Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Part 15 regarding new requirements and measurement guidelines for Access Broadband over Power Line Systems	)	ET Docket No. 04-37
	)	
Carrier Current Systems, including Broadband over Power Line Systems	)	ET Docket No. 03-104

Comments of International Broadband Electric Communications, Inc.

International Broadband Electric Communications Inc. (IBEC) hereby files its comments in the above referenced proceeding in response to the Commission's Request for Comment and Further Notice of Proposed Rule Making.

I. Introduction

IBEC has been involved in the deployment of Broadband Over Power Lines (BPL) systems in the United States since 2004. During this time, we have deployed BPL systems in rural portions of the country as a means to deliver broadband internet service to the underserved and un-served. To date, we have tens of thousands of BPL modems installed and under management control. Our deployments are primarily funded through the Broadband Loan Program of the Telecommunications Program of Rural Utilities Service (RUS).

IBEC designs and manufactures BPL equipment that is used in its networks. IBEC's BPL solutions utilize half-duplex OFDM-based modems utilizing the 2 to 30 MHz frequency range. We have great interest in responding to the FCC NPRM 09-60 and providing the perspective of an experienced BPL system builder.

Throughout deployment activities, IBEC has strived to maintain good communication with local Amateur Radio Operators and emergency services in the areas where we deploy. In fact, some of our customers who take the BPL service are active HF users, Fire Departments, and Police Departments. The interference resolution process utilized by IBEC has been streamlined by experience gained in real-world deployments. In all cases IBEC has been able to resolve interference complaints, as they arise, under the framework of the existing BPL rules in the original Report and Order. With this in mind, IBEC is satisfied that the original R&O was adequate in addressing interference concerns.

II. Signal Drop Off Variability

IBEC believes that the Commission's BPL rules as they stand today are adequate for certifying hardware. Attempting to envision and simulate every possible configuration and behavior of a BPL network can become an activity with diminishing practical returns. The NTIA BPL studies have done an excellent job of examining and modeling behaviors of BPL networks with the rigor expected. Extensive modeling was performed of typical power-line configurations that appear in North America. These simulation results align with the Commission's rules today.

Field data as examined in the Creiff testing and that in Brazil provide a few data points from real-world deployments. Each of these results and network configurations do not resemble those used in North America. IBEC considers them of limited application.

The certification process for BPL equipment represents a significant barrier to entry because of labor costs to complete the tests. The ultimate result of addressing signal decay variability in the test procedure is to further complicating compliance testing with little added value except to perpetuate additional costs and hardship up

on the BPL industry.

III. Extrapolation Factor

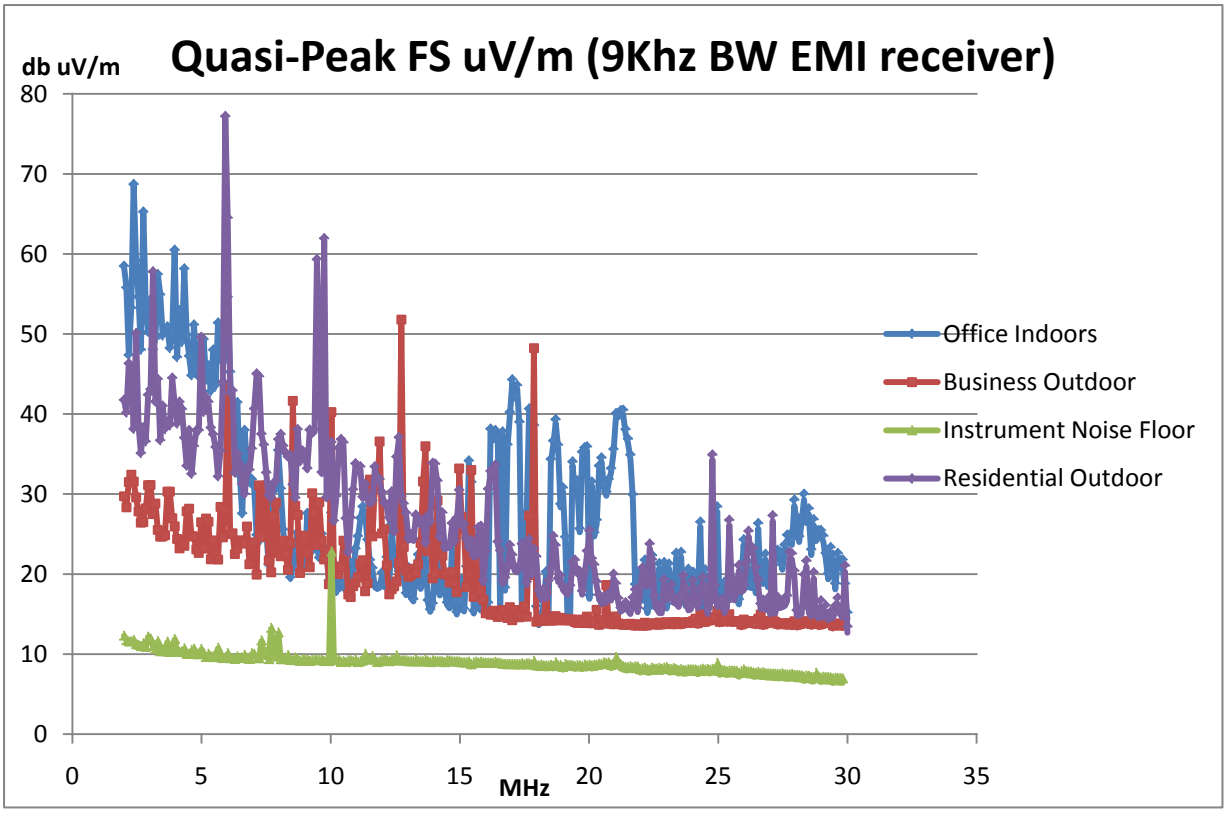
After review of the un-redacted commission material, it is our opinion that there is no compelling evidence to motivate revisiting the extrapolation factor value. Based on our field experience, we have not experienced any issues with licensed services that could not be addressed within the framework of the existing BPL rules. IBEC believes the extrapolation factor should remain at 40 dB/decade. Changing this factor to 30 dB/decade will create an additional burden on the BPL industry be increasing directly the costs of deployment.

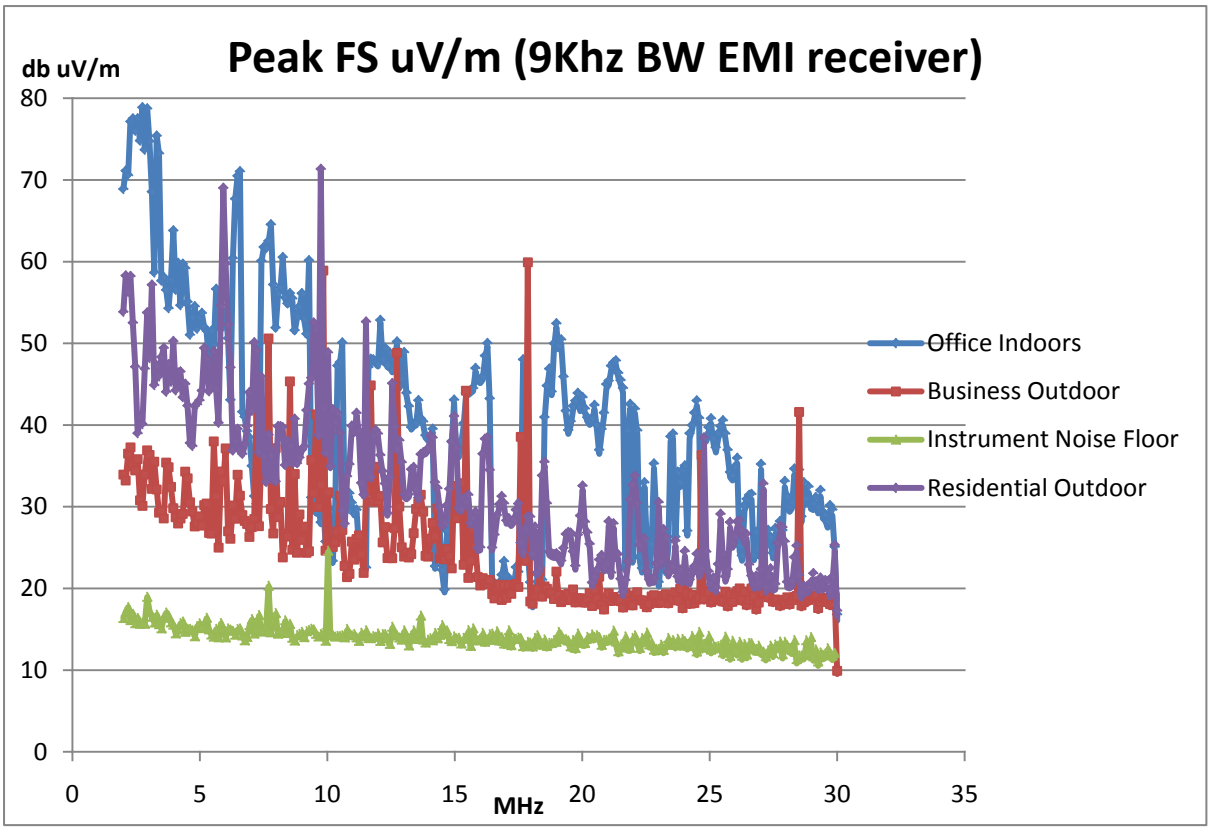
As an alternative, IBEC supports allowing the use of special procedures for determining site-specific BPL extrapolation values for "in-situ" measurements. IBEC believes that in certain cases it may be advantageous to create special procedures to address unique site-related issues. These special procedures should be implemented at the option of the equipment manufacturer. The manufacturer should bear the responsibility for justifying the procedures and ensuring that they meet the requirements and intent of the R&O.

IV. Unredacted Staff Studies

Upon review of the unredacted staff studies and presentations, we take issue with the assumptions about ambient noise levels in typical neighborhoods. In the FCC lab to OET communications, "BPL--FccLab to OET 12-03-2003a-wEmbeddedDate_1.ppt", there are graphs of expected noise curves from the ITU based off of measurements made in the 1960s. The author claims that more recent studies that looked at noise at 137MHz, and other higher frequencies, indicated that residential noise has decreased by 10 db, implying that residential noise is better today than 40 years ago. NTIA, in its Phase 2 report, contradicts these claims (Sec 5.3 paragraph 2) by citing ITU reports (2004) that HF noise levels have increased to greater levels than those measured 40 years ago.

In order to provide another data point, IBEC chose a residential and business location at random to measure HF noise to compare against the older ITU curves that were repeated throughout the presentations. The graphs are included below:





Each graph is a collection of measurements performed at three locations, the first using the QP detector and the latter using Peak Detection. It is interesting to note that the Business Outdoor measurements were taken at a spacing of at least 50 m from any surrounding buildings and not far from a 3rd party EMI/OATS measurement facility. At 10 MHz, the old ITU graphs suggest that 18dB uV/m FS is at the 10/90 percentile point for business ambients. Our Quasi-Peak measurements indicate business noise levels 10 dB higher and residential noise levels 20 dB greater than that predicted by the old ITU data. These results indicate further investigation is needed to describe the noise environment that surrounds us today.

V. Slant Range Method

IBEC agrees with the Commission that utilizing slant range to determine extrapolation factors is a fair compromise that contemplates the geometry of measuring power lines at close proximity. We also

believe that distances measured to determine the slant range should be to the closest radiating wire on the power pole.

VI. Site-Specific extrapolation factors

IBEC believes that flexibility is needed. At the discretion of the equipment manufacturer, unique procedures may be used to measure power levels. These procedures would be the responsibility of the manufacturer to justify and create as an optional approach.

CONCLUSION

IBEC respectfully requests that the Commission continue to use the 40 dB extrapolation factor and allow BPL system operators the flexibility to develop in situ extrapolation factors. IBEC supports the use of slant-distance in calculating extrapolation factors and upon review of un-redacted internal Commission documents, reaffirming the present BPL rules as being consistent with the data.

Respectfully Submitted

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