Before the
Federal Communications Commission
Washington, DC 20554

In The Matter Of:	)	Docket No. MM 99-25
	)	
Creation Of A	)	Docket No. RM-9208;
Low Power Radio Service	)	Docket No. RM-9242
	)	
	)	

To: The Commission

REPLY COMMENTS OF GEORGE MAGIROS

I. INTRODUCTION

1) I want to express my support for the Commission's low power FM service initiative, FCC Docket No. MM 99-25, and for specific comments of the microradio movement. In addition I intend to reply to the conclusions of the CPB, NPR, and the NAB.

2) I've been involved with radio as a student volunteer of Georgia Tech's FM college radio station, WREK, in Atlanta, GA.

There, I have assisted with moving WREK's audio to the internet - first in 1994 when WREK had to write its own streaming software, and a couple of years later when WREK converted to the internet standard of RealAudio. (See <http://cyberbuzz.gatech.edu/wrek/wreknet.shtml>)

I have had the pleasure of serving as the Public Affairs director of WREK and also contributing to the music programming of WREK.

3) I am also an avid shortwave radio listener, and enjoy listening to distant FM non-commercial broadcast stations.

II. SUPPORT OF THE COMMENTS OF THE JOINT STATEMENT ON MICRORADIO AND THE COMMITTEE FOR DEMOCRATIC COMMUNICATIONS AND THE MICRORADIO EMPOWERMENT COALITION

4) I support the "Joint Statement on Microradio" by the Amherst Alliance, the Microradio Empowerment Coalition (MEC), the Committee for Democratic Communications of the National Lawyers Guild (CDC), and others.

From the joint statement, I wish to particularly mark off on:

i. LPFM service should not be granted secondary status.
ii. A LP-1000 service should best be located in rural areas.
iii. A primary status microradio LP-10 service should be provided.
iv. Restrictions should be placed on LPFM ownership, especially that there be one to a customer who is local and not of a media group.
v. The regulatory structure should provide for self-regulation.

5) I additionally support the individual comments of the CDC and the MEC. Specifically I wish to note:

vi. LPFM should be created as a non-commercial service which allows unincorporated associations.

III. REPLY TO THE COMMENTS OF THE CPB AND NPR AND OF THE NAB

A. INTERFERENCE DOUBLE STANDARD

6) The CPB, NPR, and the NAB are concerned about the impact of a LPFM service on the transition to digital radio, specifically a IBOC standard. The concern is that:

a. A LPFM service would undermine a robust IBOC standard.
b. A IBOC ruling must be made before a LPFM service is created.
c. A LPFM service will create vast amounts of interference and hinder, if not prevent, the transition to digital.
d. Radio stations will not be treated as equitably by the FCC as it did television stations' conversion to digital.

7) However what is rarely mentioned is that the IBOC standards that are being considered, have need for additional bandwidth. Specifically additional sidebands on either side of the FM broadcast signal. Though they are reduced in power and are within the bounds of the FCC FM spectral mask, they are additional signals none the less. Each sideband is around 100 kHz in size, digital in nature and thus very disposed to ejecting harmonics.

How can these digital sidebands take up residence within the FM spectral mask, if the spectral mask is intended to define the minimal acceptable suppression of interference by a station. The Society of Broadcast Engineers (SBE) mentions that the Commission is attempting to violate the law of physics, the same must be said about the optimistic plan to fit these IBOC sidebands into the FCC FM spectral mask.

8) If the NAB and others claim that a LPFM service will:

a. cause significant and new interference, especially since receivers have not improved and so second and third adjacent

channel interference protection must be retained,
b. affect the air sound especially when listened to with high quality sound equipment,
c. cause the loss of subcarriers,
d. damage lightly processed programming, and
e. cause copious amounts of INTERMODULATION interference,

could not the same be said for the IBOC standards they are proposing.

9) If the NAB and others consider the interference created by their IBOC standards to be tenable for IBOC, then the same must be true for the interference caused by a LPFM service. However if they consider the interference, as they commented upon, to be significant, then are we not debating whose low power service is granted space in the FM broadcast band - the NAB's or the LPFM's.

B. THE SALIENCY OF BROADCASTING

10) When I took part in the process of deciding what programming to broadcast on WREK, I had to juggle two concerns: one of serving the Atlanta public and the other of serving the needs of the students of Georgia Tech.

While WREK was able to serve some of the needs of the Georgia Tech students through special shows and information, the station was not quite as capable to fill the true need. This was even so given that WREK prides itself on being very diverse - in music programming, which is the station's strongest point, and in public affairs programming.

This local Georgia Tech student need was met by a micro FM radio station, which has since gone. It broadcasted from a dormitory to audiences in the other dormitories. The station was well received, almost a hit with the residents of the dorms. A large number of these residents - who I would not consider pirates or lacking respect for authority of the FCC - took part in the daily operation of the station. Besides music, much of the programming centered about the current dealings and politics of the student resident organization.

11) Broadcasting does have a wide-area characteristic. That, for instance, WREK serves the Atlanta public better than it serves the smaller population of Georgia Tech. Or that shortwave broadcasting with its intrinsic high powers and far reach has programming more related to its wide-area coverage.

AM and FM broadcasting in the US does seem to have a large economy of scale. With the relaxation of FCC regulations, radio stations, besides other media and internet groups, are consolidating.

12) However the conclusions of the CPB, NPR, and the NAB, that such is the way of broadcasting which is most efficient when given the widest reach and optimal economy of scale, denies broadcasting of its primary utility, that of communication. And discounts the goals of a LPFM service.

NPR believes that the Commission is being hasty in issuing a LPFM NPRM. However the Commission's NOIs and NPRMs are providing a process, a means of dialog, to debate about the merits of a LPFM service and is the very type of purposeful forum that NPR is requesting.

13) Moreover, the following points (i) through (vi) from above in section II should assuage concerns of:

a. Minority ownership of public radio stations will be undermined.
b. Service outside of a full power station's 60dBu contour will be harmed, especially that of public radio stations.
c. Local stations being harmed economically by a LPFM service, especially struggling daylight-only AM broadcast stations.
d. A LPFM service will be marked by transient narrowcasting.
e. LPFM stations will be technically incompetent.
f. Enforcement will be impractical.
g. LPFM stations will defy the FCC's rules.

C. ALTERNATIVES: INTERNET RADIO

14) Internet radio is not a viable alternative. The major problems are technical: bandwidth and computer processing power. Initially at WREK the first streaming audio service was uncompressed and low in fidelity. Because of the bandwidth required and concerns about loading the network, only a small number of connections to the streaming server could be made at any particular time.

WREK has recently moved to a RealAudio server which provides compression and increased fidelity, however the maximum number of connections at a time, though increased, is still marginal. WREK intends to move to the RealAudio G2 protocol - a higher quality audio streaming protocol - however the computing power needed is beyond, at this moment, the station's facilities or finances.

The station also intended to also provide a MPEG layer 3 stream for its audio. However, as mentioned on the WREK website:

> "We are currently using RealAudio. [We] personally chose it over some competing technologies (freeware and commercial) due to it's sound quality at low bitrates. We were going to do mpeg layer 3, but it doesn't sound good at 16kilobits and it was becoming expensive and impractical for us."

IV. CONCLUSION

15) A LPFM service would be a benefit and would satisfy the goals of the Commission. It will maximize the efficiency of the radio spectrum with differing views and voices. There should not be an interference double standard. And lastly internet radio is not a workable alternative.

RESPECTFULLY SUBMITTED,

George Magiros

1019 Hampton St. NW
Atlanta, GA 30318
magiros@cc.gatech.edu

September 17, 1999