

Before the  
**Federal Communications Commission**  
Washington DC 20554

**NARRATIVE STATEMENT OF AMBIENT CORPORATION**  
**IN SUPPORT OF APPLICATION FOR MODIFICATION TO**  
**EXPERIMENTAL LICENSE WD2XEQ**

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**IN SUPPORT OF APPLICATION FOR MODIFICATION OF**  
**EXPERIMENTAL LICENSE WD2XEQ**

In this application, Ambient Corporation ("Ambient") requests that its experimental license be modified to allow testing of Ambient's Powerline Communications Systems over power distribution facilities around the country. This statement provides justification and details of the requested modifications.<sup>1</sup>

1. Summary of Ambient's Ongoing Testing

Ambient is the developer of proprietary technology to provide Internet access via a carrier current system by means of conduction over electric power lines. For the past year, Ambient has been conducting testing at a site in Westchester, NY pursuant to STA, WB9XQT,<sup>2</sup> and more recently pursuant to this experimental license, WD2XEQ.<sup>3</sup> To date, Ambient has received no complaints or reports of interference and Ambient has filed periodic progress reports on its testing. Further, Ambient is actively participating in the current Commission proceeding on Broadband over Powerline Systems ("BPL") and it filed detailed technical comments in that proceeding.<sup>4</sup>

2. Proposed Expansion

Under its current experimental license, Ambient is authorized to conduct testing in both commercial/industrial and residential settings in New York and Massachusetts. Further,

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<sup>1</sup> Ambient's original experimental license application provided detailed information on the system description, experimental objectives, and public benefit of such testing per Section 5.63(a) of the Commissions Rules. File No. 0118-EX-PL-2003 (portions of which are confidential).

<sup>2</sup> See File Nos. 0218-EX-ST-2002 and File No. 0435-EX-ST-2002).

<sup>3</sup> File No. 0118-EX-PL-2003.

<sup>4</sup> NOI, Inquiry Regarding Carrier Currant Systems, including Broadband over Powerline Systems, FCC 03-100, ET Docket No. 03-104 (Rel. April 28, 2003).

under Section 2.803(e) of the Commission's Rules, Ambient can demonstrate its equipment at trade shows and at customer business/industrial locations nationwide.<sup>5</sup> Ambient requests a geographic expansion of its license from these two states to nationwide so that it can demonstrate and test its system in both commercial/industrial and residential settings in various locations around the country.

3. Justification & Additional Objectives For Proposed Expansion

Grant of this modification is warranted for a number of reasons:

a. *Collaboration with Power Companies.* Ambient has had requests to consider testing its systems from a number of power companies around the country. Cooperation and collaboration by power companies is essential for future BPL commercial deployments. These power companies often require on-site demonstrations to gain familiarity with equipment compatibility, functionality on their systems, and the range of potential consumer uses which they can serve.

b. *Further Engineering Development.* From an engineering development viewpoint, Ambient would like to test its equipment on various power systems, which may use different types equipment and be affected by different environmental or other factors. Testing of the same equipment on various power-systems will provide valuable data to the Commission, as most BPL systems are currently operating at one or a few locations. Further, this would allow emissions compliance testing of similar equipment in a variety of residential settings.

c. *Staffing Resources.* A nationwide license would be more efficient for the FCC staff than having Ambient file numerous duplicative STA requests, in which the only substantive difference would be the location of the testing. Unlike licensed intentional

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<sup>5</sup> Demonstrations are limited to equipment designed to meet Part 15 emission requirements and otherwise is in conformance with Section 2.803 of the Commission's rules.

radiators, for this type of unintentional radiator, there is typically no site specific, or frequency specific information needed by the staff to make a determination. Hence a case-by-case review just creates an additional paperwork burden.

d. *No Expansion in Number of Units.* Ambient does not seek an expansion in the number of units. Ambient's current experimental license allows it to deploy up to 550 units of various manufacture. Ambient anticipates that most testing will be limited in terms of the number of units and duration, while others may be of the scale discussed in Ambient's original experimental license application. Ambient believes that this number is sufficient for the anticipated testing over the duration of this license.

As the Commission recognized in its recent Notice of Inquiry on BPL, because power lines reach virtually every home in the U.S., BPL could play an important role in providing additional broadband competition to consumers, and could bring Internet and high-speed broadband access to rural and underserved areas, areas typically underserved by existing technologies. Given this imperative and the Commission's current proceeding on BPL, this proposed modification would be in the public interest as it would advance development and understanding of BPL technology.