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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Michael K. Powell
Chairman
Federal Communications Commission
The Portals
445 Twelfth St., SW
Washington, DC 20554

Dear Chairman Powell:

Joint Industry Filing on UWB NPRM (ET Docket No. 98-153):

Need for Further NPRM Prior to Adoption of Final Rule

1. Introduction and Summary

The plethora of devices at issue in the Commission's above-referenced ultra-wideband ("UWB") rulemaking are proposed to operate throughout most of the radio spectrum that is heavily used by licensed services today. The Signatories below represent a broad range of interests that potentially would be adversely affected by the operation of UWB devices.

From the outset of this rulemaking proceeding, the Commission has been mindful of the lack of information regarding UWB devices and the potential impact of their operation on existing radio services authorized throughout the spectrum bands. As a consequence, the Notice of Proposed Rulemaking ("NPRM") in this docket declined to include any specific proposed rule text, as is customary. Similarly, on most issues, the NPRM did not even reach tentative

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conclusions. Although the Commission established a pleading cycle, it also recognized that *subsequent to that pleading cycle*, test results would be submitted by, among others, the National Telecommunications and Information Administration (“NTIA”) evaluating the potential impact that the UWB devices would have on existing, authorized radio operations. Some of those test results have been submitted. Other significant studies are yet to be completed, and the Commission thus far received public comment on only one of the studies, that submitted by the NTIA in January. This study was limited to an examination of the impact on federal non-Global Positioning System (“non-GPS”) operations, and reached what it described as preliminary results making clear the need for more study before the Commission acts. The study confirmed, however, that UWB devices need to be regulated different from Part 15 devices if existing radio operations are to be adequately protected.

Despite the preliminary and incomplete nature of the information before the Commission and the lack of public comment on much of that information, it has come to our attention that the FCC may be considering as its next procedural step the adoption of a final order regarding the operation of UWB equipment under Part 15 of its Rules. Needless to say, the signatories to this letter are concerned that any final action by the FCC on the current record would be seriously premature, for the reasons noted above, especially because the UWB proponents seek unprecedented changes in the way the FCC manages the spectrum and because of the potentially adverse impact those changes may have on the broad array of licensed radio services. Indeed, the NPRM itself, reflecting the fact that the Commission did not have before it adequate information, was general and ambiguous concerning exactly what the scope of any final rules would be (e.g., the parameters of the UWB definition, the limits on power, the types of modulation, the permitted bands of operation, etc.) and what existing radio services would be affected. Thus, it would be fair to say that there has been a complete lack of opportunity, let alone adequate opportunity, for comment on any Commission “proposed rules,” as required by the Administrative Procedure Act.

Virtually every radio service operating below 6 GHz, as well as many above, could be affected by the rules the FCC ultimately adopts in this proceeding. This proceeding uniquely raises the prospect of permitting intentional radiation by unlicensed devices in the restricted Part 15 bands in a manner that would be to the potential detriment of all licensed and unlicensed users. The Commission must take appropriate care to ensure that potentially affected parties are given an opportunity to comment on something far more concrete than has occurred to date. The Commission should exercise due caution before deciding whether and how to act.

Accordingly, the Commission should (1) provide an opportunity for comment and reply comment on any further test results submitted, once they are received, in addition to the comment cycle it recently established on the University of Texas, Johns Hopkins Applied Physics Laboratory, Stanford University, Department of Transportation and NTIA tests, and (2) based on the record developed in this proceeding last year as well as the comments on the studies, formulate proposed rule text and issue a further notice of proposed rulemaking to ensure

a meaningful and adequate opportunity for all interested parties to comment. In that way, the Commission will be able to take specific views of affected interests on concrete proposals into account in formulating its final order, the only result that is in the public interest.

2. Enormous Range of Devices Seeking UWB Status

During the NPRM proceedings, parties have proposed and discussed an enormous range of potential UWB devices and applications, some of which are anticipated to have important safety and law enforcement applications, and which taken individually may pose different issues (because they occupy different bands of the spectrum, are more susceptible to filtering and notching, or utilize different modulation techniques) and offer different solutions regarding compatibility with existing operations. The large number of potential UWB devices, coupled with the issues that need to be addressed for each category of devices, means that there are many significant policy issues where it is essential to be able to comment on a specific proposed Commission approach. Among the proposed devices are: ground penetration radars; through-the-wall imaging systems; automotive sensors; medical monitors; communications and network devices; home safety systems; commercial monitoring of fluid levels; and as camera auto-focus devices.

3. Diversity of Incumbent Interests

The use of the candidate UWB devices briefly described above would affect the incumbent interests of a very large number of existing uses, operational services and technologies in a vast array of fields and industries. Affected parties include: entities delivering satellite radio services; entities and persons providing or relying on Global Positioning System (“GPS”) devices, including aeronautical, marine, and land-based navigation and other safety-of-life services, network synchronization (telecommunications, banking, and power distribution); commercial location and tracking, geological and seismic surveying, air traffic control, E911 paramedic response, mobile emergency response systems (“E-911”) and consumer medical location services; entities providing and relying on FAA radar systems; entities engaged in radio astronomy; entities operating fixed satellite earth stations; entities and persons relying on mobile services; broadcasters; entities operating under Part 15; and even entities that see the potential benefits of using certain UWB devices (because of the potential for interference among such UWB devices).

4. Impact of UWB Devices on Incumbent Interests

The broad range of prospective UWB devices includes many different types of signals in many potential frequency bands, and their measurement and analysis is very complex. However, effective and reliable measurement of the emissions from these devices is critical to assess whether and how UWB pulse position modulation technologies can be successfully and safely introduced into the frequency domain without life-threatening or other adverse effects on

existing operations. Of the large number of potential UWB devices and applications, NTIA and others have tested only a small number, and those test results cannot be extrapolated to include, for example, the total power of a UWB communications network, or the aggregate, cumulative effect of UWB devices. So, despite the testing done to date, adequate measurement and analysis of the effect of the full range of potential UWB devices on other spectrum users has not yet been done. However, even the limited tests to date show significant harmful interference.

5. Commission Action Requested

As noted, the Commission itself recognized the uncertainties outlined above in its NPRM, where it emphasized at a minimum, the need for further testing and information as well as subsequent comment thereon; for this reason, the Commission did not propose specific rules when it issued the NPRM in May 2000. Subsequently, the Commission has received the submission of certain test analyses and results; in some cases, the Commission has expressly solicited comment on those submissions in this proceeding. However, the interested parties can not logically extrapolate from the various test submissions any comprehensive picture of the direction of the Commission's final thinking with respect to a potential regulatory framework for UWB operations. Therefore, at such time as the Commission believes that it has sufficient information before it to articulate prospective final rules, it should issue the text of the proposed rules in a further NPRM, allowing all interested parties to identify themselves and have a meaningful opportunity to review and comment on such rules. See, e.g., *Fertilizer Institute v. E.P.A.*, 935 F.2d 1303, 1131, (D.C. Cir. 1991) (final rule is the logical outgrowth of a proposed rule if a new round of notice and comment would not provide commenters with "their first occasion to offer new and different criticisms which the agency might find convincing); *National Tour Brokers Assoc. v. U.S.*, 591 F.2d 896, 902 n.2 (D.C. Cir. 1978) (interested parties should have an opportunity to "address a proposal before, not after," it is implemented). Such action here would allow affected parties to focus on specific language, definitions, operational rules and restraints, and other concepts, enabling such parties to evaluate whether the proposed rules ensure that UWB operations would not harmfully interfere with existing radio operations.

In short, since the NPRM (i) has not defined the UWB devices in question, (ii) has not measured their impact on existing incumbent users, and (iii) has not determined the bands of operation, the emission limits or other regulatory provisions necessary to support UWB deployment in a manner that protects those users, it is premature and inappropriate for the Commission to adopt any final rules at this time.

6. A Further NPRM Is Required, Both As a Matter of Fairness and Under the APA

Cases consistently hold that, in circumstances similar to the present proceeding, an agency's omission of critical issues or substantive language in an NPRM deprives interested parties of the opportunity to participate meaningfully in the rulemaking process and is reversible. See, e.g., *Chocolate Mfr's. Assoc. v. Block*, 755 F.2d 1098 (4th Cir. 1985) ("the essential inquiry... is

whether the commenters have had a fair opportunity to present their views on the contents of the final plan.”) By failing to include a proposed rule, the Commission has ensured that parties would not be able to respond specifically to the data or technical assumptions, positions, or policies reflected in the proposed rule. In fact, the Commission has created the distinct risk that interested parties will have to confront possibly harmful rules, factual assumptions, or critical data for the first time when the final rule is proposed, in violation of the Administrative Procedure Act. *See, e.g., American Medical Assoc. v. U.S.*, 887 F.2d 760 (7th Cir. 1989) (stating that rule will be invalidated if no notice was given of an issue addressed by the final rule, or where an issue is addressed only in general terms in the initial proposal); *Fertilizer Institute*, 935 F.2d at 1131; *National Tour Brokers*, 591 F.2d at 902.

The NPRM also failed to indicate the possible impact to some parties (state agencies, consumer groups, etc.) who might not have the specialized expertise to realize what the FCC's general intentions might mean to them. *See Wagner Electric Corp. v. Volpe*, 466 F.2d 1013, 1018 (3rd Cir. 1972) (reversing rule in part because although certain manufacturers may have appreciated that standards not discussed in NPRM would be affected by proposed rule changes, other interested parties might not have appreciated the connection and therefore had insufficient notice). Furthermore, the Commission will have harmed not only the interested parties, but the rulemaking process itself. *See, e.g., MCI Telecomm. Corp. v. F.C.C.*, 57 F.3d 1136, 1141 (D.C. Cir. 1995) (notice requirement seeks to assure agency will have before it all facts and information relative to particular administrative problem); *National Tour Brokers*, 591 F.2d at 902. Failing to propose a specific, substantive rule means that the Commission will be exposed to a narrower range of constructive and potentially instructive comments. Finally, review by a court (in the event of challenge) will be much more difficult.

7. No Evidence Suggests that Precipitous FCC Action is Warranted.

The record before the Commission does not provide any evidence or external circumstance warranting precipitous FCC action in the adoption of final rules and the denial to the affected parties – in this case most current users of the radio spectrum - of an opportunity to comment on those rules prior to their final adoption. This is especially the case given that test results from several government-sponsored programs are revealing harmful interference.

* * *

For the reasons given above, the signatories respectfully request the Commission to issue a further NPRM containing the proposed text and rationale of any proposed rule in this proceeding, for comment by all interested parties prior to final adoption by the Commission.

Respectfully submitted,

By: _____ /s/
Air Transport Association of America, Inc.
David A. Berg,
Assistant General Counsel
1301 Pennsylvania Avenue, NW
Suite 1100
Washington, DC 20004

By: _____ /s/
ARINC
Jack Smith
General Counsel
2551 Riva Road
MS 5-300
Annapolis, MD 21401

By: _____ /s/
ARRL, The National Assoc. for Amateur
Radio
Christopher D. Imlay
General Counsel
5101 Wisconsin Avenue, NW
Suite 307
Washington, DC 20016-4120

By: _____ /s/
Astrolink International LLC
Francis Latapie
Vice President
Government & Regulatory Affairs
6701 Democracy Blvd., Suite 1000
Bethesda, MD 20817

By: _____ /s/
AT&T Wireless Services, Inc.
Douglas I. Brandon
Vice President-External Affairs
David P. Wye
Director, Spectrum Policy
1150 Connecticut Avenue, N.W.
Washington, D.C. 20036

By: _____ /s/
Ellipso, Inc.
Gerald Helman
Vice President, International and Governmental
Affairs
1133 21st Street, NW
8th Floor
Washington, DC 20036

By: _____ /s/
Garmin International, Inc.
Andrew R. Etkind
General Counsel
1200 East 151st Street
Olathe, KS 66062

By: _____ /s/
LocatorNet
Max Cameron
President
14960 Woodcarver Road
Colorado Springs, CO 80921

By: _____ /s/
Lockheed Martin Corporation
Gerald Musarra
Vice President, Trade & Regulatory Affairs
Crystal Square 2, Suite 403
1725 Jefferson Davis Highway
Arlington, VA 22202

By: _____ /s/
Magellan Corporation
Jonathan W. Ladd
Senior Vice President Engineering
Worldwide Commercial Technology
471 El Camino Real
Santa Clara, CA 95050-4300

By: _____ /s/
Metricom, Inc.
Michael K. Hamra
Director of Regulatory and Government
Affairs
1825 I Street, Suite 400
Washington, DC 20006

By: _____ /s/
Motient Services Inc.
Lon C. Levin
Vice President and Regulatory Counsel
10802 Parkridge Boulevard
Reston, VA 20191-5416

By: _____ /s/
NAVSYS Corporation
Dr. Alison K. Brown
President and Chief Executive Officer
14960 Woodcarver Road
Colorado Springs, CO 80921

By: _____ /s/
Nortel Networks, Inc.
Raymond L. Strassburger
Vice President, Global Government
Relations
801 Pennsylvania Avenue, NW
Suite 700
Washington, DC 20004

By: _____ /s/
Omnistar, Inc.
S. John Waits
President and COO
8200 Westglen
Houston, Texas 77063

By: _____ /s/
Outreach
Kathryn B. Heatley, Ph.D.
President and CEO
97 East Brokaw Road
Suite 140
San Jose, CA 95112

By: _____ /s/
QUALCOMM Incorporated
Dean R. Brenner – Counsel for QUALCOMM
Incorporated
Crispin & Brenner, P.L.L.C.
1156 15th Street, N.W., Suite 1105
Washington, D.C. 20005

By: _____ /s/
Rockwell Collins, Inc.
Linda C. Sadler
Director, Governmental and Regulatory Affairs
1300 Wilson Blvd., Suite 200
Arlington, VA 22209

By: _____ /s/
Satellite Industry Association
Clayton Mowry
Executive Director
225 Reinekers Lane, Suite 600
Alexandria, VA 22314

By: _____ /s/
SiRF Technology
Kanwar Chadha
Founder and Vice-President for Marketing
148 East Browkaw Road
San Jose, CA 95112

By: _____ /s/
Sirius Satellite Radio
Robert D. Briskman
Executive Vice President, Engineering
1221 Avenue of the Americas
New York, NY 10020

By: _____ /s/
Spatial Technologies Industry Association
Frederic W. Corle
President
1030 15th Street, N.W.
Suite 1028
Washington, D.C. 20005

By: _____ /s/
Trimble Navigation Ltd.
Ann Ciganer
Vice President, Public Policy
645 N. Mary Avenue
Sunnyvale, CA 94086

By: _____ /s/
US GPS Industry Council
Dr. Charles Trimble
Chairman of the Council
Suite 1200
Washington, DC 20036

By: _____ /s/
WorldCom
Tally Frenkel
1133 19th Street, NW
Washington, D.C. 20036

By: _____ /s/
XM Radio Inc.
Lon C. Levin
Senior Vice President, Regulatory
1500 Eckington Place, N.E.
Washington, D.C. 20002

cc: Commissioner Susan Ness
Commissioner Harold Furchtgott-Roth
Commissioner Gloria Tristani
Ms. Magalie R. Salas