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FCC Mail Room

Before the
Federal Communications Commission
Washington, DC 20554

In The Matter of a Petition)
prepared and submitted by)
)
Richard F. Arsenault)
)
to Amend Title 47 of the Code of)
Federal Regulations, Part 73)
to authorize daytime power increases for AM)
Broadcast Stations to offset coverage)
losses due to increased interference from)
BPL, digital and electronic devices.)

RM-_____

April 10, 2010

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PETITION FOR RULEMAKING

PURPOSE

The purpose of this Petition is to request implementation of a solution that significantly addresses digital, Broadband over Power Lines (BPL) and other electronic interference problems to the reception of AM Standard Broadcast Radio, improves overall AM radio service and secures the future service provided by AM stations.

UMB-Audio 10-108

EXPLANATION and REQUEST

AM Standard Broadcast Radio service has suffered serious degradation of coverage over recent decades due to increased interference from new technologies. The development and use Broadband over Power Lines (BPL), computers and other digital computing devices, the common use of energy efficient fluorescent lighting with integrated solid state switching circuitry and virtually all other electronic devices have all increased the sum amount of electromagnetic interference to the reception of AM radio to the point of near uselessness in many areas where AM stations once provided adequate service to the general public.

The **primary** factor limiting reception of AM Standard Broadcast Radio during daytime hours is no longer interference between stations, but interference from electronic devices and power lines. Typically, co-channel and adjacent channel interference are no longer the limiting factors to interference-free reception during daytime hours.

The Commission established service contours and interference protection ratios at an earlier time when interference from existing electrical equipment was minimal and interference from digital electronics did not exist. At that time, the protected contours and the interference ratios made sense. Unfortunately, they were calculated without available foresight of the future digital technological revolution.

The current protected daytime service areas for AM stations are generally out to the 0.5 mV/m contour for all Classes of AM stations with exception of Domestic Class A AM stations which are protected to 0.1 mV/m contour. In reality, very few radios are capable of satisfactory reception at these lower signal levels because of the overwhelming degree of electronic and digital interference. What we currently have are

AM broadcast stations adequately protecting each other in the AM radio band, but these same stations are not receiving protection from the intense electromagnetic interference from unintentional sources making the current protected service contours of AM broadcast stations of minimal value. Accordingly, defining adequate rural service out to the 0.5 mV/m protected contour needs to be rethought in light of the fact that the sources of electromagnetic interference are part of our current lifestyle and will only get worse. In my evaluation, the only solution to this matter is to permit virtually every AM station United States the **option** of participating in a substantial across the board daytime power increase. Increasing power during daytime hours would solidify the daytime coverage of all participating stations and would NOT change the interference ratios between these same participating stations. I recommend that a ten-fold (10dB) power increase be adopted. If this can not be achieved, alternately, power increases of four-fold (6dB) could be adopted and still be significant. Ultimately, anything less than a doubling of power (3db) would be insignificant.

Adoption of a ten-fold power increase would solidify AM radio, penetrate virtually every remote area, break through all but the worst interference and fill most AM radio dials with numerous selections of strong stations instead of limited or no choices lost in static. A ten-fold power increase would also greatly expand the coverage of all participating AM stations and solidify coverage of all stations within their current service areas. None of the participating stations would lose coverage as co-channel and adjacent channel stations that elect to maximize power would NOT see any change in their interference ratios, but all participating stations would dramatically improve overall coverage by improving their ratios between the desired radio signals and the undesired electronic interference. I believe that the AM band as a whole would deliver more usable stations

to every AM radio dial across the United States under this proposal.

I request that if the Commission adopts this proposal, that a six month grace period be established to allow stations that elect to participate in a power increase the time necessary to install upgrades and that only a written letter be required from participating stations specifying the degree of power increase (any level up to the maximum adopted and permitted) along with the actual date of implementation.

All future interference calculations could be made utilizing the previous lower power levels of all stations, simplifying future allocation issues. I request that a five year window be granted for all stations to participate in the power upgrade, after which time, stations will be locked at the actual power level of operation. Certain stations within the border areas of Canada, Mexico and possibly in just a few other cases, with other countries where a salt water interference path to foreign stations exists, would have additional interference concerns to foreign stations, but nonetheless, the grand majority of listeners to domestic AM broadcast stations will benefit by this request if adopted.

The few stations in the border areas with required daytime protection to foreign stations could benefit by opting to use of a directional antenna pattern or a change in the existing daytime antenna pattern, or alternately possibly use a partial power increase.

To simplify matters, I initially request that only daytime power increases be proposed due to interfering nighttime interference restraints with foreign broadcasters. Nighttime interference to stations in Canada, Mexico and other foreign nations could be considered at a later date unless the Commission can resolve these issues in a timely manner with each of these countries.

FINAL STATEMENT

AM radio service will further decline without serious intervention to remedy the interference issue as the ratio of the unintentional interference to AM radio will only increase further with each new technology.

Higher powered operation will also deliver improved AM radio service to remote areas that are not adequately served due to variables such as distance or mountainous terrain. I realize that there are details that will need to be addressed before implementation, but more importantly, this Petition should open discussion on this concept. Nonetheless, the time to get the static out of AM radio is past due. We have watched the AM service degrade due to the increase in interference for too long. We must return AM radio service to comparable and usable coverage levels of the past.

A statement of my interests in this Petition is required. I, Richard F. Arsenault am a former AM Standard Broadcast radio station proprietor, am currently a Broadcast Radio Consultant and am an avid listener of AM radio. I'm fully aware of the problems with AM radio and I find it increasingly difficult to enjoy listenable interference free radio in the home, office or on the road from most AM broadcast radio stations, even within their protected daytime service areas. I have NO current broadcast ownership interests.

I believe that this Petition serves the public interest in that it further facilitates better distribution of broadcast service by AM Standard Broadcast radio stations supporting the Commission's goals of competition, diversity and success of broadcast licensees.

Respectfully submitted,



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