

Ambient Corporation
February 2009
Call Sign WD2XEQ
File No. 0132-EX-RR-2007

**PROGRESS REPORT OF AMBIENT CORPORATION'S TESTS
PURSUANT TO
EXPERIMENTAL LICENSE**

Ambient Corporation ("Company") submits this six-month progress report in accordance with the conditions of its Experimental License to evaluate broadband access via carrier current systems over power lines.

* * *

Test Sites: The Company has continued its ongoing test program at its test site in Westchester County, New York, since the grant of its original STA in June 2002. The physical layout of this system was unchanged during the last six month reporting period, and as previously reported, now consists of second generation equipment. Radiated emission measurements data taken at locations where new second generation equipment was installed was provided in the Company's Progress Report submitted August 1, 2007, and is re-attached here.

The Company continues the BPL Trial with FirstEnergy Corporation in Brimfield, Ohio. Currently, this system consists of 24 second generation nodes on two medium voltage circuits.

The Company's BPL Trial with Entergy Corporation is performed near Little Rock, Arkansas. This Access BPL test system includes nine second generation nodes on the single medium voltage circuit.

Since February, 2005, the Company has operated an in-building Low Voltage demonstration system at a 200 unit high-rise apartment building in New York, NY, to test and demonstrate broadband internet access capabilities. During the last six months the Company has significantly reduced the scale of this trial, and anticipates that it will conclude this experiment by the end of June, 2009.

BPL Standards Development: During the last six months, members of the Company's engineering staff participated in the following IEEE meetings:

Dr. Yehuda Cern, Vice Chair and Technical Editor of IEEE Working Group P1675, reports that the "Standard for Broadband over Power Line Hardware and Personnel Safety" has been officially approved and published.

Aron Viner, Ambient Director of Compliance & Standardization, is Chair of the PLC EMC Standard Working Group which will develop the Standard "Powerline Communication Equipment. Electromagnetic Compatibility (EMC) Requirements. Testing and Measurement

Methods." The Draft has been completed and approved by IEEE Power & Energy Communications and EMC Societies, for balloting. The Draft will move to the balloting phase in the first quarter of 2009

Ram Rao, the Company's Chief Network Architect, and Aron Viner, members of IEEE P1901, the BPL MAC/ PHY Standard Working Group, are participating in the development of a "Standard for Broadband over Power Line Networks: Medium Access Control and Physical Layer Specifications." The Standard is in early stage of development; however, the Working Group made substantial commitments to ensure that EMC issues will be addressed in technical requirements for Coexistence, Access and In-Home Clusters of the Standard. The Working Group has made substantial progress in terms of choosing technical proposals for standards. As of this report, the Working Group has approved the Access, In-Home, and Coexistence clusters and is about to begin the actual writing of the first Draft

Testing of Advanced Hardware and Software Capabilities: In the framework of its Experimental License, the Company continues to develop and test methods for enhancing the performance of its BPL systems and to monitor and adjust the parameters of its test facilities to be responsive to the concerns of the amateur radio operators consistent with its obligations under its Experimental License. The Company's extensive experimental testing program made possible rapid development of a new generation of the industry's first high-speed BPL access products and has demonstrated the Company's technical leadership in the industry.

The Company continues to collect data for design verification of the power quality and consumption parameters of its second generation equipment (12 units) operating on MV circuitry in Briarcliff Manor. This data is being correlated and verified with data collected by the Utility to provide a statistical basis with which to verify equipment power consumption in different weather, temperature and data capacity conditions.

As previously reported to the Commission, the Company has notched out its signals on Amateur bands, demonstrating significant advancements in our technology over the relatively short time period of its test program. These bands include the following Amateur Radio bands: 80, 40, 30, 20, 17, 15, 12 and 10 meters: 3.5-4 MHz, 7-7.3 MHz, 10.1-10.15 MHz, 14.0-14.35 MHz, 18,068-18,168 MHz, 21-21.45 MHz; 24,890-24,990 MHz, and 28.0-29.7 MHz. Also, the Ambient frequency plan was modified to comply with excluded bands of operations according Table 1 of the FCC Part 15, Subpart G Rules.

The Company also has in place procedures to give prior notification to and to consult with public safety users in the areas where it plans to deploy its Experimental test systems. It has also sent written notifications to public safety users in areas where it has longstanding trials under its Experimental License.

Finally, the Company is focusing its development activity on utility applications that will help develop a "Smart Grid" for the nation's electrical infrastructure. In particular, significant work has been done on integrating the wireless communications, cellular included, with metering technologies.

Implementation of a Smart Grid will allow more efficient usage of electrical energy and reduce consumer use, thus mitigating environmental concerns. Implementation of a Smart Grid would also help secure the electrical power grid. For these reasons, the Company encourages the Commission to encourage the expansion and implementation of BPL solutions that will help achieve a Smart Grid

February 2009

6042284_v2

Worst Case Radiated Emission data at Experimental BPL installation in Briarcliff Manor, NY

Note1: Measurements points based on installed X2 PLC NODE locations

Note2: Test performed on June 26, 2007 and in compliance with Section 15.613 and Appendix C of FCC 04-245

NODE location	Frequency MHz	Location of the antenna from coupling point (distance/ wavelength ratio)	Read max (QP) dBuV/m	Slant distance from the power line / distance from the pole m	Distance factor dB	Antenna factor dB	Cable insertion loss dB	Net (QP) dBuV/m	FCC Limit dBuV/m	Margin dB
Pole located on the corner of Woodside @Park (MV line)	25.5	1/2	30.2	16.9/10	-10.0	8.1	0.2	28.5	29.5@30m	-1.0
Pole located on the corner of Woodside @Park (LV line along Park)	13.6	1/2	32.1	12.7/10	-14.9	10	0.2	27.5	29.5@30m	-2.0
Pole located nearby 21 Parkway Road (MV Line)	17.0	1/2	30.6	15.9/10	-11	9.8	0.2	29.6	29.5@30m	0.1
Pole located nearby 21 Parkway Road (LV Line)	4.0	0	28.1	13.9/10	-13.4	9.9	0.2	24.8	29.5@30m	-4.7
Pole located nearby 178 Dalmany Road (MV line)	14.5	0	25.8	14.1/10	-13.1	10	0.2	23.9	29.5@30m	-5.6
Pole located nearby 178 Dalmany Road (LV line)	4.5	0	21.3	12.7/10	14.9	9.9	0.2	16.6	29.5@30m	-12.9