

Before the  
Federal Communications Commission  
Washington, D.C. 20554

In the Matter of )  
Expanding the Economic and Innovation ) Docket No. 12-268  
Opportunities of Spectrum through Incentive )  
Auctions )

Comments of  
Thomas C. Smith

January 26, 2012

**Opening Statement**

I am filing these comments as a concerned broadcast technician with nearly 44 years of experience in the broadcast industry. I have previously filed comments in the matter of *Spectrum for Broadband: A National Broadband Plan for Our Future* NBP Notice #26 and *Innovations in the Broadcast Band; Allocations, Chanel Sharing and Improvements to VHF*, ET Docket No. 10-235. In commenting on both notices, I expressed my concerns on the potential effect of the proposed reallocation of spectrum currently used for TV broadcasting and its possible restriction on any further growth to over-the-air TV broadcasting. I remain very skeptical of the proposed incentive auctions and the repacking of the UHF band for TV use and the reallocation of the spectrum for broadband use. This whole proposal was conceived by the Commission in the Broadband Report and then made into law by Congress mainly by request from the Commission and the wireless industry. I feel that as the Commission makes the rules for the incentive auctions and the repacking of the UHF band, they may be building the coffin for the TV broadcast industry and possibly nailing the coffin shut if too many stations were to go dark or interference increases to a point that reception of the remaining stations is greatly compromised. This whole action does not seem to provide the transparency that we need to know how the broadcast industry will be affected. There has been little discussion on how a new table of allocations would look like or even if the Commission has run any computer models of possible allocation tables. We should know at least how many stations could possibly be fit on any channel and the number of possible conflicts there could be. While the final table depends on how many will participate, it would be informative to know a rough number of stations that would be needed to participate to even start to make this work.

I will not comment on the mechanics of the auction, but will focus mainly on the repacking of the TV band and the effects of the repacking on existing users of the band besides full power and class A LPTV stations.

## **Repacking of Stations**

I have a number of concerns about the repacking of stations. These concerns start with how the original DTV transition was handled. I have questions on why the Commission did not create a more spectrum effective allocation table to be used after the transition was completed as part of giving second channel for digital use during the transition. While stations may have had to make another channel change, channels could have been allocated in a way to minimize disruption at the analog shutdown and stations would have been able to plan for it. Stations given digital channels above channel 51 did have to plan on another move at the analog shutdown. While the second digital channels were shoe horned in-between the existing analog channels, there could have been more effect allocation table created at the same time for post transition operation. Stations that would have had to go to a third channel or return to their original channels would have be able to plan ahead to make the transition as easy and economical as possible. We are now looking at another channel change transition that may involve more stations and further cost to those stations, then if this was all planned for in the original DTV transition.

Going through a second DTV transition is not my only concern. The bigger concern is the future of over the air television. In both the DTV transition and the current rulemaking on repacking the UHF band, there has been little discussion of the possible future of television. There are many economists and so called technical gurus who are giving up broadcast TV as dead even as many of the many possibilities of over-the-air TV have not been implemented. Because of the transition from analog to digital, we have had only a few stations go on the air and the only applications the Commission has accepted in the last few years were for the two stations to meet the requirements that New Jersey and Delaware have a VHF station. The Commission has never proposed the accepting of new full power TV applications to test interest. During the time of the DTV transition, some TV markets have increased in population where more stations could be supported and with the rise of religious, Spanish and other ethnic TV broadcasting, there has to be demand for some growth in stations. Also some of the new networks that were created to fill digital sub-channels may be showing that they could stand as primary services on their own broadcast channel. I have researched the Freeview services in Britain, New Zealand and Australia and see a model for what over-the-air TV could be in this multi-channel world that cable and satellite already live in. These nations have branded their broadcast services like a cable or satellite provider would and using the multi-stream capabilities of digital transmission to provide a multichannel service to their over-the-air viewers. While broadcast TV can never supply a 500 hundred channel service, I believe that with future enhancements to broadcast TV, it could provide a service that is competitive with the basic service that many people purchase from a cable or satellite provider.

This leads me to a number of questions and comments about repacking. Besides giving stations that participate in the incentive auction the option of going to a VHF channel which I consider the best choice as far as the health of the industry goes, sharing a channel which may not be all that workable, or going off the air which I believe is bad for broadcasting as losing any large number of businesses in any industry can lead to its downfall. I believe that other options should be considered such as creating a lower class of full power stations like that in the AM and FM radio broadcast services. A station may need to only cover a limited area to serve its main audience, but needs more coverage than a LPTV station can give it. An example may be a Spanish language or ethnic station whose audience is mainly in the metropolitan area and does not need to reach the far rural areas. Another option would be allowing the greater use of directional antennas to allow a station that overlaps into an adjacent market to give up coverage to an area it does not really provide service to. Finally, after the repacking of the UHF TV band, will the Commission accept new applications for any remaining channels in the television spectrum that may be available? While the UHF band will no doubt be filled in populated areas, there should be openings in the more rural states for both some UHF and VHF stations and some VHF channels should be open in some of the more populated mid-sized markets. The Commission needs to provide the opportunity for those who may wish to build new stations or without any new growth, the TV broadcast industry will surely die.

Another consideration in the repacking of the UHF television band and the use of the VHF television band is the standards the ATSC 2.0 and 3.0 committees may create for the TV broadcast. With possible changes to the modulation scheme of the digital signal and improvements in the efficiency of the encoding of the video for transmission, broadcasters may be able to improve the ease of receiving their signals and possibly provide more choices in programming by being able to carry more program streams at higher quality. New digital modulation schemes may also provide better interference protection between stations which may allow channel spacing to become less of a problem.

### **Ripple Effects on other TV Band Users**

Low-power TV stations and wireless microphones must be considered as part of the equation. There are many LPTV stations that provide local programming to their communities and a livelihood to their owners. This is a clash between Wall Street and Main Street thinking. These owners may have their life savings stuck into their business, have a passion for it and depend on it to give them a living and possibly provide some equity that they can use for their retirement. Their operations are not about maximizing the return to distant stockholders. The Commission cannot just say that you go just to provide more spectrum and income to large corporations. The Commission should at least provide some method to allow locally programmed LPTV stations an opportunity to find spectrum in the low or high VHF band.

In the case of wireless microphones, consideration has to be given to the economic impact on the entertainment industry along with wireless microphone users. If the TV band is packed so tightly that it is hard to find an open space, these users may suffer operational and economic hardships and the FCC and spectrum repacking will be the scapegoat to these users.

The final ripple effect is the impact on the TV white space users. While the use of TV white space use is just starting and its potential impact is unknown, if there is little or no spectrum for them, it looks like the Commission has reneged on its promise to those interested on using that technology.

### **Configuration of new wireless bands**

As part of the repacking of the UHF TV band, how the wireless band will be configured has to be considered. The Commission proposed a number of scenarios including a contiguous band starting at Channel 51 and going down and a split band with one half starting at channel 51 and going down and the other half starting at channel 36 and going down. I would like the Commission to consider the contiguous band starting at channel 51 and going down for two reasons. The first is avoiding have both the wireless and UHF TV band split and interweaved between themselves and the second reason is the using the lower part of the UHF band for wireless usage may present issues due to antenna size. With the small antennas in handheld devices, their efficiency decreases as the frequency uses gets smaller. This could cause dropouts and other reception issues which would be extremely frustrating to the users. For TV it would make it easier to design receivers as the tuning can remain contiguous eliminating have a 4 or 5 band tuner instead of the current 3 band tuner.

Another issue is guard bands between TV and wireless. To help minimize the size of guard bands between the services, possibly one or two TV channels closest to the wireless bands be reserved for LPTV. The lower power used by these stations could lessen the chance of overloading the wireless receivers and possibly allow for reduced guard bands between the services.

### **Closing Comments**

Broadcast television is the only local source of programming that is available in most places. Our TV broadcast system is unique in the world as it is locally based. In many nations, the television systems are nationally programmed and can be feed on satellite and reach everyone. Here stations can carry both national programming and programming aimed to the local audience. Even stations that produce limited local programming still program syndicated programming that caters to local interest and is convenient to local lifestyles. Few cable systems provide local programming and even local cable access in many places consists mainly of text scrolling from a computer the majority of time. Cable provides little opportunity for an

independent programmer to purchase time or channel space to provide service. Because of this I feel that local over the air broadcasting must be preserved. Despite what some so call experts say broadcast television can still be viable. Wall Street, Washington think tanks or some scholars from elite universities may have issues with TV broadcasting, but broadcast television and radio are still the only forms of media that can reach nearly 100 per cent of the population.

The Commission needs to consider how the incentive auction and repacking affects the future of broadcast television and its ability to grow in the future. It has been over fifteen years since there has been any real expansion of TV stations in the United States. It cannot be claimed that the industry is a dying business, when it has not been given a chance to grow. On top of it cable and to a lesser extent satellite has been given chances to grow to the detriment of broadcast television. Cable was able to use broadcast TV programming for no cost while it grew its business. The playing field is now more equal, but the damage has been done.

As part of the consideration of the repacking the UHF TV band a number of issues should be considered. The effect of repacking on the creation of new allocations in markets with growing populations is one issue. While many of the largest markets are already at the limit of possible allocations, including those in the top 25 markets where more spectrum is being sought for wireless according to one of the FCC webcasts, there are smaller markets that may need new broadcast services due to population or demographic growth. This should be a consideration. Also the findings and actions of the ATSC 2.0 and 3.0 committee need to be considered in any planning for the future of broadcast television. And the changing economic conditions should be considered. With decreasing pay and opportunities in many parts of the country, cable and satellite services may be no longer affordable, particularly with their increasing cost, broadcast TV may be many families' main entertainment and news source.

The Commission needs to be more transparent concerning its repacking plans. The Commission should release a number proposed allocation plans that give various options for repacking the UHF band. The NAB and the wireless industry should also counter with their own proposals. The findings of the ATSC 2.0 and 3.0 committees should also be considered. It may be in the best interest of all the parties for the Commission to proceed at a slower pace as so to allow the repacking of the UHF TV band to coincide with the introduction of an advanced digital TV broadcast system. The Commission should also encourage the broadcast and wireless communities to work together to create solutions that benefit both industries and present them to the Commission. Issues concerning the use of VHF channels need to be address at this time also. There should be method to attain better use of high band VHF channels, low band is a more difficult problem and probably only suitable for limited TV use. The FCC, broadcasters and the TV manufacturers need to work together to address this issue. Repacking may never work if the high band VHF channels are not made usable.

Participation by stations in the incentive auction is not a given considering that there are so many unknowns. How are stations going to be valued? Will it be according to its potential sale price if it were to be sold as a business, or by some price according to the value of the spectrum such as price per megahertz per population? Also if the Commission limits or refuses to allow the construction of new stations in any markets particularly in growing markets or in smaller markets adjacent to the major markets targeted by the Commission, all stations value may increase due to scarcity and owners may decide to hold on or sell them as existing broadcast facilities.

Over the years, the Commission has held inquiries concerning increasing localism and diversity of programming and ownership of TV stations, if the Commission unduly restricts the number of stations in order to provide spectrum, these goals will be more difficult to obtain. Also the Commission needs to hold the wireless industry to standards that they are using their spectrum as efficiently as possible including using techniques to off load their networks to other technologies. There is no reason that in many places that a wireless user could not be using a Wi-Fi type service when indoors at home, work or in a location such as an airport or shopping mall. This could reduce traffic on cell towers to allow those who need service while in outdoor locations or in transit.

As I have read the history of the broadcast industry and the actions of the FCC, I have come to realize that growth in the broadcast industry has been restricted by either the actions or inactions of the FCC and an understandable refusal of the broadcast industry to accept new competition. The Commission could have fostered better service to the public with ownership rules that better fit a growing industry, solved allocation issues in a more timely manner and had a more predictable application process. The 7-7-7 rule ownership limits lasted longer than it should have, TV allocation issues were repeatedly debated from the 1948 allocation rulemaking through the 1950's until a new table was issued in the 1960's and I don't feel the application process ever really worked, whether it was comparative hearings, lotteries or even the auctions which take too long to finally grant licenses. The action that is taken concerning the incentive auctions and the repacking of the UHF band may just be added to the list if the Commission does not take its time and assure that it is done right and benefits all parties, the broadcasters, the wireless industry and the public.

Freeing more spectrum for the wireless industry and safeguarding the interests and the viability of TV broadcasting will be difficult and neither group will get everything they want, but all sides need to come to some common agreements and understandings to make this work for all.

Respectfully Submitted

Thomas C. Smith

1310 Vandenburg Street, Sun Prairie, WI 53590

