

**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)	

REPLY COMMENTS OF AMBIENT CORPORATION

Ambient Corporation ("Ambient") herewith submits its reply comments in response to the *Notice of Proposed Rulemaking* in the above-referenced proceeding¹ addressing the Comments of the National Telecommunications and Information Administration ("NTIA") dated June 4, 2004.

NTIA's statement that interference risks posed by Access BPL are "high" suggests that it considers Access BPL systems guilty by definition, without proof. This should not be accepted by FCC. We believe that the FCC approach, "adaptive interference mitigation,"² will provide adequate interference protection to licensed government services in most if not all cases. Adaptive interference mitigation is also consistent with the newest FCC spectrum policy proposals for more effective use of the spectrum. We believe that NTIA's proposed supplemental emission restrictions

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").

² Notice of Proposed Rulemaking [FCC 04-29], (f) p.29.

in certain geographical areas as an *a priori* requirement is an unnecessary burden and contradicts current FCC Rules for unintentional radiators.

The NTIA proposals to require the establishment of a public web-based database including planned system locations, projected dates of system operations, descriptions of multiple access techniques and modulation details, number of the types of devices being deployed, and possible uses of transmission codes, plus quarterly updates for each deployment area are unjustified, administratively burdensome and totally inappropriate to be disclosed in a public database. If adopted, this would be an invitation to all actual and potential frequency users to bombard the Commission with unjustified notching demands in advance of commencement of service. We also oppose this NTIA recommendation because such data would violate the security of the network and compromise the operator's proprietary technical and business assets.

We support adoption of the BPL installation database, as long as it is kept confidential and available for FCC and other Federal Government users only. More appropriately, to reduce the bureaucratic burden, each deploying utility should maintain a database for its locale, and make these available to the FCC upon request.

The NTIA suggests using BPL system shutdown as a tool to investigate interference. We do not agree that there will be “ a time of little or no traffic...” since large number of customers including government services will be users of the

BPL systems. Therefore in order to achieve network stability, reliability and customer confidence, such proposal should not be adopted.

We believe that the NTIA recommendation to certify Access BPL systems rather than verify is another obstacle, which would slow down the penetration of Access BPL technology and contradict current FCC policy to streamline and simplify the equipment authorization process. It would also be unique in the case of unintentional radiators. Retaining verification would continue to ensure that Access BPL system would be in conformance with FCC Rules, when installed. NTIA doesn't provide any substantial evidence to justify the special needs for certification of Access BPL systems, and we suggest that the FCC not accept this recommendation, which is more bureaucratic, time consuming and burdensome for Access BPL future installations.

We disagree with the NTIA recommendation that a 5dB correction factor should be added to emission measurement data and see this as an attempt to tighten limits for Access BPL systems. Furthermore, we question the results of the NTIA simulation and measurements, which justify such corrections. We note that nobody, except NTIA, has reported such a height-dependent phenomena. For example, it was not found by CEPT Spectrum Engineering Working Group³ in their more than two year study of the interference impact of the PLT systems, and it was never reported by ETSI – CENELEC Joint Working Group in Europe. Therefore, we strongly believe that NTIA measurements, simulation data and necessity of the

³ ECC Report 24, PLT, DSL, Cable Communications (including Cable TV) LANS and their Effect on Radio Services), 2003.

correction factor shall be carefully scrutinized by FCC Laboratory Division for future consideration. As for the current proceeding, we think that the FCC measurement proposal is the best possible solution.⁴

We oppose the NTIA proposal to establish a uniform distance (10m) for measurement of radiated emission from Access BPL systems at any frequency. Such a proposal is impractical, as it predicates safe and lawful access to specific locations, and would distort the measurement results. We believe that Part 15 Section 15.31 provides more than enough guidance for measurement distance and bandwidth, and is fully applicable to Access BPL measurements. We also fully support the FCC proposal to use the slant distance to the power line instead linear projection as a more reasonable and accurate way for interpolation.

There is no need for a departure from the FCC's established procedures under Part 15 Rules for unintentional radiators nor the creation of the new Part or Sub-part for Access BPL systems.⁵ We believe that vast majority of the proposed NTIA design constraints should not be part of the FCC Rules, because that would proscribe the design of the future BPL systems and reduce the competitive incentive for improvement and innovation.

⁴ It may be that the NTIA has suggested a 5 dB correction as an alternative way of calculating the field at a 10 meter horizontal distance from a 9 meter high power lines, compared to the slant distance of an antenna placed 10 meters away from the ground projection of lines. But this is a departure from standard practice and might be misinterpreted in the future.

⁵ Comments of the NTIA, June 12, 2004, in the matter of ET Dockets No. 03-104 and 04-37, Section VII, p.24.

We also disagree that measurement procedures for BPL system shall be codified. Instead, the measurements procedures and set-up should be integrated into ANSI C63.4, which is the common guide for all RF emission measurements.

In conclusion, the FCC should reject NTIA's potentially crippling technical, administrative and operational restrictions that it proposes to be imposed on an emerging Access BPL technology. The Commission should adopt rules supporting the deployment and operation of access broadband power 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 emerging industry is still in the earliest stages of its development.

Respectfully submitted,

AMBIENT CORPORATION

A handwritten signature in black ink, appearing to read "Yehuda Cern". The signature is fluid and cursive, with the first name "Yehuda" and the last name "Cern" clearly distinguishable.

By Dr. Yehuda Cern, Chief Engineer

June 22, 2004

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