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To: A16.A16(rm-8648)
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Subject: Apple Reply Comments

10 26 1995

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Attached are Apple Computer, Inc.'s reply comments in the above-referenced proceeding. A hard copy of the attached was filed with the Secretary's office on July 25. If there are any questions, please feel free to call me.

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Before the
=46EDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
)
Allocation of Spectrum in the 5 GHz Band) RM-8653
To Establish a Wireless Component of the)
National Information Infrastructure)

Petition for Rulemaking to Allocate) RM-8648 the 5.1 - 5.35 GHz Band and Adopt
)
Service Rules for a Shared Unlicensed)
Personal Radio Network)

REPLY COMMENTS OF APPLE COMPUTER, INC.

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July 25, 1995

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SUMMARY

Recent statements by Chairman Hundt stressing the importance of networking, the role of schools and libraries in tomorrow's information economy, and the FCC's role in preserving broad access to the spectrum resource, echo the sentiments of more than two hundred and twenty-five individuals and groups who filed comments supporting the Petitions filed by Apple and WINForum for a new, broadband unlicensed wireless communications service.

People from across the country, speaking on behalf of schools, libraries, state and local governments, disabled persons, civic networks, communities, small businesses, equipment manufacturers, and individual users described the array of benefits that could be achieved through an allocation of unlicensed spectrum capable of carrying a mixture of communications and applications, including those requiring high-bandwidth and longer distance links.

Of particular interest to Apple was the strong support for the fundamental concept underlying its NII Band proposal: that the spectrum must be shared equitably by all users, without preclusive priority for any type of user or type of communication.

In sum, the comments reflected virtually unanimous agreement that:

(1) unlicensed services are an essential part of the NII, (2) other technologies and services will not adequately serve the full range of communications needs across geography, income, and type of use, and, as a result, (3) unlicensed services must be given the opportunity to flourish through appropriate, adequate spectrum allocations.

A few entities expressed limited reservations to the proposals set out in the Petitions. In particular, several existing and proposed users of the 5 GHz bands expressed concerns that unlicensed devices could cause unacceptable interference to their operations. Apple does not propose that any existing or planned user be relocated from the 5 GHz band. Apple also concurs that additional work must be done to document the existing and planned uses of the 5 GHz band and to determine the circumstances under which sharing between these users and new, unlicensed devices will be possible. Apple believes, however, that sharing solutions are possible, and that these issues must be addressed on their merits in the context of an FCC rulemaking proceeding.

A very small number of commenting parties recommended that the FCC exclude "community networks" from the proposed NII Band. These arguments ignore the fact that many links within community networks, and indeed many entire community networks, will never be built, and their potential users will remain unserved, if unlicensed services are not available as an option. They also ignore the spectrum inefficiencies associated with mandating that users employ a dedicated link when their needs could be met using a shared unlicensed band, as well as the fact that unlicensed community network links are not mutually exclusive with one another or with more traditional, smaller area unlicensed networks.

Finally, the comments reflect broad agreement that the FCC should adopt an NPRM that proposes the broad outlines for regulating the NII Band, but should give a representative industry body responsibility for developing the specific technical rules governing the NII Band.

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REPLY COMMENTS OF APPLE COMPUTER, INC.

The key feature of the information highway is going to be networking. It will be networks that will weave homes, government, schools, hospitals and businesses into a national community. I see the schools and libraries as the sparkling points, a thousand public hearths attracting community members to the light of the national information network.

Our common job, then, is to hook up the libraries and classrooms."1

"[W]hat is the purpose of the FCC? First, the FCC manages the public property of the airwaves to promote the public interest.

This means, among other things, that we make sure that new businesses and small businesses have a chance to gain access to spectrum. Without us, the big established companies would be in total control of the communications revolution. These are fine companies but they shouldn't be the only ones involved in the most important industry in this country's future."2

These recent statements by Chairman Hundt echo the sentiments of more than two hundred and twenty-five individuals and groups who filed comments supporting the petitions of Apple Computer, Inc. ("Apple") and the Wireless Information Networks Forum ("WINForum") for a new, broadband unlicensed wireless communications service (the "Petitions").3

People from across the country, speaking on behalf of schools, libraries, state and local governments, disabled persons, civic networks, communities, small businesses, equipment manufacturers, and individual users urged the FCC to create a "public lane" on the information superhighway. While the specific statements varied from commenter to commenter, the comments almost universally expressed strong support for prompt action.

I. THE COMMENTS REFLECTED VERY STRONG SUPPORT FOR THE PETITIONS.

The comments described an array of benefits that could be achieved through an allocation of unlicensed spectrum capable of carrying a mixture of communications and applications, including those requiring high-bandwidth and longer distance links. Broadband unlicensed wireless connections could promote education,4 offer new possibilities for libraries to serve as information "gateways,"5 enhance opportunities for public dialog,6 enable small companies to design and deploy cost-effective networks suited to their needs,7 create opportunities for small businesses to participate in the information/ communications economy,8 link rural and low income communities and those with special needs to the broader information infrastructure,9 promote community development,10 improve health care,11 and improve energy use and promote conservation.12 Importantly, the NII Band would achieve these benefits using a market-based solution, without government mandates and without government subsidies, other than dedication of the required spectrum.

Moreover, Apple's proposed NII Band would promote full use of scarce spectrum resource,13 spur innovation in

wireless technologies,¹⁴ promote interoperability with the European HIPERLAN allocation and create new export opportunities,¹⁵ enhance U.S. technological leadership,¹⁶ and increase business productivity.¹⁷

Of particular interest to Apple was the strong support for the fundamental concept underlying its NII Band proposal: a spectrum allocation that is available to all technologies operating in conformance with an agreed-upon set of technical rules designed to assure equitable sharing of the spectrum resource, without preclusive priority for any type of user or type of communication.¹⁸

In sum, the comments reflected virtually unanimous agreement that:

(1) unlicensed services are an essential part of the NII; (2) other technologies and services - both wired and licensed-wireless - will not adequately serve the full range of communications needs, across geography, income, and type of use; and, as a result, (3) unlicensed services must be given the opportunity to flourish through appropriate, adequate spectrum allocations.

II. THE LIMITED RESERVATIONS EXPRESSED BY A SMALL NUMBER OF COMMENTING PARTIES EITHER LACK MERIT OR SHOULD BE ADDRESSED IN THE CONTEXT OF A RULEMAKING PROCEEDING.

A. Inter-Service Sharing Issues Should Be Addressed As Part Of The Rulemaking Process.

Several existing and proposed users of the 5 GHz bands filed comments on one or both of the Petitions expressing concerns that unlicensed devices could cause unacceptable interference to their operations.¹⁹ Several other parties supported the Petitions, but agreed that sharing issues must be addressed.²⁰

Apple concurs that additional work must be done to document the existing and planned uses of the 5 GHz band and to determine the circumstances under which sharing between these users and new, unlicensed devices will be possible. That said, however, Apple believes that it is important to place the sharing situation in context.

First, Apple has not proposed that any existing or planned user be relocated from the 5 GHz band.²¹ Its recommendation that NII Band devices be regulated under a "Part 16" structure and be afforded co-primary status is intended to provide certainty to all users - both NII Band and others - by developing mutually acceptable sharing solutions that would govern future operation in the band. Apple does not propose that NII Band technologies would receive preferential treatment over any existing user or type of usage.

Scott B. Lacey

15 Manhattan Terrace, West Newton, MA 02165

July 22, 1995

regarding: RM-8653

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31 JUL 20 1995

Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

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RM-8648

I Scott B. Lacey, a citizen of the United States, am fully in support of the proposal that the Federal Communications Commission allocate a free, unlicensed spectrum of broadcast frequencies adequate for 15-30 mile communications, with equipment and usage rules structured such that there will be fair, shared usage.

I believe that this proposal, RM-8653, will best serve the public interest by stimulating the kind of technical innovation needed to insure the economic viability of the United States into the future.

The alternative, RM-8648, would have less long-term benefit to the U.S. economy, by limiting the usage of the above mentioned spectrum to business applications which are currently well served by existing wire networks.

In summary: I support RM-8653

I oppose RM-8648

Sincerely,

Scott B. Lacey 7/22/95

Scott B. Lacey
15 Manhattan Terrace
West Newton, MA 02165

This signed copy follows one sent by electronic mail

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