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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION  
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| In the Matter of:                      | ) |         |
|  | ) |         |
| Wireless Information Networks Forum    | ) | RM-8648 |
| Petition for Rulemaking To Allocate    | ) |         |
| the 5.1 - 5.35 GHz Band and Adopt      | ) |         |
| Service Rules for a Shared Unlicensed  | ) |         |
| Personal Radio Network                 | ) |         |
|  | ) |         |
| Apple Computer, Inc. Petition for      | ) | RM-8653 |
| Rulemaking To Allocate Spectrum in     | ) |         |
| the 5 GHz Band To Establish a Wireless | ) |         |
| Component of the National Information  | ) |         |
| Infrastructure                         | ) |         |

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**COMMENTS OF WIRELESS INFORMATION NETWORKS FORUM**

Wireless Information Networks Forum ( WINForum ), by its attorneys, herewith submits its comments on the above-captioned petitions for rulemaking.<sup>1</sup> As discussed below, WINForum believes that the Apple Petition provides further support for the basic premise of its own petition -- that there is a immediate and growing need for a substantial new allocation for unlicensed devices in the 5 GHz band to accommodate the demands of mobile multimedia computer users. Furthermore, as discussed below, both the Apple and WINForum petitions agree that it would be appropriate for a sharing protocol to be developed in an industry forum

<sup>1</sup> Wireless Information Networks Forum Petition for Rulemaking To Allocate the 5.1 - 5.35 GHz Band and Adopt Service Rules for a Shared Unlicensed Personal Radio Network, RM-8648 (filed May 15, 1995) ( WINForum Petition ); Apple Computer, Inc. Petition for Rulemaking To Allocate Spectrum in the 5 GHz Band To Establish a Wireless Component of the National Information Infrastructure, RM-8648 (filed May 24, 1995) ( Apple Petition ).

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governing the use of the band. WINForum accordingly urges the Commission to expeditiously adopt a Notice of Proposed Rule Making setting forth this basic framework.

The fundamental principle underlying both the WINForum and Apple Petitions is that the vast wealth of electronic media stored on the internet and other resources of the National Information Infrastructure must be available on a simple, convenient, and low cost basis for all Americans. The allocations proposed by WINForum and Apple are designed to meet this goal by enabling the high speed, wireless transmission of video, voice, and data on an unlicensed basis. With the resulting ability to deliver information wherever it is needed, whenever it is needed, the WINForum and Apple proposals have the potential to enhance efficiency and productivity in all aspects of life.

It is also a fundamental tenet of both the WINForum and Apple Petitions that the benefits of new wireless technologies should not be restricted to a few information privileged and the means of communication should not be limited by the economic realities facing commercial service providers. Only by allocating spectrum on an unlicensed basis, where access is secured, and service provided, through low-cost, market solutions,<sup>2</sup> can the full benefits of mobile multimedia technology be extended to all citizens. As Apple correctly observes, the Commission has already previously noted that some services that would be provided in unlicensed bands may not be optimally provided in licensed bands because they have the characteristics of a public good.<sup>3</sup>

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<sup>2</sup> Apple Petition at 10.

<sup>3</sup> *Id.* at 10 n.9 (citing 9 FCC Rcd 7078 (1994)).

WINForum and Apple also agree, in their respective petitions, that achieving the level of performance needed to adequately address the multimedia requirements of emerging technologies will require a substantial allocation of spectrum. Again, both WINForum and Apple agree that there is an opportunity to allocate at least some, or all, of the needed spectrum at 5 GHz band as the FAA de-emphasizes MLS in favor of differential G.P.S. Apple also suggests allocating additional spectrum from the 5.8 GHz Industrial, Scientific, and Medical ( ISM ) band for these purposes. Indeed, both of these petitions cite similar factors in favor of allocating spectrum at 5 GHz, including the benefits of retaining at least some physical compatibility with HIPERLAN in Europe, the feasibility of developing low-cost devices to operate in that band, and the relative congestion below 5 GHz.<sup>4</sup>

As a final matter, both petitions agree that the 5 GHz unlicensed device allocation should be based on packet-switched model of transmission, with a protocol governing the interaction of devices used in the band to be set through an industry consensus process. As the development of the spectrum etiquette for unlicensed PCS devices demonstrates, however,

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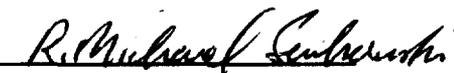
<sup>4</sup> Importantly, WINForum's advocacy of a new allocation at 5 GHz should not be viewed as a repudiation of the need for other unlicensed device allocations. WINForum has been, and will continue to be, a strong supporter of unlicensed PCS devices in the 2 GHz range, which should soon reach market. However, present allocations are insufficient to support the intense demands of multimedia technology. WINForum also does not view the proposed 5 GHz allocation as exclusive with the proposals for computer-to-computer communications in the bands above 40 GHz. However, at this time, WINForum does not believe that equipment is, or will soon be, available to support low cost devices in those regions. In addition, the bands above 40 GHz, compared with 5 GHz, suffer tremendous rain fade problems that have yet to admit a technical solution allowing campus-area unlicensed operation. WINForum nonetheless supports the Commission's actions to reserve spectrum for mobile computing devices above 40 GHz, since such spectrum will inevitably be needed for the next next generation of unlicensed products.

refining the details of the protocol is not a prerequisite to beginning the allocation process. Quite simply, if the United States is to extend to its citizens and businesses the benefits of the National Information Infrastructure, it is critical that the often extended process necessary to allocate spectrum be initiated as promptly as possible.

For the foregoing reasons, WINForum urges the Commission to act promptly on these requests for unlicensed spectrum in the 5 GHz band. As both of these petitions document in extensive detail, a new infusion of spectrum is necessary to develop a wireless component of the National Information Infrastructure capable of meeting the demands of emerging multimedia technologies. And, it is just as evident from these petitions that untethering multimedia computer-to-computer communications promises substantial gains in productivity, efficiency, and the basic delivery of critical health and educational services.

Respectfully submitted,

WIRELESS INFORMATION NETWORKS FORUM

By:   
R. Michael Senkowski  
Eric W. DeSilva  
WILEY, REIN & FIELDING  
1776 K Street, N.W.  
Washington, D.C. 20006  
(202) 429-7000

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## CERTIFICATE OF SERVICE

I, Kimberly Riddick, hereby certify that a copy of these comments were hand delivered to the following:

Henry Goldberg  
Mary Dent  
Goldberg, Godles, Wiener & Wright  
1229 Nineteenth Street, N.W.  
Washington, D.C. 20036

Ruth Milkman  
Federal Communications Commission  
Office of Chairman Reed E. Hundt  
1919 M Street, N.W.; Rm 814  
Washington, D.C. 20554

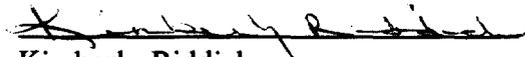
Mark Corbitt  
Federal Communications Commission  
Office of Plans & Policies  
1919 M Street, N.W.; Room 822  
Washington, D.C. 20554

Bruce Franca  
Federal Communications Commission  
Office of Engineering & Technology  
2000 M Street, N.W.  
Washington, D.C. 20554

Julius Knapp  
Federal Communications Commission  
Office of Engineering & Technology  
2000 M Street, N.W.  
Washington, D.C. 20554

Mike Marcus  
Federal Communications Commission  
Office of Engineering & Technology  
2000 M Street, N.W.  
Washington, D.C. 20554

Charles Iseman  
Federal Communications Commission  
Office of Engineering & Technology  
2000 M Street, N.W.  
Washington, D.C. 20554

  
Kimberly Riddick