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BPL Withstands Broadside Attack In Court But Court remands some details for further explanation

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Granting amateur radio operators a partial victory, a federal appeals court has sent parts of the Broadband-over-Power-Line (BPL) rules back to the FCC for a second look. BPL works by sending radio-frequency signals along the power lines using frequencies anywhere from 1.7 to 80 MHz. The useful part of the signal is conducted along the lines, much as voice signals are carried along a telephone line. At issue here is so-called “Access BPL,” a technology for delivering broadband, including high-speed Internet, to homes and businesses over the electrical power lines. The power companies like Access BPL, not only as an additional source of revenue, but also to read customers’ meters remotely and for system-related communications.

Amateurs vs. BPL

Amateur radio operators have opposed BPL from the beginning. Because some of the BPL signal leaks off in the form of radio waves in eleven different amateur frequency bands over 1.7-80 MHz, the amateurs are concerned about that leakage as a source of interference. For some of them, the battle against BPL took on the fervor of a religious crusade.

Although the FCC went ahead and authorized BPL in the amateur bands, it required BPL operators to undertake unprecedented measures to cure any interference they cause. But the amateurs wanted more. They wanted BPL completely off their frequencies. When the FCC refused to go along, ARRL (the association of amateur radio operators) went to court.

The Part 15 Problem

BPL devices, both on the power poles and in customers’ homes, are treated as “unlicensed devices” under Part 15 of the FCC rules. There has long been some tension between the amateurs and the Part 15 industry. Most of the higher-powered Part 15 operations occur in bands shared with the amateurs. In some of these bands, Part 15

power can exceed one Watt – 10 million times higher than the limit elsewhere in the spectrum. As Part 15 devices proliferate, the amateurs are exposed to increasing risks of interference. The amateurs routinely oppose expansion of Part 15 in the shared bands. Starting about fifteen years ago, those oppositions began including a stock footnote suggesting that Part 15 might be unlawful under Section 301 of the Communications Act. That section can be read to say that any device emitting radio waves must be “licensed” by the FCC. If that were the correct reading, then the statutory language would leave no room for unlicensed devices.

Back in 2001, the FCC approved another in a string of Part 15 power increases in shared amateur bands. ARRL sought reconsideration, and this time argued head-on that the FCC’s action violated Section 301. The FCC made the following points:

1. We think Section 301 requires licensing only for devices that actually cause interference. Harmless devices like laptops and PDAs and musical greeting cards are exempt – and would be impossible to license anyway.
2. And we, the FCC, get to decide which devices cause interference.
3. We now decide those higher-power Part 15 devices you oppose are non-interfering. That makes them lawful under Section 301.

ARRL promptly filed an appeal. But it withdrew the appeal shortly afterward, giving no reason for the change of heart. Observers at the time thought ARRL, to prevail, would need a case having better facts.

From ARRL’s point of view, the ideal set-up for a challenge would have the FCC authorizing a Part 15 device that the FCC itself conceded could interfere with amateur radio. But that seemed unlikely, to say the least. The FCC had always been careful about limiting Part 15 emissions to make interference to other users a very remote possibility. But it took only three years for the planets to align. In the BPL rules, the FCC seemed to give ARRL everything it needed to contest Part 15.

Mobile vs. Fixed

There are two kinds of amateur stations. *Fixed* stations are typically installed in a building such as a residence or club; *mobile* stations are usually in a car. Fixed stations tend to have better antennas and receivers, and so can receive weaker signals. That makes the fixed stations more sensitive to very weak levels of interference.

The FCC at first adopted the same BPL rules as to fixed and mobile amateur users. If an amateur reports interference, the BPL operator must “notch” (turn down) the signal on that frequency by either 90% or 99%, depending on the band. If that does not resolve the problem, the operator has to completely shut off the offending BPL unit. In addition, the BPL industry must maintain a publicly accessible database showing the frequencies in use and details on the equipment at every location nationwide, with phone numbers and email addresses to report interference. All of this added up to a major victory for the amateurs, far beyond anything else in Part 15.

In a reconsideration order, the FCC made a small but significant change. The rules remained the same for fixed amateur users. But on a complaint from a mobile amateur, the BPL operator must only effect the 90 or 99% notch; it need not turn off the unit. The FCC acknowledged that intermittent interference might remain after notching, but it absolved the BPL operator of further obligations. The mobile user could escape the interference by relocating, the FCC noted, and besides, the public benefits of BPL justified “a small increase in instances of disruptions” to mobile communications.

No party had asked for this particular ruling. But a look through the 8,000 filed comments turns up a possible motivation. A few of the more zealous amateurs had said they planned to drive around looking for interference, report it, and thus shut down BPL “one pole at a time.” Eliminating the shut-down requirement as to mobile users ended this threat to BPL. But it stirred outrage in the amateur community.

ARRL thought it finally had its case. The FCC had admitted possible interference from a Part 15 device.

Is Part 15 Lawful?

ARRL’s central argument in Court turned on the Section 301 licensing requirement. If a device can cause interference, said ARRL, it must be licensed, according to prior FCC rulings, and therefore is ineligible for authorization under Part 15.

The FCC answered by saying, yes, while BPL may cause minor and intermittent interference, that does not constitute *harmful* interference. Because Part 15 must protect amateur radio only against harmful interference, BPL is therefore proper under Section 301.

The court accepted the views of the FCC that BPL would not cause harmful interference to mobile amateurs. This means the missing shut-down requirement would never have to be invoked, so its absence from the rules does not run afoul of Section 301.

Other Issues

Having lost the war on the basic licensing issue, ARRL nevertheless won two skirmishes. The Court agreed with ARRL that the FCC should have made available for public review certain staff studies that were part of its decisional record, and it should also have explained better how it arrived at the factors for computing permissible emission levels. This will necessitate further proceedings at the FCC to consider these matters. In the meantime, the rules remain in effect. The amateur community is unlikely to pass up this opportunity to express yet again its displeasure with BPL.