby-Shelton area north of Orange. Orange North is not.

Q19. Did you consider alternatives to the proposed Orange North facility?

A19. Yes, however it is difficult to consider alternative locations when the proposed facility itself is specious. To address stress on Milford NE Alpha sector, a new facility well south of the Orange North site, potentially in Milford, Shelton or Western Orange, would be necessary to provide significant capacity relief to Milford NE Alpha.

Derby North Gamma and Derby Beta sectors are the other two reportedly Stressed Sectors. They are not near Milford NE. Derby North Gamma and Derby Beta have interlocking service areas in Derby and Shelton, which collectively are north of Orange.

To address Derby North Gamma and Derby Beta exhaustion trends, facilities in Shelton or Derby, north of Orange, would be necessary to relieve these sectors.

Q20. What are your final conclusions with respect to Cellco’s application?

A20. As detailed in my report, Cellco has proposed a facility that does nothing to satisfy the design requirements established by it. The Orange North facility will not provide significant capacity relief to any of the six sectors at issue. The Orange North facility is unnecessary based on Cellco’s own stated requirements. In fact, it is useless because the proposed Orange North facility at 831 Derby-Milford Road is entirely inconsistent with the design requirements that Cellco has submitted. In my opinion, approval and construction of the proposed facility or any alternative nearby would be a complete waste of resources.

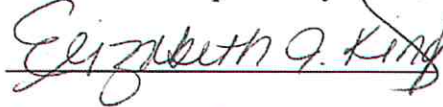
I, DAVID MAXSON, duly sworn, hereby verify that this statement was prepared by me or under my direct supervision and is believed to be true and accurate to the best of my knowledge and belief.



David Maxson

SEPTEMBER 8, 2014
Date

The above signed, DAVID MAXSON, personally appeared before me and verified that the above pre-file testimony for the Connecticut Siting Council is true and accurate and that he adopted it by his free act and deed on this XLIII day of September, 2014.



Elizabeth G. King

Commissioner of Superior Court
Notary Public/
My Commission expires



RESPECTFULLY SUBMITTED BY:
ALBERT SUBBLOIE, JACQUELINE BARBARA, GLENN
MACINNES, JILL MACINNES, DANIEL CHUNG and JOYCE
CHUNG

BY: 


Mario F. Coppola, Esq.
Berchem, Moses, and Devlin, P.C.
1221 Post Road East
Westport, CT 06880
Tel: 203-227-9545; Fax: 203-226-1641
Email: mcoppola@bmdlaw.com
Their Attorneys

CERTIFICATE OF SERVICE

This is to certify that on the above date a true copy of the foregoing has been sent by U.S. Mail, first-class, postage pre-paid, to the following parties of record:

Melanie Bachman, Esq., Executive Director, Connecticut Siting Council, 10 Franklin Sq., New Britain, CT 06051 (1 original, 15 copies, plus 1 electronic)

Cellco Partnership d/b/a Verizon Wireless, Kenneth Baldwin, Esq.; Robinson & Cole, 280 Trumbull Street, Hartford, CT 06103



Mario F. Coppola, Esq.