Before the
Federal Communications Commission
Washington, DC 20554

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| In the Matter of | ) | |
| | ) | |
| Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems | ) | ET Docket No. 98-153 |
| | ) | |

To: The Commission

**SUPPLEMENT TO PETITION FOR RECONSIDERATION**

Cingular Wireless LLC ("Cingular"), on behalf of its subsidiaries and affiliates, hereby supplements its petition for reconsideration of the *First Report and Order* ("*Order*") in the above-captioned proceeding.[1] In addition to the reasons already provided, Section 301 of the Communications Act of 1934, as amended ("the Act"), precludes the widespread deployment and operation of ultra-wideband ("UWB") devices without a license.[2] The only exceptions to the Section 301 licensing requirement are contained in Section 307(e) and do not apply to UWB operations.[3]

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[1] *Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems,* ET Docket 98-153, *First Report and Order*, 17 F.C.C.R. 7435 (2002) ("*First Report and Order*").

[2] 47 U.S.C. § 301.

[3] In 1982, Congress adopted Section 307(e) which created a very limited exception from this license requirement to permit unlicensed operations by the citizens band radio service and the radio control service. *See* Authority to Operate Certain Radio Stations Without Individual Licenses, Pub.L. 97-259, 1982 U.S.C.C.A.N. 2280 (1982); 47 U.S.C. §307(e). This narrow exception was subsequently extended to the aviation radio service and the maritime radio services.

One of the central reasons for the Commission's creation was to end the chaos of interference that resulted from a free-for-all of spectrum usage.[4] The foundational step in creating order is contained in Section 301 of the Act which states:

> No person shall use or operate *any apparatus* for the transmission of energy or communications or signals by radio . . . except in accordance with this Act *and with a license* in that behalf granted under the provisions of the Act.[5]

By enacting Section 301, Congress prohibited wireless transmissions without a license.[6] This in turn limited the number of occupants of the spectrum, which reduced the potential for interference.

The rules for unlicensed devices originated in 1938.[7] According to the Commission, the rules were:

> based upon the rationale that if radiation can be kept within certain fixed limitations, a general assumption can be made that such operations will normally not cause interference *to interstate communications or otherwise have interstate effects* bringing such operations within the purview of those which must be licensed under Section 301 of the Communications Act.[8]

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4 *See* Cingular, Petition for Reconsideration at 1-2 (June 17, 2000); s*ee also Red Lion Broad. v. FCC,* 395 U.S. 367, 375-77 (1969); J. Roger Wollenberg, *Title III, The FCC as Arbiter of "The Public Interest, Convenience and Necessity," in A Legislative History of the Communications Act of 1934* at 62-72 (Max D. Paglin ed. 1989).

5 47 U.S.C. § 301 (emphasis added).

6 As discussed in note 3, Section 307(e) sets forth the only exceptions to this requirement.

7 *Revision of Part 15 of the Rules Regarding the Operation of Radio Frequency Devices without an Individual License*, GEN. Docket No. 87-389, *First Report and Order*, 4 F.C.C.R. 3943 (1989).

8 *Amendment of Part 15 of the Commission's Rules Governing Restricted Radiation Devices*, Docket No. 9288, *First Report and Order*, 13 RR (P&F) 1543, 1544 (1955) (emphasis added).

Thus, the adoption of Part 15 was premised on the notion that Section 301 only applied to interstate transmissions and that low-power operations could be permitted on an unlicensed basis because such transmissions generally lacked an interstate component.[9] This premise was fundamentally flawed.

Although Section 301 did not expressly provide the Commission with jurisdiction over intrastate radio emissions at the time Part 15 was created, Congress always intended Section 301 to apply to intrastate transmissions. Congress eliminated any uncertainty on this issue – and thus the basis for Part 15 – in 1982 when it amended Section 301 "to make clear that the Commission's jurisdiction over radio communications extends to intrastate as well as interstate transmissions."[10] Congress stated that the amendment would also make Section 301 consistent with prior judicial decisions finding that all radio signals are inherently interstate.[11] Thus, low-power, intrastate transmission requires a license under Section 301. Accordingly, the Commission cannot authorize UWB operations on an unlicensed basis.

The fatal flaw associated with unlicensed operations has already been raised by the American Radio Relay League ("ARRL").[12] It would be arbitrary and capricious for the Commission to permit additional unlicensed operations – such as UWB – without addressing the statutory basis for such operations. Under Section 301, UWB devices require licenses.

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9 *Id.*

10 Communications Amendments Act of 1982, P.L. 97-259; H.R. Conf. Rep. No. 97-765 at 31-32 (1982), *reprinted in* 1982 U.S.C.C.A.N. 2261, 2275-76.

11 *Id.* at 2276 (citing *Fisher's Blend Station Inc. v. Tax Commission of Washington State*, 297 U.S. 650, 655 (1936)).

12 ARRL Petition for Reconsideration, ET Docket No. 98-156 (Feb. 13, 2002).

The Section 301 licensing requirement must be scrupulously applied in this setting. The record evidence demonstrates the potential for UWB operations to cause interference to licensed services.[13] More recently, Qualcomm, Inc. ("Qualcomm") has expressed concern with and shown significant discrepancies in the ambient noise study conducted by the Office of Engineering and Technology. The results of Qualcomm's testing argue against allowing greater UWB emission levels.[14] Moreover, the National Aeronautics and Space Administration has addressed the Commission's testing methodology and said, "[t]he FCC is attempting to make an illogical, scientifically unsound linkage between incidental, unwanted noise (what the current report addresses) and intentional transmissions filtered to achieve required out-of-band emission levels (what the UWB First Report & Order addressed)."[15]

Proposed UWB applications will not be limited to sporadic use of ground penetrating radars and wall-imaging systems by public safety personnel and professionals. The Commission and commenters envision that UWB devices will be utilized by the general public in the home and business thereby increasing the likelihood for pervasive use of such devices.[16] As Boeing stated, the "potential impact of ubiquitously deployed UWB systems – especially when considered in the aggregate and

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[13] *See* Cingular, Petition for Reconsideration at 5-9. Broadcast and cable companies have also recently expressed concerns on the potential of UWB devices to interfere with TV reception. *See* Mark Rockwell, "Cable Companies Raise UWB Interference Concerns," *Wireless Week* (Feb. 7, 2003).

[14] *See* Qualcomm Comments at 18-19 (Nov. 22, 2002); *see also* Qualcomm, Petition for Reconsideration at 7-12 (June 17, 2002).

[15] *See* Heather Forsgren Weaver, "NASA, Others Beat Up FCC on UWB Ambient Noise," *RCR Wireless News* (rel. Nov. 25, 2002) (quoting Letter from David Struba, NASA Office of Space Flight, to FCC).

[16] For example, other uses suggested by commenters include automotive collision avoidance systems short-range video, audio, and Internet communications in the home, school, or business. *First Report and Order*, 17 F.C.C.R. at 7441-42.

when operated in an unsupervised fashion – is too significant to permit authorization under a Part 15 regulatory regime that fails to provide the Commission with sufficient means to control the number and operation of UWB devices."[17] The Commission should not turn a blind eye to interference in the aggregate because: (i) consumers will not know when they are interfering with a licensed service; (ii) interfering consumers will not curtail their operations in accordance with Part 15; and (iii) licensed operators will not be able to identify interfering parties that are non-compliant with Part 15.

The limited exceptions to Section 301 that are contained in Section 307(e) do not include UWB operations. Section 302(a) does not provide the Commission with an independent statutory exception to this statutory licensing requirement. Congress adopted Section 302(a) in 1968 to extend the Commission's authority over the manufacturers of equipment. While Section 301 is aimed at the operation of equipment, Section 302(a) is a proactive regulatory mechanism requiring mitigation of interference before equipment reaches the marketplace. The intent of Congress was to eliminate the after-the-fact approach to controlling interference.[18]

Licensing, not unlicensed use, is the statutory model. Congress made clear that spectrum use should be permitted *only* with a license, except in the four specifically delineated services in Section 307(e). UWB does not fit within any of these services. The Commission's authority to permit unlicensed, intentional radiators such as UWB is therefore non-existent.

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[17] Boeing Co., Supplemental Comments at 5 (April 23, 2001).

[18] *See, e.g.*, S. Rep. No. 1276 (1968), *reprinted in* 1968 U.S.C.C.N. 2486, 2488.

## CONCLUSION

As shown above, Section 301 prohibits the transmission of energy by UWB operators without a license. Accordingly, Cingular requests that the Commission reconsider its authorization of UWB devices on an unlicensed basis.

Respectfully submitted,

**CINGULAR WIRELESS LLC**

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February 12, 2003