December 22, 1999

Comment on 99-325, Digital Audio Broadcasting.
By: Blair Alper, blair@uddle.com

Dear Sirs:

I am quite disturbed by the content of this NPRM and the attitude of the FCC with regard to our current system of radio broadcasting. I believe that the current system of FM radio stations has the potential to effectively serve the public interest and should not be abandoned for the sake of digital technology. I am not against the introduction of digital technology into the marketplace. I see the advent of this technology as providing some unique opportunities for existing broadcasters as well as the public at large, if it is implemented correctly.

First of all, I believe that it is important to have a clear understanding of the motivation behind the introduction of this technology. This is not something that the public has been clamoring for. There are many complaints about the state of radio today. I personally would not expect to see "audio quality" in the top ten. So, if the public isn't all that excited about it, then why are we talking about it? These proposals have been advanced by companies trying to sell the technology. Obviously, their interest is to invent something (they claim) works and get the FCC to authorize it's use so that they can create a market for their product. I can appreciate that these companies would like to get a guarantee from you that their system (when and if it works) will be adopted. They would like to have policy determined before they sink too much money into it. I truly don't understand why the FCC seems so willing to play this game. If a company wants to introduce a new broadcast technology, let them submit a proposal. If the proposal is deemed sound then issue a special temporary authority to test the new technology. Make THEM prove that it works BEFORE policy is set. I see too much "well, if we can get it to do what we think we can, then … " in this NPRM. If they can't tell you (and prove) EXACTLY what it's going to do then you need to tell them "come back when you can." Well, this is not what was done and I am now forced to debate the relative merits of an unknown quantity.

So, what happens if we move forward? What do radio stations get out of this? Radio stations get a couple things. First, they get to say that they are digital. Digital is a nice "buzz word" these days. People like digital. It's modern. Current FM broadcasters don't want to be seen as being left behind when the new digital satellite services begin beaming programming directly to peoples' cars next year. These will, of course, be pay services. So what else do broadcasters get? In the IBOC model, they get two digital data streams that ride along with their current signals. These streams can be used for "near CD quality" digital audio or for auxiliary audio or data services. I imagine that if the IBOC model is adopted, a station could choose to delve into digital or leave it alone. If the FCC chooses to go with full digital conversion, then the station would HAVE to upgrade. I guess this wouldn't be too much of a problem for them since listeners wouldn't have a choice. They would either have to buy the new receivers or they would be without radio. After all, everyone else will be selling new receivers too and you will still have to subscribe to a service. At least after you buy a new receiver for the converted FM band you would still get "free" radio. Conversion to full

digital would also “raise the bar” on radio station ownership. In other words, it would cost more money for anyone who wants to start a new station. They would be required to purchase new digital transmission equipment right from the start (or at least pretty soon after going on the air). In contrast, the existing broadcaster would have the luxury of being able to amortize these costs over a number of years while making a profit on their already established analog service. This would also put a nice tidy end to the low power FM (LPFM) movement. What small group is going to be able to afford the digital transmission equipment? Hey, if you already own a radio station, you gotta love that. Who needs the competition? While we are at it, we can also get rid of many of those smaller stations that won’t be able to afford to upgrade. Well, that’s ok. The big companies can buy them up and then they will have to resources to stay on the air. Fortunately, most of the ownership restrictions have already been removed so this can be accomplished painlessly. If I were a bit more paranoid, I might begin to sense a master plan at work here.

What does the public get out of this deal? Well, if these companies can be believed (and if it works), we get better audio quality than what we currently have. Somehow, I find it hard to believe that a station is going to choose to use these extra channels to broadcast another copy of the main channel audio. It seems far more likely to me that they are thinking about how much extra money they can make by renting them to someone else or starting a new service of their own with them. Being digital, a station could even choose to make these subscription services. No one who is not authorized to receive the data or service would have access to it. That is one of the strengths of digital technology. Well, let’s assume that this is not what is on their minds and they do choose to use this new digital channel (or digital subcarriers) to offer us the “near CD quality” sound that the NPRM speaks of. I wonder what this actually means? CD quality sound would be 20Khz of frequency response with 90db of dynamic range. We currently have over 15Khz of response. “Near CD quality” frequency response must be somewhere between 15 and less than 20. Hardly seems worth the effort to me. Perhaps the real gains will come in the form of increased dynamic range. But wait, stations are already spending a great deal of money on processing equipment designed to make them sound louder and limit the dynamic range. A few classical format stations have reduced the amount of processing that they use in order to better represent the music. The normal result is that listeners find the station “quiet” and are upset that the VU meters on their stereo systems don’t move. I guess the “better quality audio” argument doesn’t hold water. Add to this the new digital artifacts that will be created and I smell trouble. What will all this cost us? Well, we don’t know that yet. We do know that Canada is currently in the process of digital conversion and that a radio to receive these new services costs about $2,800. We have also been promised data services such as screens that display road conditions while we drive. That sounds like a neat thing. I doubt it will be a free component of the public broadcast structure on which it would ride. I believe that any service that a company can provide at an economical cost, and that is desired by a sufficient number of consumers to support it, is a good thing. Let’s just make sure that all of us don’t loose economical access to a readily available and important public resource so that a few people can have screens in their cars and existing stations can make more money.

So where do we go from here? Well, as I said at the start, I am not opposed to the introduction of digital services (if it is done correctly). The commission has stated that it endorses digital technology. We will assume, therefore, that this is going to more forward one way or another. A general

choice of two paths must now be selected. Option 1 is implementation of IBOC digital subcarriers. As stated in the NPRM, this presents many technical challenges. Bandwidths would double. Many things would probably have to be moved around. In general, it sounds to me like it would be a big mess. This would also make it even more difficult (if not impossible) to establish an LPFM service (something I would like to see happen far more than any digital implementation). Assuming that we get through all that, we may still not be finished. The NPRM seems to regard IBOC as an interim technology (on the way to full digital). We could do all this only to find ourselves faced with the same decisions all over again just a few years down the road. Option 2 is to bravely forge ahead with full digital. Personally, I find it hard to believe that broadcasters really want this. I know if I ran a station and was thinking of going digital, I'd be nervous about converting to a system that would require a $2,800 radio to receive it. I would be worried that no one would buy them. Again, they would probably sleep easier at night if you the commission mandated conversation to digital technology for everyone. That way, no one would have a choice.

With the above criteria on the table, we now come to the central question. This is the question that I know each FCC commissioner goes to bed with each night and wakes up with each morning; "what is in the public interest?" As I have said, I believe that analog FM is an efficient use of the spectrum that it inhabits. It is a resource that practically all of us make use of on a daily (or almost daily) basis. The existing base of some 550 million consumer receivers represents a massive investment by the public. In addition, the market penetration of this service is probably unequalled by anything else in existence. I call upon the commission to recognize the FM broadcast band as one of our nation's most valuable public resources, one that should be protected. My usual sarcastic tone aside, a mandated conversion to full digital technology would put an end to the inexpensive portable radio, at lease for several years. I see the benefit to the public from
such a conversion as being minimal. I see the potential benefit to existing broadcasters and equipment manufacturers as substantial. I, therefore, conclude that mandated conversion to digital technology in the current FM band is in the corporate interest, not the public interest.

The FM band does have its problems. One of the worst is that congressional and FCC polices have created an environment in which big companies have been allowed to buy up large groups of stations. There are some 7,000 FM radio stations in existence. The largest group owns 800 stations (I believe this is AM and FM). I think that any reasonable person (who is not a congressman) can see that something is wrong. Newspapers, magazines and the internet are alive with political and ethnic diversity. The big trend these days is serving a niche or local market (and serving it well). The Executive Branch of our government publicly claims to support and even backs initiatives to continue this trend. Broadcasting, however, is still rather tightly controlled. The stranglehold that a few companies have been able to get on the broadcast spectrum is the main reason for this. This is one of biggest reasons for the grass roots LPFM movement and why people are willing to place stations on the air without a license. They do this even knowing that a swat team may show up at their door and that they could find themselves being treated exactly like drug dealers. At the rate things are going, I believe it to be only a matter of time before someone encounters armed resistance in attempting to shut down one of these stations. There is already at least one station in existence that you have been unwilling to shut

down. The FCC has finally realized that there is a need here and has advanced the idea of an LPFM service. At the moment, it looks like congress is going to try and stop it from happening. Frankly, if these needs are not addressed somehow, I predict that you will have some sort of revolt on your hands within a few years

Now, the big companies want digital. I see the introduction of a full digital broadcast service as being inevitable. I therefore suggest that we view this new technology as an opportunity. Perhaps there is a way to serve everyone's interests and fix (or at least patch) some of our problems. As stated earlier, I am against mandatory conversion to digital technology. I believe that the current FM band should be maintained and protected. I think the commission is on the right track with the suggestion that a new band be opened up for a digital service. Here is what I propose. Allocate digital channels in two phases. Phase one: Allow current broadcasters to apply for a digital channel. REQUIRE that those applying for this new channel must surrender their analog channel. This would also be a good time to impose some limits. The reason for this is that many markets are already dominated by one or two players. It would be nice if, for example, existing stations could trade their analog channels for digital channels as long as their combined market share of the new technology did not exceed twenty percent. This is a new technology and provides the opportunity to set limits that have already been relaxed in the analog realm. It would be difficult to try and restrict ownership of conventional stations now that the genie has been let out of the bottle. This new technology, however, offers you the opportunity to do just that. In the second phase, open up application to new stations. Structure the new service so that coverage areas are comparable to current "high powered" stations. This makes sense in view of the fact that an important part of the digital service is the auxiliary services it
will provide. These should have wide area distribution to be effective. So what do we do with the current FM band and all that newly opened space? Shift the current FM band to more localized service. Move ahead with the LPFM service (all the way down to the proposed 1-10 watt class). Phase out the higher class licenses. I would propose, for example, that the highest class analog FM license be 10,000 watts. This should provide plenty of coverage area to serve a large metropolitan area with an analog signal.

So what does everyone get out of this? The equipment manufacturers get to make the new gear that they want to make. Radio stations eager to get into digital get to do so, and with the same coverage area (or better) that they enjoy now. The analog FM band gets opened up to local and community radio while still maintaining a reasonable ability to cover a major metropolitan area. The scaled back power levels of the analog band will encourage existing broadcasters to jump on the digital bandwagon. Those smaller stations who do so would also be rewarded by increased coverage that was not possible with their analog allocations. The public is not FORCED into buying new receivers. The larger coverage area will make the digital service attractive to both broadcasters and listeners, helping to ensure its success.

I can see it now. Existing broadcasters are going to hem and haw about moving to a new technology when the old one still exists. If this comes up, I would see it as a sign that they believe new digital technology is a good thing if the public is forced to adopt it, but may not be if the public is given a
choice. In this event you could conclude that the marketplace is not ready to

embrace the new technology and put it on the shelf for a few years. Another factor that would help to make the digital service a success is that if existing broadcasters don't adopt it, new ones will. Existing broadcasters could hardly complain about competition from a technology that they lobbied for. Meanwhile, back on the analog front, the band would change. Low power community radio would have a chance to thrive. Existing broadcasters would get the big power, wide coverage, and digital technology they want. Smaller existing stations (and new LPFM broadcasters) would get the lower power, small to moderate coverage, and analog technology they want. There would be room for existing or new broadcasters to decide on which side of the street they wish to live. In addition, the separation of the two objectives into different bands serves everyone. One watt neighborhood stations are not a good mix with 100,000 watt stations. Neither group wants to see the two try and co-exist in the same place. Another complaint that will come up is in the restructuring of analog licenses. A 100,000 watt station that gets told it gets to be digital (and move) or stay where it is and become a 10,000 watt station at its next license renewal is quite likely to do some moaning. To this, I say that we have a serious problem in the FM band with station prices. Large ownership groups have pushed the selling prices of radio stations far beyond their actual value. This action will bring these prices into line as well as serving as a reality check to keep the problem from reoccurring. Broadcasters will say that their licenses are being "devalued." Well, first of all, an upgrade path has been provided. Secondly, this action is a "correction." When a country's currency is no longer viable because of inflation, what happens? The government institutes a currency devaluation. This is what is needed with our current stations. As difficult as it will be to look these guys in the face and give them the news, it needs to be done. We tell people that a drivers' license is a privilege not a rite. Ask any Amateur Radio operator about license terms and conditions that get changed. The only difference is a few billion dollars.

In summary, I would like to see this new technology used to solve the problems of all areas of broadcasting instead of benefiting only those at the very top of the food chain. I think we are rushing headlong into this rather quickly. I am sure that it is no accident these companies want policy set on this before the effect of the upcoming DTV conversion is known. More of the public is starting to become aware of the problems in broadcasting. DTV is going to be a big shock when the public finds out what it's really about. Trying to do exactly the same thing on radio could have an even bigger backlash. The public may tolerate the conversion of television but draw the line at a mandated conversion of radio. The LPFM initiative (and the congressional reaction to it) have attracted a lot of attention. I, and others like me, are now starting to watch the actions of our government more closely. I intend to see that the comment and reply periods on this NPRM do not pass with only 26 comments and 6 reply comments filed.

Blair Alper

Comments filed electronically