

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)	
)	
Revisions to Rules Authorizing the Operation of)	WT Docket No. 08-166
Low Power Auxiliary Stations in the 698-806)	
MHz Band)	
)	
Public Interest Spectrum Coalition, Petition For)	
Rulemaking Regarding Low Power Auxiliary)	WT Docket No. 08-167
Stations, Including Wireless Microphones, and the)	
Digital Television Transition)	

Comments of
Thomas C. Smith

This filing in the matter of WT Docket No. 08-167 is due to a filing error on my part. On October 3, 2008, I filed comments on Dockets 08-166 and 08-176. At that time, I sent the file to the Docket 08-166 comments site only instead of filing to both sites. I would like to have these comments included in both dockets so I am filing this late to correct my original error.

Respectfully submitted
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October 16, 2008

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Opening Summary

This Notice of Rulemaking concerning wireless microphones and the order suspending the acceptance of new licenses and equipment authorizations for low power auxiliary stations is another example of the FCC not dealing with all of the ramifications of the DTV transition. Action should have been taken several years back so that most of this equipment would have been out of service due to the normal life cycle of such equipment. If the Commission had acted and clarified the rules, when they made the rules for wireless assist video devices in 2002, all user's and manufacturers would have known that this equipment would not have been able to be used after the analog shut-off, we would not have to be addressing this issue now.

The second issue raised in this notice is that of ineligible users. This is another cause of the Commission both not enforcing its rules and not recognizing changes in technology. Both the DTV transition and potential interference to new users of the spectrum and ineligible users need to be addressed as soon as possible.

The DTV Transition and Low Power Devices

The Commission's action not to accept any new low power auxiliary license applications and equipment authorizations for low power devices in the 698-806 MHz band is the correct action. But it will not begin to solve the potential for interference to new users of that band. There are hundreds of thousands of wireless mikes in use and many manufacturer's choose frequencies about 698 MHz because there where few TV stations occupying that part of the spectrum. The Commission has proposed that everyone cease to operate wireless mikes and other low power devices in that band on February 17, 2009, a short four and a half months away. Even with an edict from the Commission, that isn't going to happen. First, by the time the Commission issues the final order, which can't be before October 20, 2008, you will be down to four months. Given that it would take at least a few days process the comments, write and release the order and publish the notice in the Federal Register, there will be at the most three months for the hundred of thousands of user's to be notified by whatever means and purchase new equipment. The number of churches in this country alone is huge and most of them have 2-3 wires microphones with some have many more. Broadcasters and other so-called eligible users probably already know this may happen due to coverage in various trade journals. But most, if not nearly all of the "ineligible users" will not be aware of the rules and will continue to use the devices. Churches, theatres, and many musicians may be reached through their various clergy and trade news articles and journals once the rules are publicized, but many small users, such as meeting halls, social

organization faculties, hotels and wedding DJs may miss knowing about any new rules at all.

Because of the sheer problem of notifying everyone in such a short time and because it will be an impossible task for the manufacturers to supply all the equipment that would be requested, I believe that the Commission should give a transition period of several months. Many of the new services will not be ready to begin operation on February 18, 2009. Many of these services received their spectrum in the last auction that ended last spring and with the time for any planning that may have been needed and time needed to construct, it is doubtful that many will be up and running in the near term after February 17th. Because of the failure of the auction of the shared spectrum in the public safety band, there will be few users of that band ready to go also. I know in New York and in a few other places, they have been working on their system. Because of that, the transition period for the top markets should be shorter than in the very rural markets. Between the time the rules are issued and the transition period ends, the Commission and the wireless microphone manufacturers and their dealers should be doing outreach to the various clergy organizations, religious councils and dioceses, musician unions, theater craft unions, trade groups for operators of meeting facilities to get the word out.

Because not all of the wireless microphones need to be replaced, the transition period after February 17th need not run longer than a year or year and a half in rural areas and maybe three to six months in major markets. The Commission will need to know to build out time for the new users to set the appropriate transition periods. The time needed

should be just long enough so users can learn about the changes and budget and purchase and get the equipment delivered. Even with good outreach and dealer and manufacturer involvement there will be some who will refuse to update their equipment and some who will not know about the changes. And because much of the equipment is used for only a few hours a week, it will be difficult to find them when they cause problems, particularly bands and DJs. In the end, no matter when the Commission says operation in the 700 MHz band should cease by wireless microphone users, so will continue on and cause some possible level of interference.

The Public Interest Spectrum Coalition Petition

Because of many of the organizations in the Public Interest Spectrum Coalition's involvement in the "TV White Space" issue, I am leery of their motives in this issue. Saying that, I do feel that their proposal of amnesty for the so-called ineligible wireless mike users should be done and some change in the rules could be made to allow churches, bands, theatres and others to use wireless microphones in the TV bands. Because of the low power, narrow band nature of wireless microphones and the fact for the most part they are operated in facilities that are somewhat isolated from most homes, they have presented a minimal interference problem. Under the current rules, the Commission has just eight frequencies assigned for general wireless mike use under Part 90.265 of the rules in the 169-171 MHz band. There should have been many persons in the Commission including the wireless, media and enforcement bureaus that should have known that these systems have been sold and used for years outside of the rules. In fact, I

would guess that all of the Commissioners at one time or another has used wireless microphones in these bands at various meetings and forums and those microphones were not being used to produce a TV, Radio or Movie production, but to feed a public address system.

I feel that if the FCC should allow the further use of wireless mikes by churches, bands theaters and others, the Commission should have some method of registration of wireless mike by currently non-eligible groups. As far as formal licensing, I feel that would be counterproductive. Currently many eligible users such as broadcasters, video and movie production companies and cablecasters don't apply for licenses. The fact that they are not applying for licenses can be determined by the low number of licenses that the FCC has on file. I would be more inclined to see an automated web based registration system that would require the filling out of a simple online form asking for the necessary information concerning the name and address of the operator and the frequencies or band of channels being used. The data should be searchable by zip code in order to find systems in an area. The registration system could be operated either by the FCC or the wireless device manufacturers under guidelines from the FCC. Compliance would be higher with a simple registration system than a formal licensing system that would require fees and the filing or issuing of any paperwork. If the FCC still would like to license the current "eligible" users under part 74 that would be ok, then make the non-broadcast users secondary to them even if registered. I know that many in the broadcast industry feel that those ineligible users of wireless microphone should be required to cease operation within the TV band, but that train has left the station long ago and we

have to deal with the problem as it exists now. The main issue now is interference detection and not penalizing users. If we knew where many of the users are, it will make interference detection easier.

It was also proposed that the manufacturers replace wireless microphones in the 700 MHz band. I do not believe that they should have to as the units were legal to sell at the time they were sold and many of the systems have been in use for many years and are near replacement. Many of the systems were sold years ago and with the thought that they would be retired by the end of the DTV transition. Most, if not all of the manufacturers have ceased to sell wireless microphones in the 700 MHz in anticipation of the DTV transition date.

The PISC proposed that the Commission allow wireless microphones to operate in the 2020-2025 MHz band. That may be a possibility in the future, but it does nothing for the problem now, as it would take considerable time for the Commission to write the rules and manufacturers to design and produce any new equipment. Some equipment has and is being sold on the unlicensed 900 MHz and 2.4 GHz band, but interference in those bands can be high in many urban areas due to the large amount of users. That may make that band unusable for some users where the venue does not provide adequate shielding from outside signals. The Commission should encourage greater use of these bands for wireless mikes if possible, but that will not provide the total answer to this problem.

The part of the PISC petition that makes me suspect of the motives is on how in the General Wireless Microphone Service petition they referred to the relationship of wireless microphones to devices proposed on the Docket No. 04-186 that could possibly share TV white spaces. I also thought they focused much discussion on Shure, Inc., then any of other manufacturers. Shure is one of their principal opponents in the white space rulemaking for making “illegal” sales of equipment. They also put the proposed Docket No. 04-186 TV white space devices on the same level as wireless microphones even though some of those devices will operate at up to four watts compared to 50-250 milliwatts for a wireless microphone and at a far wider bandwidth.

Closing Summary

The FCC has introduced many services over the years that were to be limited to a certain qualified group and required licenses. Many eventually became available to the wider consumer market. The first one may have been Citizen Band Radio, where the FCC had to drop the licensing rules because nearly everyone ignored the licensing rules. There is no doubt that the same thing is happening to the General Mobile Radio Service where the units can be bought at Wal-Mart or the local home center in a blister pack. When wireless microphone systems moved from being sold by mainly broadcast suppliers to professional sound system dealers that sold to broadcasters, the recording and music industry, churches and other users of public address systems, why wouldn't they ask for the more versatile systems sold to the local TV station. Part of the blame has to go to the Commission for being an agency that manages technology, but at times does not

keep up with changes in technology. Some of the blame has to go to the manufacturers for not asking for changes in the rules to allow for them meet the consumer demands legally. The Commission needs to take action to make the transition to new uses of this spectrum as smooth as possible for both the new and old users of the spectrum, but also make it as burden free as possible to the existing users. This situation should also serve as an example of what happens when a large amount of equipment is in the public's hands and can cause the potential of interference. It is nearly impossible to police or end their operation.

Finally, while I think that the issues brought up by the PISC concerning the use of wireless microphone and who is eligible to use them is worthy of discussion, the discussion of new unlicensed devices in the TV white spaces should not be a consideration in the discussion of any new wireless microphone rules. The white space proposals need to be considered on all aspects of how the operation of the new devices would perform with all the existing users of the bands including broadcast TV, wireless microphones, medical equipment and even cable TV. Signaling out any one of the other users of the TV band and trying to make it the object of attack because it may be a possible roadblock is not fair to any of the current users invested interest.

These comments are my opinion only and may reflect the opinion of my employer or any other organizations that I may belong to. I have been a broadcast technician for over thirty-nine years and been involved in frequency coordination efforts for over fifteen years.

Respectfully Submitted

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October 3, 2008