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October 17, 2003

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ELECTRONICALLY FILED

Ms. Marlene Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: *Ex Parte* Communication
ET Docket No. 03-122, Revision of Parts 2 and 15 of the Commission's Rules to
Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5
GHz Band

Dear Ms. Dortch:

On October 16, 2003, Michael Green of Atheros Communications, Inc. and the undersigned spoke by phone with Julius Knapp, Deputy Chief of the Office of Engineering and Technology (OET) with respect to the late-filed comments and test plan submitted in this proceeding by the National Telecommunications and Information Administration (NTIA).

During the conversation we emphasized that although NTIA has worked with industry in developing its draft test plan, the plan as submitted to the FCC had not been made available to industry and vetted before its filing. Nor was industry privy to the specifics addressed by NTIA in its Comments until they became available after submission. This new information was filed with the Commission after all deadlines for comment had passed. Atheros on its part, however, will prepare and file specific comments on the draft test plan as a written *ex parte* at its earliest opportunity.

Atheros is concerned with the NTIA's opinion expressed on page 9 of its filing that "the DFS mechanism should be required to detect a single radar pulse present during coincidence of the transmitted radar pulse and the dedicated listen period of the DFS mechanism between each packet/frame." The only requirement for Radar Detection should be conformance with the test specification, which uses representative radar signals and observed response by the U-NII device to demonstrate performance of the radar detection function. Specifying or limiting the internal characteristics of a U-NII device's

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detection mechanism was explicitly avoided in prior ITU work¹. Limiting the actual detection mechanisms would negatively impact the industry's ability to further improve detection performance while minimizing false alarm events – something very much in the interests of both the NTIA and industry.

On page 10 of its filing NTIA argues that the test facilities that perform the Commission's equipment compliance measurements "will in all likelihood not have this specialized measurement equipment or have experience in generating the radar signals that are necessary to determine whether or not DFS equipped U-NII devices comply with the Commission's Rules." This assertion is inaccurate. For over a year a number of U.S. and European test labs that test to current FCC requirements also have been performing radar detection tests to determine compliance with European requirements. These labs use the ETSI specification, which has many similarities with the NTIA draft specification. This is a matter of concern because there is a critical need to avoid a bottleneck in the U-NII equipment authorization process shortly after adoption of the new rules because of a lack of accepted test laboratories. This bottleneck risk in testing (and similarly in TCB approvals) can be avoided by simplifying NTIA's draft specification, such as by ensuring that the "conducted" rather than "radiated" test option is chosen as the preferred method and by replacing the frequency hopping radar with a simplified alternative which equivalently tests for compliance.

On page 10 NTIA states "that this government/industry project team has the expertise to provide guidance to the Commission in the development of the compliance measurement procedures. A first draft of the compliance measurement procedures is provided in Appendix B." As we indicate above, however, industry was not shown this version of the test plan nor asked to agree to it. Atheros and others may strongly suggest changes to this draft, and we ask that the FCC and NTIA continue their work with industry so that based on actual testing, we all will come to an agreed specification that meets the needs of Government, test laboratories, and equipment designers. This would best serve the end-users by enabling them to soon begin benefiting from use of the new band.

¹ See ITU-R Rec. M.1652 (2003), DFS in Wireless Access Systems Including RLAN Networks for the Purpose of Protecting the Radiodetermination Service in the 5 GHz Band. Annex I states: "The implementation of radar detection mechanisms and procedures used by WAS are outside the scope of this Annex. The main reasons for this are that:

- WAS design affects implementation;
- practical experience may lead to innovative and more efficient means than can be formulated today;
- different manufacturers may make different implementation choices to achieve the lowest cost for a given level of performance; therefore only performance criteria rather than specifications for a particular mechanism should be given in regulatory documents.

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On page 12 NTIA states: "Moreover, NTIA believes that since the current Institute of Electrical and Electronics Engineers (IEEE) 802.11 standards require TPC in both of these bands as a means to facilitate sharing among U-NII devices it should not create a burden on industry to implement TPC in both the 5.25-5.35 GHz and 5.47-5.725 GHz frequency bands." This is not accurate. The IEEE Committee has under consideration adding standardized messaging and functions which can be used to implement TPC and DFS for more consistent operation between different vendors' products. These IEEE extensions, known as 802.11h, do not themselves require that DFS/TPC be implemented in a device for any particular region. It is the regulatory requirements of a country that determines if and how TPC and DFS features must be implemented in a U-NII device. While we fully expect 802.11h to be implemented, it is not a pre-requisite to complying with regulatory requirements and should not be referenced in the Commission's Rules.

Finally, we reiterated our earlier comments that the transition periods for new certifications should start not when the Commission's Report and Order is published, but rather, on the date when certification becomes possible as a practical matter.

In accordance with Section 1.1206 of the Commission's Rules, 47 C.F.R. § 1206, this letter is being filed electronically and a copy is being sent to each named FCC participant.

Please direct any questions concerning this matter to the undersigned.

Respectfully submitted,



David R. Siddall
Counsel to Atheros Communications, Inc.

cc: Julius Knapp
Alan Scrim
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