

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Carrier Current Systems, including)	ET Docket No. 03-104
Broadband Over Power Line Systems)	
)	
Amendment of Part 15 Regarding)	ET Docket No. 04-37
New Requirements and Measurement)	
Guidelines for Access Broadband)	
Over Power Line Systems)	

COMMENTS OF AMBIENT CORPORATION

Ambient Corporation ("Ambient") herewith submits its comments in response to the *Notice of Proposed Rulemaking* in the above-referenced proceeding.¹

INTRODUCTION

Ambient Corporation is a development stage company engaged in the design, development and marketing of equipment and technologies that utilize existing electrical power medium voltage and low voltage distribution lines as a medium for the delivery of broadband and other communication services.

Ambient has designed, developed and successfully tested, on a small scale basis, its proprietary technology and is currently working with leading

¹ Carrier Current Systems, Including Broadband over Power Line Systems, Notice of Proposed Rulemaking [FCC 04-29], ET Docket No. 03-104, released February 23, 2004 ("Notice").

utilities and technology companies in the design, development and testing of the principal equipment, components and technologies that comprise its BPL Technologies. Prototypes of these components and technologies presently are being evaluated in field trials. Its BPL Technologies are designed to be used with a commercially deployed power line communications network to enable the delivery of information to utility's customers at the higher speeds necessary to obtain broadband email and web browsing services as well as Voice over Internet Protocol (VoIP) through modem devices that are plugged into a standard electrical wall outlet without the need for cable, telephone, or satellite services.

Ambient has entered into a research and development agreement with Consolidated Edison Company of New York, Inc. ("CECONY"), pursuant to which the companies are cooperating in the research and development of high-speed power line communications and pooling their respective efforts to further develop and test the feasibility of Ambient's BPL Technologies with the goal of commercialization of this technology.

Ambient's proprietary coupler and the other components have been deployed in a small field trial on CECONY's medium and low voltage lines to construct a

complete end-to-end network in a live environment. Beginning in July of 2002, the company has successfully demonstrated the technical viability of its BPL Technologies on CECONY's overhead electric distribution system in Westchester County, New York. It has achieved speed rates from 10 to 16 mega-bits per second (mbps) over the medium voltage lines and 3.5 mbps to 7 mbps of bandwidth delivered to the customers' premises. It believes that these results support the positioning of power line communications as an alternative broadband technology.

DISCUSSION

Ambient requests that the Commission adopt rules supporting the deployment and operation of broadband power line ("BPL") systems at the earliest feasible time (1) to foster the rapid development of the full potential of this emerging technology, (2) to enhance the opportunities for BPL to develop as a realistic competitive alternative to cable modems and DSL, and (3) to avoid onerous crippling regulation while this fledgling industry is still in the earliest stages of its development.

Some of the public benefits from early commercial deployment and operation of BPL technologies were recently confirmed by the President in his speech to the American Association of Community Colleges annual convention in Minneapolis (released April 26), highlighting the potential benefits of BPL technology, in which he stated:

"So how is some guy in remote Wyoming going to get any broadband technology? Regulatory policy has got to be wise and smart as we encourage the spread of this important technology. There needs to be technical standards to make possible new broadband technologies, such

as the use of high-speed communication directly over power lines. Power lines were for electricity; power lines can be used for broadband technology. So the technical standards need to be changed to encourage that."

Ambient strongly supports the President's conclusion that "... technical standards need to be changed to encourage ..." the use of high-speed communication directly over power lines.

The technical path whereby these public benefits can be achieved is also described in the White House white paper (page 12) on the Administration's technology agenda which was issued to accompany the President's speech:

"Promoting Innovation"

"The Administration is working to enable the rollout of broadband technology. The Department of Commerce is developing the technical specifications necessary to enable the widespread and responsible deployment of broadband over powerlines (BPL). Having conducted 10 million measurements of BPL systems, the Department of Commerce will be able to chart the clear technical path forward for BPL to coexist with other critical uses of spectrum. Once deployed, BPL has the potential to turn every electrical outlet into a broadband pipeline."

Ambient believes that such coexistence of BPL with other critical uses of spectrum is a goal which can be achieved.

The Commission has allowed unlicensed devices to employ relatively low level RF signals provided their operation did not generate field strengths greater than a specified level which the Commission selected so that these devices generally would not be expected to cause interference. Under the Commission's policies "...a certain amount of interference between devices is acceptable; however, beyond a certain limit interference can be considered

harmful ..."² Ambient requests that the Commission set the boundaries for what is considered harmful interference so that there is a realistic opportunity for the early deployment of BPL technologies and the achievement of the many public benefits which such deployment will make possible.

CONCLUSION

The Commission's proposals do not go far enough to foster the competitive deployment of BPL technologies. As the President has described, the Commission should promptly adopt rules changing current technical standards for BPL technologies to foster the important public service benefits which BPL is capable of providing as an important new competitive broadband technology and, for many rural areas, as a critical first source of broadband in these underserved areas.

Respectfully submitted,

By _____
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² OSP Working Paper Series, "Unlicensed and Unshackled: A Joint OSP-OET White Paper on Unlicensed Devices and Their Regulatory Issues," May 2003, pp. 45-46.