DOCKET FILE COPY ORIGINAL

ORIGINA

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
)
Petition for Creation of) RM-9242
the Low Power FM (LPFM))
Broadcast Service)

To: The Commission

REPLY COMMENTS OF

J. Rodger Skinner, Jr.
RM-9242 Petitioner
TRA Communications Consultants, Inc.

Pursuant to the Commission's Rules, 47 C.F.R. Section 1.405, J. Rodger Skinner, Jr., president of TRA Communications Consultants, Inc., as the RM-9242 Petitioner , hereby submits reply-comments on his petition for rulemaking proposing the creation of a new Low Power FM broadcast service nationwide. See Public Notice, Report No. 2261, File No. RM-9242, March 10, 1998 (hereinafter referred to as the "LPFM Petition"). Mr. Skinner's 35-year broadcast background and qualifications were detailed in the LPFM Petition RM-9242. With a reply-comments deadline of May 26, 1998, these reply-comments are timely filed.

Table of Contents

1. The comments filed in response to the LPFM Petition were both voluminous and predictable . Those supporting the creation of a LPFM broadcast service were many and varied, ranging from prospective broadcasters to experienced broadcasters citing reasons why the creation of such a service would serve the public interest. As the petitioner in RM-9242, I am encouraged by the many sincere comments filed in support of the LPFM Petition. I do not however support most of the concepts in the other two petitions being considered in this proceeding, RM-9208 and RM-9246, so I will not address many of the comments filed in response to those two petitions. I do, however, wish to address the comments filed in opposition to RM-9242 and, to a limited extent, some comments filed in opposition to RM-9208 and RM-9246 as they relate in general to the concept of creation of a Low Power FM broadcast service. Many of the arguments put forth in opposition to creation of a Low Power FM broadcast service originate from the National Association of Broadcasters ("NAB") and were parroted in comments filed by individual radio stations and several State Broadcasting Associations. The NAB, through organized scare tactics such as unfounded interference threats, has rallied some individual stations and several State Broadcasting Associations to join in an orchestrated attempt to squash this new service before it is born. When a LPFM supporter asked me how I could expect to prevail against such a highly organized and well funded lobbying effort, often called the second most powerful lobby in Washington, I replied that I felt a little like David facing Goliath. We all remember how that ended. As a person of faith, I honestly feel that creation of a LPFM service would serve this country well, is clearly in the public interest and, simply put, is the right thing to do. I hope the Commission shares these feelings and can find a way to create a Low Power FM broadcast service that will help

reshape America by giving a voice to those individuals, minorities, women, churches and schools presently shut out of radio station ownership. The Commission created a very worthwhile service in 1982 when it created the low power television (LPTV) service, despite opposition from the National Association of Broadcasters and others. It now is at an important crossroads whereby it has the opportunity to create an equally worthwhile service, LPFM. I will detail the benefits of such a service later in these reply-comments.

2. The NAB puts forth the idea that creation of a LPFM broadcast service is not an efficient use of spectrum[1]. It then begins to attack the 1-watt stations as proposed in the original version of RM-9208 (Leggett petition), filed at the FCC on July 7, 1997. What the NAB fails to state is that the RM-9208 petitioners themselves abandoned the idea of 1-watt stations in an amendment of RM-9208 filed with the Commission on March 4, 1998, proposing instead a coverage area of up to five miles. In that regard the NAB's arguments against a 1-watt service are moot. In addition, the efficient use of spectrum argument cannot be made against the power levels requested in RM-9242, since those power levels are above the minimum power level of 100-watts, considered efficient use of spectrum for Class-A FM stations. It's the core issue of diversity of voices on the airwaves that the NAB conveniently leaves out of its discussion of efficient use of spectrum. It is abundantly clear that it is a more efficient use of spectrum to allow an increased number of users to use it! By increasing the number of stations, without interference, and at the same time increasing the diversity of ownership, it is obvious that the spectrum then is being used more efficiently. A LPFM

[1] *NAB comments* at 4.

broadcast service would make more efficient use of the spectrum, even greater than creating more full-power stations. I contend that if more full-power stations were created, they would just be gobbled up in the continuing merger-mania, further reducing the diversity of voices on the airwaves and eliminating the many positive benefits of local ownership of broadcast media. For many years, when comparative hearings were used by the Commission to select a licensee out of mutually exclusive applicants for a FM channel, great weight was given to "local ownership" and "integration of ownership into management". It is exactly these positive benefits that a LPFM service would restore, with ownership restricted to locals, as proposed in RM-9242. If more efficient use of the spectrum is a goal, then the Commission must create the LPFM broadcast service to make more efficient use of this precious resource.

3. The NAB attempts to make the argument that "The Commission has determined that operation below the minimum power level is an inefficient use of spectrum".[2] This argument was used in 1978 to eliminate the noncommercial educational ("NCE") stations that were operating at only 10 watts. This was done to free up channels for the higher power stations that National Public Radio wished to attract. I agree that a power level of 10 watts is too low for broadcast use and in this case the NAB gives support to our request in RM-9242 for power levels of between 50 watts and 3000 watts (3 KW), the range of power levels needed for effective communication on the FM band. The NAB again advances our position on power levels required for LPFM when it states on page 5 of its comments -

---

[2] *See Changes in the Rules Relating to Noncommercial Educational FM Broadcast Stations,* 69 FCC 2d 240 (1987).
NAB comments at 6.

"The FCC chose to set the power level minimum to ensure that stations can serve a substantial number of listeners. A full-power radio station can provide music, news and information of value to an entire community, not just those listeners in a confined area. The FCC's policy is supported by the fact that many people listen to radio in cars and other places outside the home- and most likely outside the listening area of a micro- or low power service. On weekdays, 61.7 percent of all radio listening by persons 12 years of age or older takes place outside the home".

The power level minimum referred to above for full-power stations is 100 watts for Class-A FM stations. The above argument makes some sense when arguing against a 1 watt service but actually supports the case for the higher power levels as proposed in RM-9242. These same considerations were considered when selecting the power levels of 50 watts to 3 KW as proposed in the LPFM Petition for class LPFM-1 stations. NAB, in continuing discussion on deletion of the 10 watt NCE license, on page 6 of its comments states, "The Commission made a reasonable decision to establish minimum power levels in order to provide the most efficient use of the spectrum to the public". I agree with NAB that 10 watts is too low a power level for either a NCE or a LPFM station. By comparison, existing FM translator stations are allowed a power level of 250 watts with approximately 8 mile (13 km) range. It should also be noted that the low power television service provides power levels for "low power" stations that allow for coverage of 20 miles (32 km) and more. It is only logical that a LPFM service should provide for coverage areas similar to that of "low power" television stations. Since the NAB supports the minimum power level of 100 watts for Class-A full-power FM stations, it is inconsistent to argue that power levels of up to 3 KW, as proposed in RM-9242, are too low to be efficient use of spectrum. It may be helpful to think of power

levels as they relate to coverage areas. For example, the maximum proposed in RM-9242 is 3 KW at 100 meters antenna height above average terrain ("HAAT"), which equates to coverage of 15 miles (24 km) to the stations 1 mV/m (60 dBu) contour. A power of 250 watts at the same 100 meters HAAT provides coverage of 8 miles (13 km). A *chart* of several power levels and antenna heights with corresponding coverage areas is attached to this document as *Appendix-A*[3] and may be useful to the Commissioners when considering the power issue. By using the desired-to-undesired (D/U) signal ratio method, as effectively used for many years in the Low Power Television (LPTV) service, I have proposed in RM-9242 that one should be able to use the maximum power that a channel will hold without causing interference , up to the maximum power level of 3 KW for LPFM-1 class stations. Thus, if an engineering channel study shows that a channel can hold 500 watts without causing interference, then that power should be granted. Likewise if an engineering study shows that the channel can hold 3KW, then that power should be granted, or whatever power level the applicant states in his/her application, up to the 3KW maximum. This method ensures the maximum efficient use of the spectrum and is one of the key factors that separates RM-9242 from the other low power radio proposals. In addition, this method makes available more channels for LPFM use than would be available under a strict mileage separation criteria. Again, this method of ensuring no interference while allowing maximum use of the band has worked well in the LPTV service and can work equally well for a LPFM service. Software is readily available to both the Commission and to consulting engineers that allows study of desired-to-undesired signal ratios for FM applications. Thus, it would not impose any

[3] The *chart* in *Appendix-A* was prepared using data from the Commission's FM propagation curves in Section 73.333 Figure-1 of the rules.

additional burden on Commission resources to check engineering studies submitted using desired-to-undesired signal ratios for LPFM applications. Indeed, the Commission already uses the same desired-to-undesired signal ratio methods in applications for short-spaced FM facilities, per Section 73.215 of the rules. In fact, the contour protections outlined in RM-9242 for LPFM stations co-channel and 1st-adjacent channels are precisely the same as those listed for short-spaced full-power FM stations in Section 73.215 of the rules.

4. NAB attempts to make the argument against creation of a LPFM service, at this date in time, based on a decision made by the Commission some eight years ago when it denied giving FM translators local origination capability.[4] At that time the Commission stated it was committed "to provide FM radio broadcast service in a manner that promotes program diversity while enhancing the incentives for efficient broadcast station development". Surely no one can argue that the radio landscape today, after the consolidation brought about by the Telecommunications Act of 1996, is vastly different than what existed back in 1990. The same statement used in 1990 to deny local origination for FM translators could be used today as a rationale for creation of a LPFM broadcast service. As demonstrated previously in this document, a LPFM service would be a more efficient use of spectrum that would promote program diversity as well as diversity of ownership with the added benefits of local ownership. The continuing merger-mania acquisition of radio stations by the large broadcast corporations clearly results in less diversity in programming, less diversity in ownership and less local ownership and hence less efficient use of the spectrum. Surely no one will argue that these

---

[4] *Amendment of Part 74 of the Commission's Rules Concerning FM Translator Stations*, 5 FCC Rcd 7212, 7219 (1990).

continuing station acquisitions by the large corporations result in less diversity of ownership and less local ownership. I can state from my own local observations here in South Florida that this consolidation of stations has led to less diversity in program choices not more. For example, one day I tuned in a local talk station in Miami (940 AM WINZ) only to hear a new talkshow host that was not to my liking. I tuned that station out and switched to a station in Fort Lauderdale (1400 AM WFTL) only to find the same talkshow program being aired. I then decided to switch to a third talk station, this time in completely different market, West Palm Beach (AM 1290 WBZT). Low and behold, the same talkshow beamed forth from that station replacing another show which I had previously enjoyed. So there is a tangible real-life example of how three listening choices was reduced to one, due to the same large corporation (Clear Channel Communications in this instance) buying all three of these stations and airing the same program on all three stations simultaneously. While this may be a benefit to the owner's bottom line, it certainly is a very big loss to the listening public. After speaking with people from many parts of the nation on this issue, it is obvious that my above example is being repeated in market after market after market, resulting in a decrease in listening choices for the public and a decrease in diversity of ownership of stations (voices). These substantial negative effects of consolidation can be remedied, to some degree, by a new LPFM service. Creation of a LPFM service will provide sorely needed diversity in programming for millions of radio listeners across this great land, while at the same time providing the benefits long associated with local station ownership. While the concept of consolidation as a business tool may be useful to promote profits, it should not be used with reckless abandon to bring negative changes to something as important as radio broadcasting, a service that directly affects the

lives of every American every day! The enormous decrease of diversity of voices on the airwaves brought about by this consolidation of stations serves to effectively point out the urgent need for the pendulum of change to swing back in the other direction. A tremendous increase in diversity of voices on the airwaves can be achieved by creation of the LPFM service.

5. The NAB argues "With each new authorized micro- or low power station, the area of interference-free radio service would be diminished. Additionally, the public would be disserved because it would be deprived of the great benefits provided by full-power stations that would be precluded in order to provide interference protection for low power stations that only a few people could hear"[5]. Again, this argument against 1 watt stations does not work It appears that the NAB does not want to face the reality that under the present allocation scheme and mileage separations[6], there can be no more full-power stations built in most major metropolitan areas across this nation. One need only look at the small communities, far from most major metropolitan areas, that are receiving new FM channels these days. In these out of the way areas, LPFM will not preclude new full-power stations. In these sparsely populated areas there is not a big demand for new FM facilities so there is plenty of spectrum still available for new full-power stations. One of the most important facets of RM-9242 is the fact that by deleting 2nd and 3rd adjacent channel restrictions, a handful of channels will be available for LPFM use even in large metropolitan areas, where no more full-

[5] *NAB comments* at 12.

[6] Section 73.207 of the rules, table of mileage separation requirements.

power stations could fit under current rules. It is this fact that has prompted the NAB and existing broadcasters to object so vehemently to creation of a LPFM service. It is clear their objections are of an anti-competitive nature and therefore should be rejected by the Commission. The limitation of ownership to those living within 50 miles (80 km) of the antenna site, as proposed in RM-9242, is intended to provide for local ownership and preclude LPFM channels from being snatched up by the big corporate broadcasters. Indeed, some of these LPFM stations licensed to major markets could attract a sizeable audience which could affect revenues, albeit slightly, of some existing full-power stations. It is for this reason that the large corporate broadcasters, who dictate NAB policy, have opposed LPFM so strongly. LPFM could affect their bottom line by attracting some audience away from the full-power stations and even some small amount of advertising business; however, isn't this what competition is all about? Section 257 of the Telecommunications Act of 1996 directs the Commission to promote competition and to lower the barrier to entry for small business, not discourage competition as the NAB would like. Should the Commission doom the only chance that average Americans have at owning a radio station, just to protect the bottom lines of the corporate giants that may be affected very slightly? This is the real question that needs to be addressed. In my opinion, all the other arguments are merely a smoke screen in an attempt to mask the real issue (revenues). I find this anti-competitive stance displayed by the NAB and its large corporate members to be symptomatic of the greed that is destroying the foundation of the American system of radio broadcasting that has served this country well for over half a century. When you replace family members with board members in radio station ownership, you see an entirely different set of values. The profit motives that drive Wall Street

and the stock market have now managed to change the face of broadcasting in America forever. Today, only two or three companies own all the radio stations in most major markets and the consolidation trend is now eating away at even the small markets. These large power players have mastered the art of lobbying Congress to obtain whatever they want and they are now applying that same lobbying expertise to attempt to smash any hope of a LPFM service in America. This, simply put, is a disgrace. Several small market broadcasters have called me to voice their disgust with the NAB, who according to them, represents only the views of the large corporate broadcasters. Many of these small market broadcasters have expressed their desire to see a LPFM service created, since they realize it would serve the public interest and their own by making some channels available to them at start-up prices they can afford. One small broadcaster in Texas told me that he might turn in his Class-A license for a LPFM to serve his town of 4,000 people since the Class-A was too expensive to maintain and a LPFM would be more cost efficient.

6. NAB, knowing that many of its arguments against LPFM are weak and unsupportable, has attempted to "poison the well" by claiming that LPFM would doom the transition to digital broadcasting in this country[7]. It's own exhibits in its comments contradict each other and do not support the conclusions they attempt to draw. For example, their Figures 4 and 5 show IBOC energy occupying the entire "-25 dB wing" of the FCC's FM emissions mask. However, in footnote 57 on page 21, they state that this is not the case at all, by saying "In reality, the IBOC system developers do not intend to use the entire -25 dB wing,

[7] *NAB comments* at 13.

as will be discussed later in these comments". Figures 4 and 5 are clearly misrepresentations of the amount of space to be taken up by the IBOC energy[8], in an attempt to have the reader reach a false conclusion that LPFM will interfere with IBOC, as currently planned. It appears that NAB wishes to mislead the reader who fails to read the footnotes, since in Footnote 53 on page 17 of their comments they say "The system ultimately submitted to the Commission for approval may have digital bandwidths and emission levels that differ slightly from those described in these comments". Figure 6 of the NAB comments[9] more closely resembles the true picture showing much narrower bandwidth of the digital IBOC signal energy, with no interference occurring even when the undesired 2nd adjacent channel is up to 40 dB stronger than the desired IBOC station being received. Figure 6 is even misleading since it shows no guardband between the upper frequency portion of the desired IBOC signal and the lower frequency portion of the undesired second adjacent channel IBOC signal, when such a guardband does exist. This guardband[10] is described in the text of NAB comments on page 23, which states - - -

> "In the current IBOC system designs, the guard band between the upper frequency portion of the desired IBOC signal and the lower frequency portion of the undesired second adjacent channel IBOC signal are very narrow". This narrow guardband should be sufficient to permit receivers to decode a desired IBOC signal in the presence of a 40 dB interfering signal immediately adjacent to them. However, because this guardband is so narrow it will not provide much leeway for increasing the strength of the second adjacent channel interferer (i.e., moving second adjacent stations closer together) because such an action would likely cause the interfering IBOC signal to overlap the desired IBOC signal."

The NAB, with this statement, has given a good reason not to remove the second adjacent channel restrictions for full-power stations but a faulty argument against allowing use of

---

[8] *NAB comments* at 19 (Figure 4) and 21 (figure 5).

[9] *NAB comments* at 23.

[10] *NAB comments* at 23.

second adjacent channels by LPFM stations only. In fact, these comments make a strong case for allowing LPFM stations to operate on 2nd adjacent channels showing that no interference would occur to analog FM stations or IBOC stations, as described. Their own comments show that a 2nd adjacent channel station will not interfere if its signal strength is up to 40 dB above that of the desired station. Comparing 100 KW stations to other 100 KW stations or even 50 KW stations, this presents a far different interference potential than say a 500 watt, 1 KW or even 3 KW LPFM station would cause. The chart below shows how many dB down the examples of LPFM power levels are compared to full-power stations using 50 KW or 100 KW.

100 KW full-power station:	50 KW full-power station:
23 dB > 500 watt LPFM station	20 dB > 500 watt LPFM station
20 dB > 1 KW LPFM station	17 dB > 1 KW LPFM station
15.2 dB > 3 KW LPFM station	12.2 dB > 3 KW LPFM station

The above power comparisons show that a typical LPFM station would not be able to exceed a full-power station's signal by 40 dB on a second adjacent channel except in a very small area immediately around the LPFM stations antenna site, if at all. If the LPFM were co-located on the same tower site as the 2nd adjacent channel full-power station, there would be no area of interference at all since the LPFM would not exceed the full-power station's signal strength by 40 dB at any point. Even if the LPFM antenna site was some distance from the full-power 2nd adjacent channel's antenna site, the area for potential interference would be very small, only in the immediate area of the LPFM antenna site. Indeed, this area of potential interference would be smaller than the "blanketing area" around full-power station's antenna sites that the Commission acknowledges and allows. Here is an example of the minimal area that might

receive interference from a LPFM station compared to the "blanketing area" of the full-power station - - -

Full-power station operating on a 2nd adjacent channel to a LPFM station 37 km away:

Full-power FM station facilities:	Low Power FM station facilities:
ERP: 100 KW	ERP: 3 KW
Antenna HAAT: 309 meters	Antenna HAAT: 100 meters
Blanketing Contour: 3.2 km	Interference Contour[11]: .55 km
Blanketing Area: 15.5 sq. km	Interference Area: .43 sq. km

As shown here, the blanketing contour of the full-power station extends 3.2 km as compared to the area of potential interference from the LPFM station which extends only .55 km (.34 mile) from its antenna site. This minimal area of interference is much smaller than the blanketing area around the tower site of the full-power station and thus should not be considered as an impediment to the use of 2nd adjacent channels for LPFM stations, operating at the maximum proposed power of 3 KW. LPFM stations operating at lower power levels would have even smaller areas of potential interference and thus could be safely ignored. Below is the definition of FM blanketing from the FCC rules.

Section 73.310
FM TECHNICAL DEFINITIONS

FM BLANKETING

Blanketing is that form of interference to the reception of other broadcast stations which is caused by the presence of an FM broadcast signal of 115 dBu (562 mV/m) or greater signal strength in the area adjacent to the antenna of the transmitting station. The 115 dBu contour is referred to as the blanketing contour and the area within this contour is referred to as the blanketing area.

Thus, the NAB comments have shown conclusively that LPFM stations could operate on 2nd and 3rd adjacent channels without causing interference to analog or planned digital channels.[12]

7. There are some other facts about IBOC that need to be brought out in this

---

[11] Interference contour defined as distance from the LPFM station's antenna site where its signal would exceed that of the full-power station under study by 40 dB or more and thus could have potential for interference.

[12] NAB comments filed April 27, 1998 at the FCC regarding RM-9242, RM-9208 and RM-9246, see Page 23, Figure 6 and accompanying text.

discussion. In addition to the lengthy discussion of IBOC in the NAB comments, there were comments filed by USA Digital Radio Partners, L.P. ("USADR"). USADR is a partnership of CBS Corporation and Gannett Co., Inc. formed in 1991 to attempt to develop digital AM and FM broadcasting systems. I said "attempt" because after seven years USADR still does not have a working system[13]. Some time back USADR partnered with Lucent Technologies to develop its IBOC system; however, as reported in a recent issue of Radio World magazine[14], Lucent Technologies did not renew its consulting agreement with USADR and Lucent has now gone on its own to develop a commercially viable in-band on-channel (IBOC) digital audio broadcasting system for the United States. The new venture is called Lucent Digital Radio. It is important to note that only USADR, the partnership of two broadcasters CBS and Gannett, filed comments opposing creation of the LPFM service. I would pose these questions regarding IBOC and LPFM. If indeed LPFM would cause problems with digital IBOC, as NAB and USADR argue, why didn't the other two developers of digital IBOC file comments against LPFM? No such comments were filed by either Lucent Digital Radio or Digital Radio Express, the other two companies developing IBOC systems of their own for AM and FM digital radio broadcasting in the United States. With the wide exposure given RM-9242 and the other low power proposals, it certainly could not be for lack of knowledge about them. Could it be that their systems would not be impacted by the LPFM proposals or could it be that the NAB / USADR comments overstate the potential for LPFM to interfere with IBOC, or both? It would seem that the USADR approach to IBOC could be in serious trouble, hence

---

[13] *USA Digital Radio Partners, L.P. comments* at 2.

[14] *Radio World* May 13, 1998 issue, page 1.

the withdrawal of Lucent Technologies and setting up of its own Lucent Digital Radio venture. "The venture is part of Lucent's plan to identify key technologies developed by Bell Labs, its research arm, and bring them to market", according to a report in the May 13, 1998 issue of Radio World magazine. According to that same article, the agreement with USADR expired February 28, 1998 and was not renewed. Suren Pai, president of Lucent Digital Radio, was asked in that article if Lucent Digital Radio would use anything gained from its agreement with USADR, and he said Lucent Digital Radio is "walking away from that technology". Given these recent happenings, it is questionable if USADR will be the one that succeeds in creating a workable IBOC system. Both Digital Radio Express ("DRE") and Lucent Digital Radio ("LDR") plan to work with the National Radio Systems Committee ("NRSC") to develop mutually-agreeable tests, a step toward setting a uniform IBOC digital audio broadcasting ("DAB") standard for broadcasters and receiver manufacturers[15]. USADR has stated that it refuses to participate in such tests[16]. Also of interest is the final technical evaluations of DAB systems conducted earlier by the Consumer Electronics Manufacturers Association ("CEMA"). This final report said the Eureka-147 system was superior to those tested (which included the USADR system)[17]. The Eureka-147 system uses a completely separate band for digital broadcasting and this system has been accepted for use in Europe and Canada already. Some time back the NAB had supported the Eureka-147 system for use in the United States but switched its support to development of IBOC when a particular band of

---

[15] *Radio World* May 13, 1998 issue, page 6.

[16] *Radio World* March 18, 1998 issue, page 17

[17] *Radio World* May 13, 1998 issue, page 6.

frequencies it wanted for Eureka-147 would not be released from government use. I present this information to show that DAB is far from a reality in this country and to put the comments from NAB and USADR in this proceeding into perspective. To hold LPFM in abeyance while DAB is being developed would serve no useful purpose and would only act to delay the benefits of LPFM service to the public. As shown above, neither NAB nor USADR made a convincing argument that LPFM's use of second adjacent channels would cause interference to analog or digital broadcasting. Its argument that LPFM could cause IBOC not to be implemented is an overstatement, as shown above, and should not be accepted by the Commission. Indeed, on page 4 of the USADR comments they state "Any change in the existing interference requirement, broadcasting parameters or protection requirements may render USADR's systems inoperable or require a lengthy and costly redesign effort (emphasis added)". If it required a redesign effort to accommodate the creation of the LPFM service, it would serve the public interest to insist on such a redesign. The information provided by NAB and USADR are not convincing that a redesign would even be necessary in order to implement the LPFM service, with its proposed use of 2nd and 3rd adjacent channels. No one is forcing the companies involved in USADR to spend their money trying to develop IBOC. They are taking a business gamble in hopes of producing a system that is accepted as a standard in this country. If that happens they will recoup their investment, including any needed redesign, and make a huge profit. To hold the creation of LPFM hostage, by refusing to act until a final DAB system is chosen, would not serve the public interest. LPFM can be approved now and still have digital radio for these reasons:

1. USADR and NAB comments did not prove conclusively that LPFM's use of 2nd and 3rd adjacent channels would cause interference to their IBOC system.

Indeed, many of their comments contradict their conclusions as shown above.

2. Other firms working on DAB may prove successful with a system that will not be affected by LPFM's use of 2nd and 3rd adjacent channels. Neither of the other two firms that are developing IBOC, Digital Radio Express and Lucent Digital Radio, filed comments in opposition in this proceeding.

3. A Eureka-147 type system may still be used in place of IBOC and since it would use an entirely different band, the 2nd and 3rd adjacent channel concerns would be moot.

Although digital radio may prove itself in the long run, at this time I am not aware of the public being dissatisfied with the quality of analog FM broadcasting. I doubt that the Commission receives many requests from the public demanding digital radio for FM. While digital can make a noticeable difference in the quality of AM broadcasting, it would not have such a profound effect on FM. Since only Low Power FM and not AM is being proposed in RM-9242, I feel that the digital debate is insufficient to hold up rollout of a LPFM service in America. The advantages of creation of a LPFM service far outweigh the minimal concerns over development of a digital IBOC system, given the many players and different systems under development. I have shown above that the 40 dB threshold of interference from a 2nd adjacent channel, which was the basis of both the NAB and USADR comments, would not result in any interference if a LPFM were co-located with the 2nd adjacent channel full-power station. I have also shown in an example where the LPFM and 2nd adjacent channel full-power FM were several kilometers apart, that interference could occur in only an extremely small area immediately around the LPFM's antenna site. This area is much smaller than the "blanketing area" of the full-power station. Due to the much lower power levels of LPFM as compared to full-power stations, the entire 2nd and 3rd adjacent channel arguments can be disregarded, as shown in detail above. If development of IBOC cannot achieve satisfactory

results, stations can always used the tried and tested Eureka-147 system being used in Canada and Europe already. Where would the spectrum be found to implement Eureka-147 in the United States? Spectrum will be recovered when the nation's analog television stations complete their conversion to digital, which is now scheduled for 2006. At that time, adequate spectrum could be made available for digital radio broadcasting use, giving each analog full-power and LPFM-1 class licensee a channel on which to operate a digital station, until such time as the conversion to digital was completed on the FM band, with adequate receiver penetration. The model for this type of transition has already been implemented in digital television. Upon completion of the transition to digital radio, the analog spectrum could be returned to the government for auction. Under the IBOC plan, there is no revenue being made available to the government. This reason alone might dictate that a Eureka-147 type digital system might better serve the public interest.

8. Several commenters referred to possible interference that could be caused by licensing LPFM stations[18]. In trying to make this argument, they attempt to confuse the issue by citing interference caused by unlicensed "pirate radio" stations operating with sub-standard non-type-accepted equipment. Certainly, licensed LPFM stations, as proposed in RM-9242, would not cause interference since their choice of frequency in their FCC application would have to be supported by an engineering showing of non-interference. In addition, as proposed in RM-9242, no interference would occur since FCC type-accepted equipment would be required, the same as at full-power stations. Thus, this argument is moot.

---

[18] *NAB comments* at 32.

9. Several commenters claim that Commission resources would be strained in attempting to license and regulate the large number of LPFM stations that are expected to be requested[19]. While this is a legitimate concern, it need not be a practical concern in this matter. An application form can be constructed in such a manner as to allow quick processing by the Commission staff, checking mainly the engineering attachment for accuracy. Indeed, the Commission is currently in the process of streamlining its forms to allow faster processing, including revamping many questions that will be answered with a simple yes or no answer. Other areas that in the past required lengthy filings will now be covered by an applicants certification that certain requirements are being met. The Commission then can audit such compliance on a random basis with strict punishment, including license revocation, for those found to have certified falsely. Here is an idea that could make the LPFM service self-policing to a large degree, thereby conserving Commission resources. The Commission could aid in the self-policing of a new LPFM service by creating a position of "official observer", as has been done for many years in the amateur radio service, quite effectively. The "official observer" would have no power or authority other than to send a first notice of any violation detected. Such observers could be volunteer positions and report such things as violation of Commission rules concerning obscenity, advertisement of prohibited items, over-modulation, etc. If a notice from an "official observer" did not result in correction of the problem, then the "official observer" could report the repeated offense to the Commission's CIB bureau. Most station operators would welcome an informal notice of violation and take steps so that it does

[19] *NAB comments* at 33.

not turn into an actionable offense that could lead to imposition of a FCC fine on the station. I had a personal experience of receiving a "pink slip" after first obtaining my amateur radio license in 1959. I had inadvertently drifted outside the edge of the band and received a notice from an "official observer". I have always been careful after that not to transmit outside the edge of the band and I remember at the time being thankful that it did not result in a formal action against my amateur radio license. This is similar to being pulled over for speeding and the policeman just giving you a warning. For the majority of people, this is quite effective. Of course, there will always be the trouble makers that will require enforcement action, but these should be few and far between once a legal LPFM service is available across the nation. The Commission gained valuable experience over the years in handling thousands of low power television applications and has gotten that procedure streamlined and simplified greatly since first implementing the service back in 1982. I could envision the LPTV Branch at the FCC being expanded slightly to encompass processing of LPFM applications. It could be referred to as the LPTV / LPFM branch. Or conversely, a separate LPFM Branch could be implemented within the Mass Media Bureau. Application fees of an amount necessary to pay for the processing of LPFM applications could ensure sufficient resources for the Commission to process LPFM applications, much the same as in all other services now requiring application fees. Additionally, annual regulatory fees would be in order for LPFM to pay for monitoring the service. If Commission resources were to become a problem, I would suggest implementing FCC filing windows for the LPFM-1 class of license first, as described in RM-9242, then follow later with FCC filing windows for the LPFM-2 class stations next. The LPFM-3 temporary permit for event-type stations may need to be processed by an industry

organization, with FCC oversight, since these applications could be quite numerous. If such an industry organization could not be established, it might be necessary to drop consideration of the LPFM-3 class event-stations, for the time being until a processing mechanism could be put in place. Any inability of dealing with LPFM-3 or LPFM-2 class licenses, as proposed, should not keep the Commission from establishing a LPFM service for LPFM-1 class stations. By implementing some of the ideas presented in these comments and others, the Commission can handle the task of processing LPFM applications and regulating the service in much the same way as the other services it regulates. The NAB had commented that the lower cost of constructing and operating a LPFM station might lead to the operator not fearing losing his license since he would not have that much to lose. I should remind those who are among the higher incomes that when what's on the line is all you have, it's a lot regardless of the dollar amount.

10. The NAB attempts to make the point that "wealthy corporations" do not dominate mainstream media[20]. To attempt to back up this point NAB states "In reality, the top five corporate radio groups own only around eight percent (8%) of the radio stations in the nation". This figure is deceiving since it includes even 1,961 non-commercial stations. I question how many non-commercial stations are owned by the top five corporate radio groups? No mention is made of the other large corporate radio groups that although not making it into the top five would surely be in the top twenty, with substantial numbers of stations owned. A comparison of ownership of stations as they relate to population would

[20] *NAB comments* at 25.

show that it's not only the number of stations that the large corporations own but the total population of America covered by these stations. For instance the top-10 markets represent approximately 30% of the nations households while the top-30 markets account for 53% of the nations households[21]. While the top five corporate broadcasters station totals are only 8% of the total of all stations (AM, FM and non-commercial), the percentage of the nation's population that they reach is very high, since many of their stations are in the top-30 markets. Thus the NAB contention that "wealthy corporations" do not dominate mainstream media is is deceiving and unsupportable. Just more of the standard NAB lobbying-doublespeak. One needs only to read any of the broadcasting press over the last two years to see the enormous amount of consolidation that has taken place, with over 4,000 stations trading hands at last count. While the top 30 markets are almost totally consolidated, the consolidation is now reaching down to even the smallest markets, where the large corporate owners are intent on owning the maximum number of stations possible in each market.

11. NAB and some other commenters have stated that there are other outlets available for LPFM broadcasters without resorting to establishing a new service[22]. They suggest possible non-commercial frequencies and even the Internet as ways to reach their communities. While the non-commercial part of the band may still hold some frequencies in some parts of the country, it is apparent that even this segment of the band has no channels available for application in many markets, especially in major markets like here in South

---

[21] *Statistics* taken from Mass Media Bureau, Policy and Rules Division FCC website item titled *"Digital Television Tower Siting Fact Sheet"*.

[22] *NAB comments* at 30.

Florida (Miami-Ft. Lauderdale). Myself and many others who wish to construct a LPFM station plan to offer advertising to support the stations and of course this would not be possible in the non-commercial portion of the FM band. Thus, their suggestion of using non-commercial channels is not workable. Although the Internet has proven useful for many purposes, it has not proven itself as a broadcast medium. The relatively small percentage of the population that has access to the Internet[23] and the fact that it becomes extremely expensive to attempt to have multiple streams available for more than a handful of listeners at any one time, make this suggestion also unworkable.

12. Some commenters argue that a LPFM service cannot be created because the FM band is too congested and there is no room left for new stations. The NAB even tries to make irrelevant comparisons to the number of stations per channel in the FM band as compared to the UHF and VHF TV bands[24]. Is the FM band full? In most major markets, using the strict mileage separation requirements in Section 73.207 of the rules, the FM band can hold no more full-power stations. However, by deleting the unnecessary 2nd and 3rd adjacent channel restrictions, as shown in detail in RM-9242, several channels can be found, even in most major markets, that could be used by a LPFM station without causing interference. NAB's argument to apply the use of full-power FM 2nd and 3rd adjacent channel restrictions[25] to LPFM stations is unsupported by any evidence that interference would exist. The Commission has determined that the 2nd and 3rd adjacent channel restrictions could be

---

[23] Fewer than 30% of the population has Internet access at this time.

[24] *NAB comments* at 13.

[25] Section 73.207 of the FCC rules.