

**Before the  
Federal Communications Commission  
Washington, DC 20554**

In the Matter of )  
)  
Review of Technical Policies and Rules )  
Presenting Obstacles to Implementation ) RM 11565  
of Section 307(b) of the Communications )  
Act and the Promotion of Diversity )  
and Localism )

To the Commission

**Comment**

**By: Edward A. Schober, PE**

Edward A. Schober, PE, a consulting engineer who specializes in radio broadcasting, and has provided services to hundreds of broadcasters over more than 30 years respectfully submits the following comments. Mr Schober generally supports the instant petition, objects to some specific proposals and provides insight into his concerns on the great benefits and identifies some potential unintended consequences.

- 1) Development of channel 5/6 digital aural broadcasting. Mr Schober strongly supports this proposal with several caviats: a) The transition of AM stations should follow the plan of the DTV transition for TV, without an option for maintaining both a digital and an AM analog station, for those who opt to convert. The AM band expansion to 1700 kHz provided no improvement in the quality of reception in the AM band because the modest number of stations slated to move and that those that were chosen were chosen poorly, and because most of the AM stations scheduled to be deleted were never shut off. b) There should be a requirement that all digital radio receivers be able to tune and decode all systems – the system(s) used in the Channel 5/6 band, and that in the 88-108 MHz band. In this day of software defined radios several competing systems may readily be decoded using the same hardware. c) There should be a plan to transition the 88-108 MHz band to the much more efficient channel spacing similar to that proposed for the Channel 5/6 band, thereby providing the future option to return a portion of the spectrum to other uses. A transition such as this should plan for high spectrum efficiency. c) The channel 5/6 band should be developed specifically using multi-transmitter

stations. The use of multiple, relatively low-power, low tower height transmitters in highly developed areas is much more efficient and provides better service to urbanized areas than single transmitter high power, tall tower systems. Such multiple transmitter systems provide equivalent areas of coverage with much lower areas of preclusion of other cochannel stations. In areas with hilly terrain the benefits are even greater for multiple transmitter systems. The allocations in this new band should be designed for full market coverage using multi-transmitter systems, and for low power neighborhood stations. There is no incompatibility with intermixing full market stations with local stations, and no need to reserve special channels for special use.

- 2) Principal community coverage at night, under section 73.24(i) of the FCC rules is very problematic for AM stations. Class D stations are presently exempt from this requirement. Class C stations have very small night interference free service due to great amounts of received interference at night. Class B stations range from relatively high Night Interference Free (NIF) limits (small areas) and limits below the 5.0 mV/m principal community contour. a) Mr Schober recommends that as a minimum, reference to Night Interference Free contour be dropped from 73.24(i) for all classes of station. b) Class B AM stations generally must employ directional antennas at night. These antennas consume a large amount of land area, and are subject to encroachment by development, as outlined in the petition. It is often necessary to relocate the transmitters to more sparsely developed areas in order to serve population that has moved into the “nulls” of the directional pattern, or to accommodate the loss of a transmitter site. A station with a high NIF contour is locked into its present facilities because it cannot move with respect to its principal community. In addition to this factor the “ratchet clause” addressed separately in docket RM-11560 further restricts the ability of AM station operators to adjust their legacy transmission facilities to serve the present population. c) Some communities are physically larger than the entire NIF coverage of the AM station serving it. d) The service of an AM station does not simply shrink to the NIF contour when the sun goes down, instead, the interfering signals of other stations gradually increase over the succeeding two hours or so. For the all the essential “drive time” hours after sunset and before sunrise, the coverage of the night antenna provides very real service well beyond the NIF contour. e) Mr Schober believes that a reasonable requirement would be for Class B and C stations to cover some portion (however small) of the principal community with the 5 mV/m contour at night.
- 3) Changing the portion of the principal community which must be covered from 80% to 50% appears to be a reasonable proposal. If 50% of a community is served by the 70 dbu contour of

an FM station, and by the 5 mV/m contour of an AM station, then the balance of the community will still be assured (except in the most extreme cases) an acceptably listenable signal.

- 4) There remains no public interest reason to retain the minimum efficiency standards for AM radio stations. Engineering standards should be developed to assure that stations do actually develop the correct amount of radiation, both to assure that the channel is efficiently used, and that interference will not be caused by the station. These minimum efficiency standards often preclude the location of low frequency AM antennas due to safety of flight considerations, and local zoning and planning restrictions.
- 5) Mr. Schober recommends that the FM zone system be deleted in its entirety. There is no scientific or public interest reason to continue this system. The population density around Atlanta, GA or Houston, TX, is far greater than that of Canton, OH or Albany, NY. This system is a relic of a time when the population density of the United States was completely different than it is now. Mr Schober proposes that all new allocations be C, C0, C1, C2, C3 or A. All class B and B1 stations can be grandfathered with their present facilities and spacing. The licensee of a Class B or B1 Station should be permitted to convert them to Class C2 or C3 by minor change application. If the amount of short spacing is not increased, Class B stations should be able to be converted to C1 and B2 to C2 by minor change.
- 6) Mr Schober agrees that vacant allotments should be deleted. Mr Schober suggests that the FCC place allotments which have become vacant, or for which there were no bidders in previous auctions be placed in a new auction with a low \$100 starting bid. This way any allocations which may be marginally viable will provide a one time opportunity for anyone wishing to bid to do so. In the case that there are no bidders for an allocation in this auction, the allocations would be immediately deleted. Any FM allotment which is not constructed by the successful bidder, and the authorization deleted should go to bid one time in the next practicable auction with a low starting bid. If there are no bids, then the allocation should be deleted.
- 7) Mr Schober agrees that third adjacent channel spacing requirements are unnecessary for low power stations. Mr Schober recommends that LPFM, Class D NCE FM and FM translator third adjacent channel spacing should be eliminated, or possibly decreased so as to avoid overlap of the LPFM or translator 60 dbu with a full service station station's 120 dbu contour. The Commission should also consider decreasing the Class A third adjacent spacing requirement to protect only the Class A 60 dbu contour from higher class station 120 dbu contours. (no spacing requirement with respect to other Class A stations, or class D facilities. FM receiver third adjacent rejection has improved so much that this spacing requirement is

archaic. Additionally, the 10.6/10.8 MHz spacing requirements for LPFM, 10 Watt NCE FM stations, FM translators over 100 Watts and for class A full service stations should be deleted.

- 8) There is no rationale for limiting the number of translator applicants to 10. There are many applicants who filed applications in good faith, and have waited many years for action from the FCC. The solution to this logjam is to permit a 60 day window to resolve application conflicts. In order to make channels available for LPFM and other services, I have previously proposed that FM translators be permitted to be converted to LPFM stations provided that the ownership of the FM translator meets LPFM requirements. This will resolve the entire contention that FM translators “steal” spectrum that could go to LPFM stations. This provision will assure that the “leftover” spectrum used by FM Translators and LPFM stations goes to the best public use. Mr. Schober believes that retroactively limiting the number of translator applications to 10 abrogates the rights of those applicants.

The FCC's inaction on acting upon the plethora of pending FM Translator applications locks up the possibility of finding LPFM stations in some areas because there are literally 10 or more translator applications vying for a single channel in some populous areas. By granting one or two single applications for a channel in an area, and allowing for the dismissal of all others, the FCC would then provide the ability to identify the remaining channel opportunities. This is because the mutually exclusive applications may be spread out over a 30 to 50 mile radius, thereby completely blocking all access to the channel in an area.

The FCC clearly was blindsided by the volume of FM translator applications, but that does not give it license to wholesale disenfranchise applicants who applied in good faith and have been waiting over six years for action on their applications.

- 9) LPFM stations have unfortunately been the victim of FM channel allocations and relocation of FM stations. This proposal, as written, will unduly hamper the ability of full service FM stations to adjust their facilities to changing market needs. Mr Schober does not favor this proposal, however, he understands the problem. Under any circumstances, LPFM stations should not have protection to stay on their present channel. New FM allocations and FM station changes should take priority over LPFM stations when it simply requires the LPFM station to change channel at its present location. They should also take priority when an alternative site for the LPFM would solve the conflict or permit an alternate LPFM channel and the proponent of the change will pay for relocation of the LPFM station.
- 10) Mr. Schober agrees with the premise that the FCC should relax the limitation on the number of contingent applications. I would suggest raising the limit by one to five, then reviewing the

FCC staff workload and ability to deal with the influx of more complex applications. Upon review in six months, consider increasing the limit further. By setting the limit by administrative order instead of regulation, the FCC can moderate the work flow, and complexity, and avoid a “land rush” situation.

- 11) Mr Schober does not see where the relaxation of main studio rules, as outlined in the petition serves to improve or weaken localism. The main studio rule is an anachronism, as generally programming is no longer produced contemporaneously with its broadcast. What is important is that the station maintain a presence in the community, which could be accomplished from a vehicle, or even a reporter with an iPhone and microphone. I believe that the FCC should undertake a review of what substantial local involvement actually requires, and in that review consider deleting the requirement to maintain a main studio at all.
- 12) Mr. Schober agrees that the 18 month extension described in the petition should pertain to construction permits for changes as well as for new stations, especially for AM station changes.
- 13) Mr. Schober agrees that a blanket one year extension of all outstanding construction permits is warranted. The extreme difficulty in acquiring construction capital and initial operating capital for broadcast radio stations in the current adverse economic conditions has put many plans in jeopardy. The current conditions were not in effect at the time the applicants filed their applications. In many cases the finality of the expiration of a construction permit has hampered acquiring capital. If the Commission can decide this item promptly, it should issue a public release as soon as possible to aid those seeking capital but approaching the end of their authorizations. A further extension of construction permits should be considered in six months if conditions have not substantially changed.
- 14) Mr. Schober strongly agrees that resolving interference issues with respect to Cuba is important. Regularizing radio matters between Cuba and the USA would greatly improve AM radio in the US, if for no other reason that broadcasters would know that their business will not be destroyed by a new Cuban “irregular” station.
- 15) Mr. Schober believes that an educational program for would-be and new broadcasters to familiarize themselves with the rules is desirable. He does not believe that it is desirable to have FCC personnel run tutorials at conferences of trade groups and other specialty interests, as this places the attendees at an advantage over the general public. Much better would be web based learning programs using on-line teaching systems that individuals needing to know how to comply with FCC rules and interact with the FCC can study at their own schedule. Such courses could also, when successfully completed, be used for CEUs and as credentials to assist

small broadcasters to judge the knowledge level of their prospective employees.

16) Mr Schober strongly believes that the FCC may not compete with lawyers and engineers. The petition's proposal to use taxpayers money to provide a Broadcast Public Engineer is extremely inappropriate. The proper response the the FCC should make to the problem outlined in the petition is to simplify the FCC rules, not to provide a taxpayer supported professional service in competition with other small businesses for a select group of applicants and licensees. A level playing ground is needed, not one tilted in favor of one group or another.

17) Mr. Schober does not believe that a one year waiver of fees for small business entities is justified when the entity is requesting new or changed facilities. If a small business wishes to apply for a radio station, or for changes, the application fee is a small part of the total cost. If the applicant has so little resources that (s)he cannot pay a fee for the application, then what resources will be available to actually build the facility and operate it?

The FCC Form 302-AM and 302-FM, Form 350 and STA applications are a different story. These fees are due at a point where the permittee has completed the construction of the station, and may be nearing resource exhaustion. The licensee is demonstrating that they have complied with the terms of the construction permit, and needs whatever resources are remaining to build a business. Mr. Schober wholeheartedly agrees that a one year or longer waiver of these specific fees would be very appropriate in helping new small broadcasters to succeed.

Sincerely,

A handwritten signature in blue ink that reads "Edward A. Schober". The signature is written in a cursive, flowing style.

Edward A. Schober, PE 1 October 2009  
FM Translator Licensee  
FM Translator Applicant  
AM Broadcast Station Applicant  
Consulting Engineer