

In Reply to the Comments of the
Public Radio Regional Organizations (PRRO)

I must respond to PRRO's specious comments of August 2, 1999 opposing LPFM. In particular, they argue that LPFM will "jeopardize public radio service on FM translator stations throughout the country." They use as an example Utah's KUER translator network which distributes the Salt Lake City station's signal throughout the state. I find it very interesting that PRRO is arguing to protect a network which appears to be operating in direct violation of 47CFR74.1231, which states in section (c):

The transmissions of each FM translator or booster station shall be intended only for direct reception by the general public. An FM translator or booster shall not be operated solely for the purpose of relaying signals to one or more fixed received points for retransmission, distribution, or further relaying in order to establish a point-to-point FM radio relay system.

In looking at the map provided in Attachment A of the PRRO's comments, it appears to me that the following translators, which are located on high peaks in unpopulated areas, serve no real purpose except to get the signal to the more populated towns in the southern and eastern parts of the state (note: Altitudes are from the FCC database and converted to feet):

FRISCO PEAK (K203CA: 9685 ft)
UTAH HILL (K300AC: 7690 ft)
BARNEY TOP (K216AC: 10498 ft)
BALD MESA (K218AA: 8418 ft)
TABBY MTN (K285BK: 10042 ft)
BLUE MT (K211CV: 8038 ft)

The TABBY MTN, UTAH HILL and BLUE MT translators in particular appear to have no useful purpose whatsoever except to feed the next translator in the chain.

So the PRRO's argument seems to be that you must preserve the status quo so that translator chains operating in violation of FCC regulations can continue to operate. I'm sure I must be wrong and that, for instance, the TABBY MTN translator is primarily for the benefit of the residents of Tabiona (1990 population: 120). If that is the case, then KUER must be applauded for bringing their signal to such a small town. I wonder, though, if this is the case why they have not tried to get a translator installed in Sundance, which is in the North Fork of the Provo Canyon, described as follows in [1]:

The North Fork of the Provo Canyon is in a wildland/urban interface area consisting of 7,000 acres of privately owned land surrounded by National Forest and wilderness area. The area includes 258 dwelling units and 116 vacant lots. One hundred and twenty people are full time residents. It is estimated that 7,500 people may be using the area at any time during peak seasons.

According to [2]:

Sundance, Utah is in a "white area", an area where no adequate FM broadcast signals exist. Sundance is located near the North Fork

Provo River at the base of Mt. Timponogas. Completely surrounded by mountains, this area is practically impenetrable to FM radio signals despite the near proximity to several full power FM radio stations. The area is devoid of radio news, information, entertainment, and local emergency information including that generated by the Emergency Alert System.

If PRRO and KUER do indeed want to claim that their existing translators do provide useful service to the rural areas in which they are located (and by the way, I don't mean to pick on KUER - KUSU also has a statewide translator network which includes a translator on Tabby Mountain. I'm sure that both are fine stations, and I'm sure I would have done the same thing had I been in their position), then I think they help prove the viability of LPFM. For if we take away the master KUER feed, we are left with a bunch of low-power stations in rural areas which are not causing any interference to existing higher-power stations in the state. Some of the areas where these translators are located are sufficiently remote that they could today meet the licensing requirements for a Class A or higher station, yet no such stations exist. I take this to mean that either there is no demand from the few residents and prairie dogs in these areas for a local station, or that a full-service station would be too costly. If the first is the case, opponents of LPFM are greatly overstating the potential for interference through their FUD (Fear, Uncertainty, and Doubt - a tactic made infamous by Microsoft Corp to establish and maintain their monopoly in the computer software business) campaign that thousands of stations will spring up immediately if the LPFM service is allowed. If the second is the case, then LPFM is a very good thing, because it can help these people meet their desires for a cost-effective local broadcast voice.

I was most impressed by the recent filing by Jeremy Lansman regarding 2nd and 3rd adjacent interference. I have undertaken my own study, which although less rigorous than Mr. Lansman's study, does appear once again to show that there are quite a few existing situations where 2nd and 3rd-adjacent stations already happily coexist.

I urge you to look at spectrum usage in St. George, Utah. It is a very interesting situation, and I have to thank the PRRO for alerting me to something that I otherwise would have missed by bringing up this whole translator chain argument. A search by town of the FCC database for St. George results in the following list of station in the reserved band:

- 88.1 MHz: 10W translator, non-directional antenna
- 88.7 MHz: 115W translator, non-directional antenna
- 89.3 MHz: 10W translator, non-directional antenna
- 89.7 MHz: 52W translator, directional antenna
- 89.9 MHz: 3KW full-service station, non-directional antenna
- 90.3 MHz: 10W translator, non-directional antenna
- 90.5 MHz: 20W translator, non-directional antenna
- 90.7 MHz: 1KW full-service station, non-directional antenna
- 90.9 MHz: 10W translator, directional antenna
- 91.3 MHz: 10W translator, non-directional antenna
- 91.7 MHz: 100W full-service station, non-directional antenna

St. George has MANY 2nd and 3rd-adjacent low-power stations, and even what appears to be some first-adjacent stations! To check on this, I visited St.

George on Saturday, November 6, 1999. I used the factory radio in my 1994 Ford Bronco to determine whether these stations actually exist or not. It was a sunny 73 degrees in the early afternoon as I chose two random spots (which happened to be shopping mall parking lots) to make my tests. My GPS receiver reported these locations as:

37 degrees 6 minutes 40 seconds N
113 degrees 33 minutes 16 seconds W

and:

37 degrees 5 minutes 36 seconds N
113 degrees 35 minutes 7 seconds W

In all fairness, the full-power station at 90.7 MHz does not appear to be on the air yet, and will probably bump the adjacent translators if and when it does go on the air. However, I was able to receive stations on 88.1, 88.7, 89.1, 89.7, 90.1, 90.5, and 90.9 MHz from both locations. The 90.1 and 90.5 stations were identical content and broadcasting in mono. My receiver did not lock onto the stations on 89.1 and 90.1 MHz during a scan, but they could be tuned manually. Now let's see: 88.1 and 88.7 are third-adjacent, 88.7 and 89.1 are second-adjacent, 89.1 and 89.7 are third-adjacent, 89.7 and 90.1 are second-adjacent, 90.1 and 90.5 are also second-adjacent, as are 90.5 and 90.9.

This looks to me like convincing evidence that LPFM will NOT present any technical problems with respect to interference, since 47CFR74.1203 states in section (a):

An authorized FM translator or booster station will not be permitted to continue to operate if it causes any actual interference to:

- (1) The transmission of any authorized broadcast station; or
- (2) The reception of the input signal of any TV translator, TV booster, FM translator or FM booster station...

and in section (b):

...operation of the offending FM translator or booster station shall be suspended and shall not be resumed until the interference has been eliminated.

So I ask you: has that happened in St. George? Do the citizens of St. George have special high-rejection radios, or do they buy standard receivers at the local WalMart and Radio Shack like people in the rest of the country?

Several commenters, including PRRO, have suggested that LPFM be allocated a different part of the spectrum, perhaps unused television channels. The easy argument against this is that LPFM should be able to take advantage of the fact that most people already have one or more radios capable of receiving the FM broadcast band. However, I'm starting to think that it wouldn't be such a bad idea. If a different part of the spectrum were used, LPFM could dissociate itself from the corporate radio that exists today. Yes, people

would have to buy new radios to receive it, but I think we would just see a repeat of what happened with FM radio in the 1960's. For the benefit of those who are reading this and might not have been around then, or have only drug-induced fuzzy memories of that era, let me give my interpretation of what it was like. In the early to mid-sixties, radio was big business, but all the action was on the AM band. The FM band had some weird stations, but very few people listened. Cars came with AM-only radios. It was the days of Top 40 radio (i.e. small playlists), and the AM stations weren't worried about FM with its obvious problems of line-of-sight communications, multipath distortion, and limited market presence. There was no way that could compete with their clear-channel stations that could be heard by millions of people across several states. But the times they were a-changin'. Stations like KMPX, KPPC, KSAN, and WBCN started playing album cuts on the FM band, and people caught on to the idea. They went out and bought FM radios so they could hear these stations that were providing what was to them meaningful programming. Auto manufacturers started including AM/FM radios as optional and eventually, standard equipment. Of course, there is a dirty dark side to this story, and that's that these stations were not newly licensed stations, but displaced the existing spanish language (in the case of KMPX before Tom Donahue) and classical (in the case of KPPC) stations that might even be considered closer to what LPFM will be. In any case, the rest is history. Today the FM band is mainstream, where the formula stations with their small playlists exist, much as the Top 40 stations of that earlier day. The noncommercial stations build the FM equivalent of clear-channel AM stations with their statewide translator networks. Many commercial stations are satellite-fed or receive their playlists from some service, so there is little diversity. WBCN does still exist, today owned by Infinity Broadcasting, and the legendary underground radio veteran Charles Laquidara was bumped over to another Infinity-owned station in Boston to make way for Howard Stern in the mornings, as Infinity creates its own equivalent of a clear-channel station.

References:

- [1] Provo Canyon North Fork Community Fire Plan
- [2] Translator Feasibility Study for Sundance, Utah report funded by the author

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