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January 11, 2000

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Ms. Magalie Salas, Secretary  
Federal Communications Commission  
The Portals Building  
445 12<sup>th</sup> Street, S.W.  
Room TW-A325  
Washington, D.C. 20554

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JAN 11 2000  
FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Re: Amendment of Part 15 of the Commission's Rules  
Regarding Spread Spectrum Devices  
ET Docket No. 99-231

Dear Ms. Salas:

This is being filed as an *ex parte* letter in the above-referenced proceeding on behalf of Proxim, Inc. ("Proxim") to provide the Commission additional information with respect to the small business aspects of the proceeding and the Commission's proposal.

The Office of Advocacy of the United States Small Business Administration ("SBA") submitted comments to the FCC's June 24, 1999 notice of proposed rulemaking, *Amendment of Part 15 of the Commission's Rules Regarding Spread Spectrum Devices* ("NPRM"), in which the FCC proposed to revise its rules: (1) to permit frequency hopping systems operating in the 2.4 GHz band to use wider operational bandwidths; and (2) to modify the measurement of the processing gain of direct sequence spread spectrum systems.<sup>1</sup>

The SBA opposes the promulgation of final rules until the FCC conducts a "proper initial regulatory flexibility analysis and seek[s] comment both on the effect of its proposal on small business and on its analysis of regulatory alternatives."<sup>2</sup> The SBA contends that

<sup>1</sup> SBA Comments (Oct. 4, 1999).

<sup>2</sup> *Id.* at 2.

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the proposed rules do not satisfy the Regulatory Flexibility Act of 1980, as amended (the "Regulatory Flexibility Act") because: (1) the FCC failed to consider the proposed rules' impact on small business and to suggest ways to minimize, or "lessen it"<sup>3</sup> and (2) the NPRM's Initial Regulatory Flexibility Analysis ("IRFA") is "wholly inadequate."<sup>4</sup>

SBA's arguments have no basis in fact. Proxim, Inc. - itself a small business - demonstrates below that the FCC solicited small business input in its rulemaking and provided sufficient information to which the public reacted in an informed manner.<sup>5</sup> Small businesses participated in the initial request that resulted in the FCC's issuance of the NPRM and actively participated in the rulemaking proceeding itself. Moreover, adoption of the proposed rule regarding wider bandwidths for wireless applications will provide significant new opportunities for small businesses.

#### **I. Small Businesses Participated In The FCC's Rulemaking Proceeding.**

The proposal to amend the Part 15 rules regarding the operation of non-licensed spread spectrum systems is based, in part, on a November 1998, request that the HomeRF Working Group ("HomeRF") filed with the FCC requesting that the Commission interpret or modify Section 15.247 of the Commission's rules to allow frequency hopping systems in the 2.4 GHz band to operate with 3 MHz and 5 MHz bandwidths.

The FCC's proposed rulemaking, which incorporates the HomeRF proposal, is based on considerable small business input. In addition to Proxim, HomeRF is comprised of 46 small businesses out of a total membership of 97, or nearly 50 percent of the membership. HomeRF companies broadly constitute a representative sample of the personal computer, consumer electronics, peripherals, communications, software, and semiconductor industries.

HomeRF was formed to provide the foundation for a broad range of interoperable consumer devices by establishing an open industry specification for wireless digital communication between PCs and consumer electronic devices anywhere in and around the home. Of particular interest to small and home-based businesses is the specification that HomeRF has developed for wireless communications in the home, which is important to the success of a complete home network solution.

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<sup>3</sup> *Id.*

<sup>4</sup> *Id.* at 3.

<sup>5</sup> SBA defines a small business for Standard Industrial Classification ("SIC") category 4812 (Radiotelephone Communications) to be small entities when they have fewer than 1500 employees. Amendment of Part 15 of the Commission's Rules Regarding Spread Spectrum Devices, ET Dkt. No. 99-231, FCC 99-149 (June 24, 1999) at App. A.

In addition, small businesses actively participated during the comment and reply period of the FCC's proposed rule change, both supporting and opposing the proposal. Approximately 80 small business entities filed comments at the FCC regarding its proposals to allow for wider operational bandwidths and to refine the method for measuring the processing gain of direct sequence systems. That number represents over 66 percent of the almost 120 comments filed at the FCC.

## **II. The FCC's Proposed Rule Will Benefit Small Businesses**

The FCC's proposed rule, *inter alia*, amends the Commission rules to permit frequency hopping systems to use wider bandwidths under conditions suggested by the HomeRF. Wideband Frequency Hopping ("WBFH") is an important step in supporting the communications needs of small businesses, particularly home-based small businesses.

Over the past few years, the number of home-based business has increased substantially. According to the National Association of Home Based Businesses ("NAHBB"), the home-managed business is the fastest-growing segment of the U.S. economy with an annual growth rate of 10 percent. NAHBB projects that in 2000, there will be more than 55 million people working from home. About one-third of those, about 16.5-18.5 million, are estimated to be home-based businesses. Other sources indicate that currently, home-based business owners represent 6.1 million households in the United States, about 6 percent of all U.S. households.<sup>6</sup>

WBFH devices will provide a low cost means for home-based business to create a low-cost network capable of supporting high-capacity communications. With current technologies, such a network likely is beyond the financial and/or technical reach of many small businesses and most very small home-based businesses. At the same time, small businesses increasingly cannot compete effectively if they lack a high capacity internal communications network that can distribute within the business information generated within, received by, or accessible to the business. Furthermore, for small businesses in multi-unit office buildings, WBFH offers a low-cost and highly robust system for mobile and location independent data networking without coordination of spectrum usage with other tenants in the building as commonly needed with other high capacity wireless technologies.

The proposed rule change also will expand opportunities for small businesses in the telecommunications and information technology markets. Part 15 devices - including WBFH devices - are not subject to licensing. As a result, they provide an

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<sup>6</sup> SBA News Release, Home Based Business Conference, Rel. No. 99-65-615 (1999) (citing statistics from the National Association for the Self-Employed ("NASE")).

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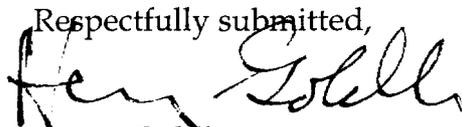
"easy entry" path for smaller businesses that may not have the resources to compete in a spectrum auction or to deploy a network throughout a large, pre-determined geographic area. The more these devices are allowed to do, the greater the opportunities for small businesses.

The authorization of WBFH devices will expand significantly the market for suppliers of information services to residential users, including content suppliers, software designers, suppliers of complimentary products and services, and others. This, in turn, will create new opportunities for small businesses serving the residential market.

The authorization of WBFH devices also will create new avenues for small business participation in the telecommunications marketplace. For example, businesses can manufacture these devices; sell the devices; enter into an original equipment manufacturers ("OEM") arrangement in which they integrate the devices into larger systems; employ the devices to provide a service to third parties; or provide system design, installation, maintenance, and other consulting and support services to end users of these products. Because WBFH devices are new, will be relatively low-cost, and generally will be used in residential and similar environments, the market surrounding them will not present the entry barriers that exist in much of the higher-end, more entrenched telecommunications marketplace. As a result, they will create new opportunities that are of critical importance to small businesses.

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The FCC's proposed WBFH rule is based on small business input and the final rule will be based on extensive small business participation in the rulemaking proceeding. Moreover, the introduction of WBFH will provide solutions to small business for cost and connectivity problems.

Respectfully submitted,  
  
Henry Goldberg  
Attorney for Proxim, Inc.

cc: Dale N. Hatfield  
Jere W. Glover  
Eric E. Menge