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<DESCRIPTION> comments re: NPRM for LPFM service(s)

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<TEXT> My comment petition will include quotations from the NPRM using the quote-back protocol of each quoted line being marked with double brackets at each end of the quotation, as in: >>This is a quotation.<<

from NPRM I.

>>We also seek comment on whether to establish a third, "microradio" class of low power radio service that would operate in the range of 1 to 10 watts on a secondary basis.

As a general matter, we seek comment on whether any new services established should be operated strictly on a noncommercial basis.<<

My concern is that the owners and operators of any new low-power broadcast services should not include owners and primary operators of broadcast entities in existing broadcast services. By "primary operators", I wish to see excluded those in decision-making capacities in existing broadcast services, not, for example, secretaries, maintenance personnel, or other similarly-situated employees. The intent of this hope/request is to maximize the entry of new "voices" to the airwaves.

If the only practical means of achieving this end is restriction to noncommercial operation, perhaps that is required. I would prefer other means to meet the stated goals be found, and that both commercial and non-commercial LPFM services be made available, as detailed elsewhere in the NPRM.

from NPRM II. B.

>>The National Association of Broadcasters ("NAB"), National Public Radio, Inc. ("NPR"), other radio broadcaster organizations, and a number of individual licensees oppose the petitions, claiming that existing radio stations are already serving the myriad needs and interests of their communities and must do so in order to remain competitive, thus making low

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power radio unnecessary.<<

Existing commercial radio stations program primarily upon the basis of what they feel will attract income from advertisers, and seem very much more heavily influenced by advertisers than by listeners. It is my opinion that advertisers, commercial broadcasters, and some of the larger non-commercial broadcast entities have little sense of, and nearly no concrete means of determining, "the myriad needs and interests of their communities". My opinion is based upon:

1) My personal experience in non-commercial "college" radio from 1980 to 1995. Despite procedures to ascertain the needs of the community, we had little idea of what listeners in our community wanted, other than a handful of letters, undocumented phone calls, and the interests of the volunteer staff. The latter factor determined the nature of most actual programming, and, to the degree which the volunteer staff's interests were aligned with the community's interests, successfully served our listening community.
2) Many (undocumented) conversations over the years with volunteers, listeners, and visitors to the radio station; customers at the stereo repair shop (where i worked from 1982-1994); and friends and relatives.

>>According to some of these opponents, the Commission's diversity concerns are more appropriately addressed through the ownership rules than by creating a new service.<<

It is not clear to me that there is a solid correlation between ownership and programming. No doubt there often is such a connection, however it seems far from assured.

>>Several opponents of the petitions also take issue with the supporters who decry the effects of consolidation, contending that group ownership can foster important services to listeners because it allows for more efficient operations.<<

Have they enumerated these "important services"? As a radio listener since the early 1960s, this argument is unpersuasive to me.

from NPRM III. A.

>>Thus, it appears that low power radio offers opportunities to potential broadcasters and listeners for which there are currently no comparable alternatives. Commenters are invited to address these issues.<<

I concur with the findings quoted above, and as enumerated in detail in the remainder of the paragraph from which the quotation is excerpted. I can neither elaborate nor improve upon the wording/content of that paragraph.

from NPRM III. B.

>>In considering new classes of FM radio service, we are inclined, at a minimum, to continue the noncommercial educational channel reservation with respect to any new stations that would have a preclusive effect on the operation of full power stations in the reserved band, such as the primary low power stations discussed below. We seek comment on this determination. Commenters should address any statutory limitation on our discretion in this regard.<<

I am unable to address statutory limitations. I concur with the Commission's inclination, as quoted above.

>>We also seek comment on whether we must as a matter of law or should as a matter of policy extend a parallel reservation to any secondary low power or microradio stations that we might authorize on channels 201-220. Commenters should also address whether all low power (and microradio) services should be limited to noncommercial operation, and whether eligibility should correspondingly be restricted to those who would qualify

as noncommercial licensees under our current rules. We also ask whether there are potential applicants for the proposed secondary low power and microradio services being considered that could meet the strict eligibility criteria that pertain to the existing noncommercial educational broadcasters.<<

As stated above in this comment, i feel the public's interest will be best served by having a commercial/noncommercial limitation system which parallels the existing system for full-power facilities. Therefore i do not agree with those who feel all low power and/or microradio services should be operated in a strictly non-commercial fashion.

>>We seek comment on whether all LPFM stations, whether primary or secondary stations, should be permitted to seek authority to use radio broadcast auxiliary frequencies.<<

Whether primary or secondary status, i feel *all* newly-authorized broadcast stations must fully cooperate with local frequency-coordination committees, as full-service broadcasters are expected to do. If the Commission or other commenters foresee an enforcement issue, especially with secondary-class stations, i suggest those services not be permitted to use the broadcast auxiliary spectrum unless and until a means is found to ensure non-interference for all users which is at least as effective as the current system for full-power broadcasters.

from NPRM III. C. 1.

>>We seek comment on whether this service should be restricted to noncommercial applicants, open to commercial service, or both.<<

Both, in view of its use as a platform for the entry of future full-power broadcasters, with division as per existing rules for full-power service.

>>We seek comment on the above parameters and assumptions, as well as on any reasonable alternatives.<<

I concur with the findings as stated, with nothing to add. They seem well-reasoned, and appear to serve the intent of the rulemaking.

>>We invite comment on our proposals to create an LP1000 class and afford it primary frequency use status.<<

If such a class is created, it appears appropriate for it to have primary status, and more closely follow existing rules and requirements for existing full-power station classes.

>>We also seek comment on whether to prohibit the establishment of any translator or booster stations for use in conjunction with LP1000 stations, given our desire to maximize ownership and service opportunities for locally owned LPFM stations.<<

I suggest such a prohibition be adopted. A need for a translator or booster station and the means to establish same indicate to me a broadcast entity ready to graduate to full-power, full-service broadcasting, in one of the existing services.

from NPRM III. C. 2.

>>Should this service be restricted to noncommercial applicants, open to commercial service, or both? Should there be a different lower power limit for this service, such as 30 watts?<<

As for the LP1000 proposal, i feel both noncommercial and commercial service should be allowed, with spectrum segregation as in the existing

rules for full-power service.

Other commenters with more R.F. experience will need to comment on the exact recommended lower power limit. I wish to see little or no gap in the possible contour coverage between the lowest-ERP LP100 station authorization and the highest-ERP micropower station (if authorized). This would allow prospective broadcasters more options to tailor their contours to most fully serve their targeted audience(s) without unnecessarily consuming unneeded spectrum.

>>We seek comment on our proposal that LP100 stations be afforded a lower spectrum use priority than LP1000 stations.<<

While at first glance this appears to be reasonable, i am concerned that, assuming the example numbers in the appendix are truly representative, giving priority to LP 1000 stations over LP 100 stations will severely limit the number of possible new stations, and thereby directly contradict one of the key purposes promulgated in this NPRM (section I and section III. A. paragraphs 1 and 2), namely the maximization of "new voices and program services to serve the public".

I suggest a(n unspecified) mechanism to maximize the number of newly-available channels, in concert with the proposed limitations on interference, as described in the NPRM, in hopes of maximizing service.

>>To promote localism, should we prohibit translator or booster rebroadcasts of the programming of LP100 stations?<<

Yes. Entities needing such coverage should more appropriately seek a station in a higher-coverage service (LP 1000, Class A, or beyond).

from NPRM III. C. 3.

>>We seek comment on the creation of a third class of LPFM service, which would be intended to allow an individual or group of people with very limited means to construct a broadcast facility and permit them to reach listeners within the confines of a very localized setting.<<

Yes!! There is a substantial need for such a service, as demonstrated by the number of entities who have felt so strongly about this as to risk their future options by setting up similar enterprises outside current law, as well as the many signs of interest the Commission has already received.

>>We seek comment on whether such facilities could satisfy some of the demand that has been expressed for very inexpensive community radio services, particularly in places where LP100 stations could not be located due to interference concerns or financial constraints.<<

In my opinion, based upon those with whom i have conversed over the years,
yes.

>>We seek comment on whether such a class of service should be restricted to noncommercial applicants, open to commercial service, or both.<<

I continue to suggest allowing both options, and maintaining the same spectrum segregation as for full-power broadcasters. This is the spectral division the public has come to expect over the years since the inception of FM broadcast service.

>>If we adopt a microradio service, we believe there should be an FCC transmitter certification requirement. We are vitally concerned that such stations meet transmitter out-of-channel emission limits and other standards related to interference protection of stations on adjacent channels. We note that uncertified equipment has on numerous occasions caused dangerous interference to aviation frequencies. We do not believe that a certification requirement would overly burden small operators, given

the recent streamlining of our certification procedures. We seek comments on this proposal, including not only burdens of compliance, but specific harms that could result from not requiring transmitter certification.<<

Though i am unfamiliar with the details of the certification procedure, i feel there is no question that the Commission's views (as stated above) on these points are well-placed and compelling. If it is found that compliance is too burdensome in practice once implemented, i hope the Commission will rapidly remediate the situation. As noted, the harm from interference resulting from poorly-designed or poorly-operating equipment is nontrivial, and easily has the capacity to harm the public interest far more than the broadcaster's content benefits the public interest.

from NPRM III. D.

>>Possible approaches might include ... even more elaborate methods involving a terrain-dependent propagation model, such as the point-to-point model proposed in our radio technical streamlining proceeding.<<

I am unfamiliar with the contents of that proceeding. Still, it would be highly desirable to somehow incorporate terrain considerations into spacing decisionmaking, since so much of the U.S. is nowhere near flat. As i look out my window, i see several thousand feet of mountain range, no more than a mile and a half away. It would be unfortunate for someone in my area to lose an opportunity to operate a LPFM station merely because there was (hypothetically) already another LPFM station in operation on the other side of the mountain range, with neither station possibly able to interfere with the other.

>>Depending on our initial experience in authorization of LPFM service, should we later consider a more sophisticated and spectrally efficient approach?<<

Given the limited number of possible allocations, would there be any benefit? In other words, it may often be the case that, had a spectrally efficient approach been used from the beginning, two or three assignments might be possible in a given area. A simpler, less-efficient allocation scheme may have already assigned a single station in the center of this hypothetical geographic area. This would preclude any further assignments unless that existing station were to relocate, switch to a DA, go off the air, or take some other action.

If there is any possibility of incorporating terrain data (even coarse data) from the beginning without excessively burdening either the Commission or prospective applicants, it would be worth the effort in increased channel availability.

>>We seek comment and analysis on our tentative conclusion not to include 3rd-adjacent channel protection requirements for any LPFM service.<<

While i lack hard data to back up my conclusions, i hope the following anecdotal information will be of use. In over 34 years as a radio listener (on all types and vintages of receivers), i have never, to my knowledge, experienced a 3rd.-adjacent interference problem. More to the point, in 13 years of home audio equipment repair, no customer of anyone at any shop where i worked encountered a 3rd.-adjacent interference problem (almost all interference problems were multipath-related, with a handful of front-end overload problems). Without solid documented evidence to the contrary from other commenters, in my opinion it would be safe to not include 3rd-adjacent channel protection requirements for any LPFM service.

>>We ask commenters to assess the level of risk of increased interference to stations in existing FM services that would result from permitting LPFM stations to locate without regard to 2nd-adjacent channel spacing for this service and to weigh any costs against the additional service to the public that could result. Commenters should consider the likelihood and potential

extent of any harmful effects on current stations and listeners, taking into account the size and location of the areas possibly affected and the interference immunity of the existing receiver population. We also seek comment on the state of receiver technology and the ability of receivers to operate satisfactorily in the absence of 2nd-adjacent channel protection.<<

(footnote 65)>>We seek comment on the original rationale for 2nd- and 3rd-adjacent channel protections and the extent to which circumstances have changed in such a way to support relaxation of these protections.<<

The original rationale almost certainly had to do with the IF bandwidth characteristics of early FM receivers. Until the mid-1970s, all commonly-available "consumer" FM receivers used tuned IF transformers as the devices establishing the selectivity of the IF section, and hence the particular tuner's bandwidth characteristic. There were several considerations:

- 1) The passband of these devices was further from ideal than what replaced them,
- 2) The transformers were difficult to align (especially in the field), primarily due to test equipment limitations of the time,
- 3) The transformers were subject to "drift" (gradual misalignment) to a much greater extent than ceramic filters, the drift exacerbated by heat, commonly in plentiful supply from the vacuum tubes used at the time.

For all these reasons, the actual IF passband of a common receiver in someone's home was likely to be wider - often *much* wider - than the prototype model, or even the same unit when it rolled off the assembly line.

Starting in the mid-1970s, ceramic IF filters and similar devices became widely used. They offered the following advantages:

- 1) Fixed alignment (no post-manufacture adjustment possible) in most cases,
- 2) Less drift,
- 3) Sharper "skirts" on the passband (more closely matching the theoretically ideal passband),
- 4) Lower cost (always a winner :-)).

By the latter '70s, it was rare to find a tuner section equipped with IF transformers. By the early 1980s, IF transformers were unheard of in new equipment.

The main consideration for possible preservation of 2nd./3rd. adjacency protection is users of pre-mid-1970s receiving equipment. There is still a fair amount of such equipment in use (mainly by aficionados and collectors, who may be more likely than most to notice interference), though the numbers continue to decline each year (this is based primarily upon what came in for service at the repair shop where i worked, and can be substantiated if absolutely necessary. It is also based upon friends' and acquaintances' collections).

from NPRM III. E.

>>We are also proposing to require FCC certification of transmitters used at all LPFM stations, which we believe would be necessary to ensure compliance with out-of-channel emission >requirements....<<

Please do so. Please allow individual stations (especially micropower) the ability to make their own homemade transmitter, and be able to receive FCC certification for it.

>>We also ask whether a modulation monitor should be required or, alternatively, whether transmitters should be certified with built-in modulation limits.<<

If you read nothing else in my comment, please read and note this. I am strongly of the opinion that any form of modulation monitor is insufficient, and that transmitters *must* be certified with built-in modulation limits, for any possible input signal (including heavy audio

"processing"). Though off-topic for this NPRM, i further propose the same built-in limiting be required in the future for full-power broadcasters. For both cases, here's why:

In my 15 years of volunteering in non-commercial FM broadcasting, i found too many incorrigible operators who would not (or could not) maintain acceptable modulation levels. While i have encountered such individuals at many stations, i shall focus on the one where i worked. Besides being a Staff Engineer, i was also Production Director, "DJ trainer", and an operator ("programmer"/"DJ") myself.

As a DJ trainer and Production Director, i often trained numerous individuals on station operations, most definitely including a lengthy, non-technical explanation of frequency modulation, and the practical (and legal) problems of over- or severe under-modulation, and how each one of them, when the operator on duty, was fully in control of, and responsible for, this parameter. To put it bluntly, some took it seriously and exercised due care, and others could not be bothered and did as they pleased. All too often, upon entering the air studio, i would see the console VU meters fully pegged! If it had not been for the precise alignment of our signal chain by our talented Chief Engineer which effectively prevented overmodulation no matter how high the amplitude of the incoming audio, the Commission would be well-acquainted with the station by this point, if indeed it were not removed from the air. I should mention (in fairness to the station's programmers) that for a number of years in the 1980s, the modulation monitor continually displayed false peaks, and most operators of that era learned to ignore it, as it provided no useable information. This situation was rectified by the early 1990s, still it is another reason i feel any sort of external modulation monitor is insufficient to ensure spectrum compliance.

Furthermore, as a listener i have experienced egregious overmodulation on

several occasions, once from an unlicensed broadcaster, the rest from full-power licensed stations. Two repeat offenders include KCRH, Hayward (channel 210) circa 1997 (afternoon drive-time only), and Free Radio Berkeley. A couple of operators at FRB (several years ago) were broadcasting under the influence (probably alcohol, judging from their banter), and went well beyond 100% modulation (easily audible; no measuring equipment required) for a good 10-20 minutes (before i tuned out from boredom). The combination of sloppy operations at KCRH and my abysmal Blaupunkt CR-3001 car radio's excessively broad IF passband precluded my reception of either KFJC, Los Altos Hills (channel 209) or KZSU, Stanford (channel 211) due to severe 2nd. adjacent interference from overmodulation.

For these reasons, and because LPFM operators are more likely to be inexperienced than full-power operators, i strongly urge the Commission to require modulation limiting. Whether the limiting is incorporated into the transmitter box proper or into a separate unit to me is immaterial, as long as the transmitter cannot be operated without limiting, the goal is met.

>>We seek comment on the effectiveness of reduced bandwidth as an alternative means of interference protection, particularly with regard to 2nd-adjacent channels. What bandwidth reduction would best serve this purpose? What emission mask for a reduced channel bandwidth would be appropriate to further restrict emissions on adjacent channels?<<

I suggest the Commission not reduce the bandwidth of LPFM stations below that for full-power stations, and focus on the emission mask and other techniques to minimize interference. The reason has to do with the listener experience, signal-to-noise ratios, and volume levels.

First, by definition, LPFM stations will have a tougher time of maintaining an adequate signal-to-noise ratio over their coverage area. Any reduction in bandwidth is a reduction in the upper modulation limit, which is a direct reduction in the s/n ratio.

Second, though we in the industry realize that the listener is ultimately in charge of the volume of the program material emanating from their

receiver, many listeners do not pay much attention to such considerations. They may consider a modulation-limited station playing at a lower volume than surrounding stations to be "weak", or be having technical difficulties. In the most extreme case, they may not find the station at all, if its current program at that moment is soft, and the surrounding full-power stations are loud. Presumably, even with identical modulation limits as full-power stations, most LPFM stations might be expected to be using less (or no) audio "processing", and will already be suffering a loudness penalty. Decreasing the possible modulation limit only exacerbates this discrepancy.

>>Commenters should address the specific stereophonic sound transmission standards which would be appropriate for a reduced channel bandwidth, including pilot tone, L/R subcarrier, highest modulating frequency, and maximum signal deviation.<<

Do considerations such as this not indicate that any different modulation standard than that in place for full-power stations opens broadcast equipment manufacturers, and most especially the Commission, to a greatly increased workload? Would there be any alternative to the Commission basically rewriting Part 73 for the proposed new LPFM modulation limit? Considerations such as these more firmly convince me that the liabilities far outweigh the benefits of setting a different modulation/bandwidth standard for LPFM stations.

from NPRM III. F.

>>We see the increased opportunity for entry, enhanced diversity, and new program services as the principal benefits of a new low power service. These goals may be hard, if not impossible, to achieve if LPFM stations are made available to existing broadcasters, or if a number of the new LPFM facilities in an area are under common control. Accordingly, we tentatively conclude that strict local and cross-ownership restrictions would be appropriate for the low power radio service.<<

Agreed.

>>We seek comment on whether the proposed cross-ownership restriction will unnecessarily prevent individuals and entities with valuable broadcast experience from contributing to the success of the service,<<

Not likely, in my opinion. There are numerous individuals "with valuable broadcast experience" who are currently not in the field.

>>or whether it is necessary to keep the service from being compromised or subsumed by existing stakeholders.<<

Absolutely yes, since some of them fear competition, and will likely go to great lengths to minimize it.

>>Commenters should also address the alternative of permitting individuals and entities with attributable involvement in broadcasting to establish LPFM (or microradio) stations in communities where they do not have an attributable interest in a broadcast station.<<

I am unclear on the definition of "attributable involvement". This could be difficult. My sense of fairness says that some individuals/entities would be new voices, others would not. For example, it would not bother me if the receptionist or Chief Engineer of an existing broadcast station set up and ran a LPFM station, since they presumably do not influence the content of their station's programming to any significant degree. I would object to the Program Director doing the same, however, since s/he does materially influence programming, and already has a "voice".

>>We also seek comment on whether the cross-ownership restriction should be extended to prevent common ownership of LPFM or microradio stations with newspapers, cable systems, or other mass media.<<

Again, these entities already have viable "voices", and since it appears that one of the primary goals of this NPRM is the entrance of new "voices" and points of view to the community, allowing cross-ownership as described could seriously restrict and limit new entrants.

>>As with full power stations, we expect that economies of scale would allow licensees to improve their service to the listening public. We expect that the nature of the service LP100 and microradio facilities provide would attract primarily local or nearby residents. Operating a group of LP1000 stations may provide a licensee with essential broadcasting experience to assist potential new entrants in their attempts to acquire and operate full power stations. However, because competition and diversity have a greater impact on viewers on a local level than on a national scale, we tentatively believe that these national efficiencies would likely outweigh the competition and diversity costs to viewers.<<

I vehemently disagree with nearly everything in this (quoted) paragraph, and related observations regarding the merits of economies of scale vs. "localism". Group station operation is yet another indication to this commenter than a broadcaster has "graduated" from LPFM to full-power service. I am unpersuaded by economies of scale arguments. My understanding of the point of this NPRM is to maximize the number of "new voices" to local communities all across the land. National ownership (or even multiple ownership) *minimizes* new voices, diversity of opinions, and true community responsiveness.

Equipment is relatively easy to come by, individuals and groups who wish to broadcast to their communities are *extremely* easy to come by, available channels are nearly impossible to come by (in broadcast FM).

>>With regard to all three classes of service considered, it may be that particular issues and needs that they might address recur throughout the country and can be effectively addressed, perhaps more effectively in some instances, by an operator with multiple facilities.<<

I disagree. Los Angeles, California and Biddeford, Maine (for example) do not share many local issues. Those they *do* share are already well-served by existing national full-power broadcasters. Please leave these rare instances to the already well-consolidated national broadcast entities, who have taken economies of scale about as far as it is possible to go.

>>Consistent with the proposals of a number of parties, we seek comment on whether a limit of five or ten stations nationally would provide a reasonable opportunity to attain efficiencies of operation while preserving the availability of these stations to a wide range of new applicants.<<

As noted above, I believe the limit should be one.

>>Although urged on us by many commenters, we do not propose to establish a local residency or an "integration" requirement for any LPFM stations. Regarding LP1000 stations, we have long recognized that full power stations require neither local residency nor integration between ownership and management to assess and address local needs and interests.<<

I believe the Commission is mistaken in regards to the effects of non-local residency of ownership and management. (I take no issue with "integration").

>>Such a restriction would also frustrate any attempt at achieving certain efficiencies from national multiple ownership long recognized as beneficial

for full-power stations.<<

Good! Because the whole idea of the proposed new services, as i understand them, are to enable new **local** voices **of the community** to broadcast.

>>Additionally, because the service areas for LP1000 stations will be relatively small, a potential new entrant may hold residency in a location where no LP1000 channels can be found, so that we might frustrate one of the significant potentials of LP1000 stations with such a requirement.<<

What is the problem here? Has the Commission found a shortage of prospective new entrants? This is not what i read in the introduction. My point: there will be some other entity *within* the coverage area, wishing to broadcast, so no frustration from that end. In terms of the entity residing where no channels are available, so what? Specifically, the Commission already knows demand will well outstrip available supply of new allocations, therefore many potential new entrants will be frustrated in their endeavors to legally broadcast in any event. I would rather someone outside the range of the allocation be frustrated, rather than someone *inside* the range, shut out by an "outsider".

>>The same rationale can be applied to LP100 and microradio stations. Moreover, as noted above, we expect the nature of the service provided by the two smaller class of stations would attract primarily local or nearby residents in any event. Given these suppositions, we do not believe that any benefits that might accrue from such restrictions would be sufficient to warrant the proof and enforcement efforts that they would entail. We seek public comment on these assumptions and the resulting proposal.<<

My opinions as stated above apply equally well to LP100 and microradio services. Proof and enforcement are the only significant reasons to waive such restrictions, and i am unconvinced that there is not a pragmatic, affordable means to prove and enforce residency.

>>As a result, given the court's holdings in the Bechtel cases, we believe that we would require a particularly compelling record indicating that listeners would be less well served by stations not managed by their owners before we could adopt an integration requirement that could withstand judicial scrutiny. We ask for comment on this analysis.<<

I concur with the Commission's analysis.

from NPRM III. G.

>>Accordingly, we are inclined to give low power (and microradio) licensees the same discretion as full-power licensees to determine what mix of local and nonlocal programming will best serve the community. However, in order to promote new broadcast voices, we propose that an LPFM station not be permitted to operate as a translator, retransmitting the programming of a full-power station. We seek comment on these positions.<<

Full agreement from this commenter.

>>Public Interest Programming Requirements.<<

Again, full agreement with the Commission's position, as stated, with no further comment.

>>We would be disinclined to apply these service rules to microradio stations, and we particularly seek comment with regard to the rules appropriate for LP100 stations. Commenters are invited to discuss which existing rules should apply or what new or modified rules would be more appropriate.<<

Too many possibilities for this commenter to meaningfully cover most cases. I only wish to state that i suggest the Commission consider having

all classes of LPFM/microradio stations maintain a public file. Whether or not the file(s) should follow the letter of the current Rules i leave to other commenters. It does not strike me as unnecessarily burdensome to maintain such a file, and it certainly seems to make it easier for the public and the Commission to verify the broadcaster's serving the public interest, convenience, and necessity.

>>Operating Hours.

Commenters are urged to address the efficacy of our proposals and their practicality for both licensees and the Commission's licensing and enforcement functions.<<

Once again, full agreement with the Commission's position, as stated, with no further comment.

>>Also, we seek comment on the Community Radio Coalition's proposal to prohibit the transfer of low power radio construction permits in light of the ownership and construction terms proposed.<<

This commenter agrees with the CRC proposal, as outlined in the NPRM.

>>...we are open to comment on whether stations in other classes should be authorized for finite non-renewable periods, such as five or eight years, so that others may eventually take their turns at the microphone. (An existing operator could, of course, reapply for a station where there is not another (new) applicant.) Making broadcast outlets available to more speakers is a fundamental premise of this rule making effort, and we do not expect that such a limitation would discourage the very modest investment required to build such a station, particularly if the assets would be readily transferable. We seek comment on whether the disruption of service to the public outweighs the potential benefits of making this service available to more speakers on a consecutive basis. Our decision may be influenced by the number of low power stations we expect to be able to authorize under the rules we ultimately adopt. We seek comment on these proposals and on their underlying premises.<<

The basic concept of finite non-renewable periods of license, with the possibility of reapplication when there are no other new applicants seeking the particular allocation, seems desirable (for reasons as stated). From my experience of 15 years at a non-commercial Class A station, tracking the trends of the station's ability to serve its community, i feel 5 years would be too short a duration in most cases, and would be more disruptive than beneficial. 8 years may be about right. 10 years might be better. Nearly all programming content-providers at the station where i worked were ready for a different challenge or a break after about 10 years.

>>Commenters are invited to address this issue, including whether restrictions on sales would be advisable if the Commission adopts ownership rules other than as proposed above.<<

The fewer the ownership restrictions, the greater the burden (especially on the Commission) to regulate sales transactions.

>>We also request commenters to address how LP100 stations, with their intermediate size and audience reach, should fit into the EAS structure.<<

My opinion: if LP100 stations are secondary status, no EAS requirement. If primary status, same EAS rules as full-power stations. Encouraging voluntary participation at some level (if only monitoring a local primary EAS station, and issuing an informal suggestion that listeners may wish to tune elsewhere for emergency information) might be worthwhile for both microradio and LP100 stations.

In an ideal world, *all* stations should fully participate in the EAS

system, since it is very possible that many listeners may choose to listen singly to a microradio or LP100 station for extended periods of time, and might be deprived of useful emergency information thereby. Unfortunately, EAS equipment would absolutely be too burdensome (last time i checked prices) for microradio stations, and definitely on the borderline for LP100 stations.

>>Commenters should explain whether the local population benefits by having an LPFM station's status identified through its call sign.<<

I believe it does. Hopefully, this analogy will substantiate my belief:

We watch television channel 68, KNLA-LP, Los Angeles. If i did not see occasional references to KNLA being a low-power station, as a repair technician i would wonder 1) why reception sometimes has so much noise at our house, and 2) why my parents cannot receive KNLA *at all*, despite easily receiving all other Los Angeles stations over-the-air with no problems. I might easily conclude that there was a malfunction with either my or my parents' television tuner(s).

In the case of LPFM, travelers who encounter programming of compelling interest, and who hear a LP ID, will realize that they may need to pull off the road to stay in range of the station to hear the remainder of the program.

Further, if any of the proposed classes of stations are excused from EAS service, the public may benefit from easily determining that this is the case. Therefore, it might possibly be appropriate for LP1000 stations not to identify themselves as low-power (especially since some Class A stations will have very similar ERPs), and for LP100 and/or microradio stations to identify themselves as low-power, especially if excused from EAS service.

>>We seek comment on both the utility and propriety of a mandatory electronic filing system for LPFM and microradio, taking these factors into consideration, as well as the effect of such a system in promptly determining, and perhaps avoiding, mutual exclusivity of applications, as further discussed below.<<

Excellent idea. My only concern (for which i shall have a better understanding once i succeed or fail in submitting this Comment) is that the electronic filing system be available to all, regardless of their computer platform (Unix, Sun, Mac OS, Windows, etc.). The Commission's system must therefore be robust in terms of various email platform quirks (CR, CR/LF, LF, etc.) not covered by RFC822 and the like. The website should not require Java, Javascript, or other similar scripting languages which may be proprietary. Many users cannot afford newer computer hardware (this based on my experiences as a BMUG volunteer), and are restricted to using older, HTML 2.0-compliant browsers. Ideally, the website should somehow support these users (perhaps it already does and will continue to do so - this commenter has had no time to check).

Appendix D, footnote 132

>>This protection criterion differs somewhat from the criteria proposed in this Notice. Specifically, the Notice proposes a secondary status for LP100 stations, which means that they would not be protected against interference received. Thus, our analysis, which assumes full protection against interference received by the low power station, may significantly underestimate the number of low power stations that could be assigned if they were permitted to receive interference.<<

Comments on JOINT STATEMENT OF CHAIRMAN WILLIAM E. KENNARD AND COMMISSIONER GLORIA TRISTANI

>>However, we cannot deny opportunities to those who want to use the airwaves to speak to their communities simply because it might be inconvenient for those who already have these opportunities.<<

Exactly. I hope everyone involved takes this, and the subsequent final.

paragraphs, of Chairman Kennard and Commissioner Tristani's joint statement to heart!

Comments on DISSENTING STATEMENT OF COMMISSIONER HAROLD W. FURCHTGOTT-ROTH
>>In order to create any substantial amount of new service, protection standards have to be loosened so far as to eliminate third and even second adjacent channel safeguards. This is a severe incursion on the rights of current licenseholders, as well as on the value of their licenses, which will be drastically undercut in the market if these proposals are adopted.<<

Where is the evidence to support this conclusion, other than "we've always done it this way, and it has always worked", which does not take into account that the present interference protection standards may be unnecessarily restrictive for receivers made since about 1975? And why should I, as an American citizen, be upset if the value of a commercial license drops from hundreds of millions of dollars to mere tens of millions of dollars?? Do the chosen few incumbent broadcasters have a God-given right to a monopoly on the golden goose of usable broadcast spectrum?

>>For instance, in New York city, there would be no LP1000 stations and no LP100 stations, and in Los Angeles there will be only one LP1000 station, no LP100 stations with translator protections and six LP100 stations with unprotected translators. See Appendix D.<<

My reading of Appendix D includes the following:
Appendix D, footnote 132

>>This protection criterion differs somewhat from the criteria proposed in this Notice. Specifically, the Notice proposes a secondary status for LP100 stations, which means that they would not be protected against interference received. Thus, our analysis, which assumes full protection against interference received by the low power station, may significantly underestimate the number of low power stations that could be assigned if they were permitted to receive interference.<<

In other words, the number of stations in Appendix D was calculated as though the Commission would authorize full 2nd. and 3rd. adjacent and so forth protection for all stations, as is currently the case for existing FM broadcast services. In other words, the situation Commissioner Furchtgott-Roth claims he would accept without as intense scrutiny. Looked at another way, the Commissioner is mixing apples and oranges. Yes, with full protection, few allotments. With realistic, relaxed protection, possibly *many* allotments.

>>In addition to their small number, these services will be relatively unavailable to mobile audiences due to their low wattage.<<

Not necessarily. Keep in mind that when KALX was still a Class D 10W station in 1980, it covered several Bay Area **counties** (Alameda, west Contra Costa, Marin, San Francisco, possibly upper San Mateo. An antenna location approx. 238m HAAT contributed greatly). While micropower stations under this proposal would not cover that range (due to the 30m HAAT limit), they still could easily be viable in mobile settings in their target local community. Free Radio Berkeley certainly was (is?) viable for a couple of miles, even with my abysmal Blaupunkt CR-3001 car radio, using parameters closer to what the Commission is considering.

>>And, on a practical level, these ownership limits would help to ensure that no one with any actual experience in broadcasting could actively participate in these new stations. By dint of regulation, then, these stations may be pushed toward second-class performance and quality levels.<<

I object strongly to this characterization! I worked for *15 years* at

KALX, and was paid for slightly over *6 months* of that time. I did so because i got something out of it, and **i believed in the programming of the station**, and its service to an otherwise un/underserved listening audience. If the programming at FRB had been far more compelling and vital than it was, i might well have risked my license to help them out. I am by no means unique in these orientations. Read broadcast trade publications, and you will find that there is no shortage of broadcast engineers, station operators, program directors, and the like in the United States who are unemployed/uninvolved presently in broadcasting.

Actually, i have a *lot* more experience running a legal radio station on a shoestring than an employee of a megalopolis giant consolidated commercial station group! Again, i am far from unique in this qualification.

Actually, this proposal may create enough *first-class* LPFM stations that full-power stations may be forced to get their act together and improve their programming and emissions!

>>And, of course, Commission enforcement of rules and regulations applicable to the new stations will be an administrative drain and involve the Commission in micromangement of the smallest of operations.<<

Thanks to the careful considerations of others at the Commission, this appears as though it will not be the case. Did Commissioner Furchtgott-Roth read in detail the sections related to fewer rules for secondary-status LP100 and microradio stations? How about the mandatory electronic application filing? I ask the Commissioner to substantiate his opinion with data.

>>Specifically, I wonder whether the "substantial interest in, and public support for," supra at para. 1, this rulemaking, relied upon so heavily in this item, was not partly generated by the Commission itself with its web site page for low power radio.<<

This would not explain the *substantial* traffic on Usenet Newsgroups discussing micropower radio. A keyword power search on "micropower" in DejaNews just turned up 3828 entries (Jun 1 1995 to Aug 1 1998 date range). Some of these 3828 are not involved with radio, though out of the first 25 returned, only 2 are off-topic, with the remaining 23 involving micropower radio (some crossposts). This was a quick, spur-of-the-moment search; i suggest a more careful search would turn up similar numbers (probably much higher). I arbitrarily picked the 1 August 1998 date, as i do not know when the FCC web page was originally posted.

>>The provision of information about our activities is an important and laudable goal. In meeting this goal, however, we must be careful not to slant our presentation toward one point of view, lest the Commission become an advocate instead of a neutral decisionmaker. Of all agencies, the FCC should not be attempting to shape and color public opinion on matters before us by the dissemination of unbalanced information. I believe that, if we are to enjoy the appearance of fairness in the rulemaking process, we should not use government funds to promote a particular result prior to even the issuance of an NPRM.<<

I am in full agreement with this section - *very* important. I did not see the version of the website cited (attachment not available), and therefore cannot comment on it.

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Commenter's background, biases, and disclaimers

BACKGROUND

My name is Nicholas W. Kratz. I am 40 years old, and a U.S. citizen. I graduated from UC Berkeley in 1981 with a B.S. in Electrical Engineering (analog emphasis). I am a member of the Society of Broadcast Engineers, and a Certified Broadcast Radio Engineer. I am proud to hold an FCC General Radiotelephone Operator License (PG-12-18215, formerly a First-Class Radiotelephone license).

I have a long-standing interest in electronics, radio, and music. From February 1980 until September 1995, i worked at KALX (FM), Berkeley (channel 214) (nearly all of the time as an unpaid volunteer). My positions over the years included Staff Engineer (mostly studio/audio work), Production Director, DJ trainer, producer, several internal management-related positions, and programmer (a.k.a. operator/disc jockey).

My "day job" during that period (specifically, from December 1981 until January 1995) was as a home audio ("stereo") equipment repair technician. I aligned and tested a tremendous number of tuners and receivers during that period (both AM and FM, mostly FM).

Since the end of 1995, i have been more interested and involved in personal computing (on the Mac OS platform) and the explosive growth and possibilities of the Internet, and have had little to no involvement with radio-based broadcasting.

BIASES

I love music, especially music not often (if ever) heard on commercial radio stations (even today). While i support commercial radio/television philosophically, i dislike broadcasters more focused on their advertisers than their listeners, and therefore have avoided working in commercial radio to date. Having witnessed failed attempts to change the status quo, i am highly sympathetic to individuals and entities who purport to wish to enter broadcasting and offer true alternatives to those which exist, and have had many conversations over the years with many such individuals.

I strongly support the creation of LPFM (especially micropower) radio services, as legal outlets for these sorts of individuals/entities.

I personally believe IBOC and other present-spectrum digital terrestrial radio services are doomed to failure, and hence have not commented on related matters. The rest of the world has adopted a unified system and spectrum for it; the U.S. continues to ignore the possibility of international standardization in the name of vested interests (existing broadcasters and the U.S. military establishment).

DISCLAIMERS

Since 1995 and currently, i have had no participation in broadcasting, other than a short period in early 1996 as a consultant testing an FM broadcast compressor/limiter from/on behalf of Orban Inc.

I currently have no plans to seek a broadcast license of any sort, either in existing service or those proposed in this NPRM, nor am i in contact with anyone licensed nor seeking any license nor broadcasting without a license. I do not expect i will wish to seek a license in the foreseeable future.

The "stereo" repair shop where i worked most of my years was Resistance Repair, in Berkeley, California. Stephen Dunifer was (is?) a tenant in the same building. Though i never worked for Free Radio Berkeley nor any of Mr. Dunifer's other enterprises, he and i conversed from time to time, sometimes at length, usually regarding "micropower" broadcasting. Some friends of mine from KALX claimed to have been operators at Free Radio Berkeley. I listened to FRB occasionally. I feel i must note that Mr. Dunifer's transmitter testing interfered far *less* with Resistance Repair's home audio/video repair operations than a previous tenant in the computer games business who claimed all their equipment was Part 15 compliant. Also, Dunifer's interference was almost always to equipment under test with its normal shielding removed, almost never to fully-assembled user-ready equipment.

MY COMMENTS ARE MY OWN ONLY, and do not represent the official or unofficial position(s) of the radio station where i formerly worked (KALX,

Berkeley), nor the repair shops where i formerly worked (Recycled Stereo and Resistance Repair), nor any other entity. No one other than myself has reviewed these comments prior to their submittal.

* * * * *

Originally i had hoped to contribute some measurements of receiver interference on a few representative receivers representing several decades of manufacture and circuit design (late 1940s to early 1990s). Due to a recent move, i was unable to do so by the comment deadline, and may be unable to do so until sometime in mid to late May.

As i lack access to a field strength meter, the data would have consisted of RF output levels from a Sound Technology 1000A FM Signal Generator (uncalibrated) at which aurally discernable interference occurred. I would have used the generator with a standard dipole antenna very close to a standard dipole receiving antenna (1m or less spacing), with the generator simulating a LPFM station (micropower) as the interfering signal, and using the signal from a licensed full power station as the reference desired signal (one each of high field strength and low field strength at the receive location).

If the admittedly rough data from a test such as this would be of use to the Commission in its decisionmaking, and if test results can wait until late May or early June of this year (or later), please contact me at my email address, and i shall proceed. Or, perhaps other more well-equipped commenters will be willing to undertake similar tests.

Submitted for your consideration,

Nicholas W. Kratz