

Before the  
Federal Communications Commission  
Washington D.C. 20554

In the Matter of

Second Periodic Review of the Commission's Rules and Policies Affecting the Conversion To Digital Television )  
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Comments of Thomas C. Smith

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Opening Comments

1. I am filing these comments due to concern about the transition to digital broadcasting of television. What happens in the next year or two will determine whether free or advertiser supported over-the-air broadcasting of television will survive. I believe that the transition is in trouble and it will definitely not make the December 31, 2006 deadline. That deadline was unrealistic in the first place, but at the rate that digital sets are selling versus analog sets, we have a long way to go before we can say we are well on our way to making the transition to digital TV. I have been a TV broadcast technician for nearly 34 years and I do not want to see the TV broadcast industry, a industry that earns about \$40 billion yearly according to the 2002 Broadcasting Yearbook, destroyed by a the transition that does not respond to the public's needs and the marketplace. Government nor the private sector cannot force the market to embrace a product that it is neither wants, needs or in the case of DTV may not know about or understand.

2. There have been missteps by the FCC, Congress, the broadcast industry, and the consumer electronics industry. Actions resulting from enactment or modification of FCC rules will not guarantee that the transition will be successful, but they may add clarity to the transition process. As part of the clarification process, the FCC must make sure that the election of final digital channel channels by the existing analog stations is made so that band is as interference free as possible and will allow for the addition of future full power, Class A and other low-power stations and translators. The FCC must also aid in addressing the problem of consumer knowledge about DTV. As a broadcast technician, I have only been asked about DTV once or twice. Because of this lack of interest, I do not believe that most people have knowledge of the transition to DTV or have any interest in it. This is something that the FCC, the broadcast industry and the consumer electronics industry need to address by labeling and informational advertising.

3. In my comments, I wish to address election of channels, replication and maximization, PSIP, labeling of TV sets and station identification as well as satellite stations and new transmission technologies.

#### Election of Channels

4. First of all, I have no problem with the May 1, 2005 deadline for stations to make their selection of which channel, they wish to use for their final digital channel. But, I believe that stations need guidance in the selection of their final DTV channels. This guidance needs to come from the FCC, the NAB, the Association for Maximum Service Television or some other industry group.

5. Because so many DTV transmitters are short spaced to analog or digital transmitters, stations should get guidance in selecting channels, which minimize or eliminate short spacing as much as possible. One of the objectives of the election of channels should be to get all of the stations back to the spacings between stations as called for in the FCC rules. The use of mileage spacing requirements has worked well for minimizing interference in the TV and FM bands. Currently, the FCC is relying on desired to undesired signal strengths for determining interference contours for DTV stations. AM radio has to rely on desired to undesired signal strengths because of the variables of ground conductivity. Because of the variables in computing the various signal overlaps, it has helped lead to the interference problems in AM radio. Inconsistencies in terrain could cause the same

problems in figuring signal overlap in TV. The use of fixed spacing by distance has worked well in most cases leaving some buffer between stations for terrain differences and changes in signal due to weather conditions.

6. Either the FCC or some other group such as the MSTV or NAB should run a computer analysis of all the allocations with each station using its DTV or analog allocation to give stations information on whether their DTV transmitter should continue to operate on the assigned DTV channel or should be moved to their analog channel. This could also give the FCC an earlier idea of which channels to move the out of core stations to. The FCC should also create a classification for those stations that remain short spaced to better identify them. I would also like to see a mileage separation table set up for low-power and Class A TV stations to help them find a new channel to locate to if need be and determine any conflicts with full-power stations as the transition evolves. A mileage table was created for low-power FM and it seems to have simplified the application process. In a perfect world, the best method would be to create a new totally efficient table, but with the expense of transmission plant already paid by broadcasters, that is not possible. The Commission needs to ensure that it builds a table of allocation from what has been built so far to be as efficient as possible.

7. The Commission asks in its notice, if stations that apply to move to their analog channel before the end of the transition should be required to file a rulemaking for amending the table of assignments or through the application process. I feel that it should be done through the application process. I consider the use of the process of issuing a rulemaking of amend the table of assignments, one of the worst procedures in the FCC's rules. All the use of the amending of the table of assignments does is complicates the application process. It penalizes the person who finds an open frequency by subjecting them to needless competition from other applicants, many who would not be filing if, it were not for someone else's work and expense. There are still many safeguards in the application process to weed out a problem with a proposed addition to the band as well as a poor applicant. The system should be first come, first served as much as possible, such as in many other services like land mobile or common carrier.

#### Replication and Maximization

8. Stations should be required to operate with digital power levels that get the same general coverage area as they currently do with analog transmissions by the end of the transition. There

are a couple of problems with power levels that may need to be dealt with at the end of the transition.

9. Many stations are short spaced and their power limits for replication and maximization were based on the interference levels with the short spacing. Stations that elect a channel that allows them to achieve full spacing with all of their co-channel and adjacent channel stations should be able to request a power increase to the full power allowed for DTV before the end of the transition.

10. Station may also have a problem at this time in determining if their DTV coverage will be the same as their analog coverage. There are not enough receivers, set-top boxes, etc. to determine the nature of coverage problems with digital transmissions as of this time. Because of the shortage of receiver equipment, many broadcasters do not have a good idea of what their actual coverage will be. They may require more power in the future to achieve the same coverage as their analog station. The commission should be prepared to make adjustments in the future if power levels prove to be insufficient for coverage similar to the analog station. Coverage problems may be particularly troublesome for low band VHF stations.

11. Finally, stations should be able to request power and tower increases after the transition ends, using the same application process that they do now for analog TV. Stations that are operating at less than maximum power or height should not be fixed in time at the end of the transition. Population shifts, tower sites have to be moved, etc. and the rules should allow for those changes.

#### PSIP

12. I believe that the FCC should mandate a minimum requirement for PSIP transmission. PSIP entails a lot of functions, but from experience with various set-top boxes in our station, it seems that some boxes require some PSIP functions to identify whether a set-top box can function and receive a station. When Digital TV recorders become available, they may require a minimum of program guide information to operate. The FCC should adopt the minimum PSIP standard as proposed by the Consumers Electronics Association. Services such as identifying the station and program when tuned and program guide are features that will have to help sell DTV.

#### Station Identification

13. I believe there should be some kind of station identification requirement similar to the one we have for analog by the end of the transition. Currently many stations are in a pass through mode from their networks and may not have the ability to add a local ID. The ID generated in the set-top box from PSIP should be good for now. But in the future, stations should be required to do a local ID at regular intervals. About two years ago, I spent some time in Toronto, Canada. Stations there used a lower corner branded logo (bug) and some other types of branded identification, but no station ID as required here. There were seldom a channel number or call letter given. I found it very confusing to figure out whom I was viewing. People tend to identify the station by the channel, call letters, network or city. Identification by call letters or channel depends on the station. Some stations promote the channel or channel and network together and others promote the call letters more. Station ID's are helpful to both the viewer and the station and should not be a burden to the station.

#### Distributed Transmission Technologies

14. The idea of using multiple transmitters is something that should be investigated. But, is there enough known to even answer the question asked in the notice concerning potential interference problems. I believe that it is too early to write rules to cover Distributed Transmission Technologies or on channel boosters. But, the FCC should allow the limited use of Special Transmitting Authority to test the theory. If someone wants to try using multiple on-channel transmitters, let them try it. The same goes for on-channel boosters and translators.

15. Secondary or primary status should be dependent on the service. Translators and boosters should be handled on a secondary basis as is now. On-channel transmitters used in a distributed transmission system should have primary status as long as the signal strengths of all of the boosters or transmitters do not exceed signal strengths of the normal coverage area of full power station.

#### Satellite Stations

16. The Commission asked if they should allow satellite stations to switch their transmission from analog to digital at the end of the transition without operating both in analog and digital during the transition. I believe that satellite stations should be able to "flash-cut" to digital operations if the station believes that

the viewers will accept it. I also believe that the FCC should check on the market sizes of the stations that did not apply for there digital allocation. Because many or if not most of these stations are in the smallest markets in the nation, they should also be allowed to "flash-cut to digital transmissions. It is better to allow them to make the last minute switch, then to have the viewers lose the service especially when the viewers go one or two local stations.

17. There is little or no spectrum shortage in the very small markets, so that freeing this spectrum would will not make a large impact on providing new services.

#### DTV Labeling Requirements and Consumer Awareness.

18. This is where I think there is a real problem with the transition. I do not believe that the FCC, the broadcasters or the consumer electronics industry has done a good job of getting the word out on DTV. As I stated in the opening statement, as someone who works in the broadcast industry, I have seldom been asked about DTV. In most stores, DTV is 16 by 9 TV's and DVD players. Some stores promote digital satellite TV and the cable companies promote digital cable. Many of the devices serve different uses and none of them except the 16 by 9 TV's are high definition.

19. TV's should be labeled to whether they are standard or high definition capable, have broadcast or cable digital tuners and if the set is a regular analog set, information on the transition to DTV should be given as well as information on whether the set has video inputs to accept a standard definition signal from a digital set-top box.

#### Closing Summary

20. Actions by the Commission in response to this notice may be pivotal to the success of the transition. We are about half way through the transition with half of the DTV transmitters on the air and the rest on the air by sometime next fall. Now we need the consumer to embrace digital TV in it's various forms. Less than one half percent of the homes can receive DTV over-the-air. This requires action by Broadcasters, electronic manufacturers, and the FCC to educate the public.

21. The Commission needs to help make sure that the election of channels is done for efficient use of the TV band, so that the

public continues to receive the service, it currently enjoys. With the potential changes in the ownership rules, additional channels may be needed to provide additional diversity of ownership and if duopolies are allowed, provide additional outlets for stations that are not able to purchase a second station in their market and gain marketplace equality.

22. Even with the reduction in the TV band, there will still be space in the remainder of the band to provide for more stations in many markets after the transition ends. Because of that potential, TV broadcasting may be the last part of the mass media that can still support expansion. Cable and satellite systems and programming are controlled by a few corporations, as are newspapers. The expense to start up operations in any of these media also is very high. The broadcast radio bands are filled in most places and it is very difficult to provide more than a niche publication in magazines or on the Internet. With a more effective use of the band, growth can come to TV.

23. One problem that the Commission seems to have in the handling of matters concerning TV is that it minimizes the impact over-the-air TV has. Over-the air stations still provide the majority of local programming. The local content is still delivered to many more homes over-the-air than the FCC or even many broadcasters give themselves credit for. The Commission likes to quote that 85% of the home subscribe to some form of multi-channel TV distribution system and only 15% rely on over-the-air for their television viewing. I believe homes that rely on off-the-air usage for local TV station viewing is much higher than 15%. I would guess that at least 30% use off-the-air reception for some of their TV viewing. First, DirecTV and Dish TV do not have local station carriage in most of the TV markets. While the majority of markets that the satellite providers carry local TV from are the largest markets, how many decide to save the 5 or 6 dollars and view local TV with an roof-top or indoor antenna. More people are moving from cable to a dish as cable prices raise which increases the need for off-the air reception for local TV. Satellite may also never provide HDTV in the local station packages. Some MMDS (wireless cable) do not provide local stations in their transmissions. Our local service mounts a UHF antenna with the MMDS antenna. The satellite master antenna system uses off-air with the dish in most places to receiver their product. Many hotels along with apartments houses use this system. Then there are all the RV's, vacation homes, dorm rooms and businesses that are not counted as TV homes, but have TV's

that rely on off-air. Finally many cable systems still pick their local signals off the air.

24. The Commission should be concerned on the effect that its decisions have on the 30% that use over-the air for all or part of there TV viewing. That makes up around 30 to 35 million homes and uncounted other users.

25. Finally, much FCC policy in the past few years have been on the so-called "convergence of media". The FCC as well as Congress and others have planned on all media sharing similar platforms whether TV, Internet, phone or radio. Spectrum auctions including future auctions in the TV band were based on this convergence of media. But, at this time most people others than some of those deeply involved with media still view TV, radio and the Internet as different for the most part only sharing limited capabilities. Convergence may happen, but it may take some time if it ever happens at all. Until that time, the use of the TV broadcast band should remain for use mainly for a video service with minor auxiliary uses. Allocations and management of the band should reflect that TV service is primary use of the band. Because of the nature of digital, modifications to how the band is used can be made later. Auctioning spectrum should not be the primary goal of this transition, but providing better service to the public with clear video and hopefully better reception should be the goal of the transition to digital.

26. The Commissions actions will guide all those involved in the transition to digital in one way or another. I have hopefully addressed issues that are important to me concerning the transition to digital TV.

Respectfully Submitted

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