

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, D.C. 20554

In the Matter of	)	
	)	
Unlicensed Operation in the TV	)	<b>ET Docket No. 04-186</b>
Broadcast Band	)	
	)	
Additional Spectrum for Unlicensed	)	<b>ET Docket No. 02-380</b>
Devices Below 900 MHz and in the	)	
3 GG\Hz Band	)	

To: The Commission (filed electronically)

**COMMENTS OF THE COMMUNITY BROADCASTERS ASSOCIATION**

1. The Community Broadcasters Association (the “CBA”) hereby submits these Comments in response to the Commission’s Further Notice of Proposed Rulemaking (“FNPRM”) in the above-captioned matter, FCC 06-156, released October 18, 2006. The CBA is the trade association of the nation’s Class A and Low Power Television (“LPTV”) stations and represents the interests of those stations in legislative, regulatory, and judicial forums. According to the latest survey by the Commission, Class A and LPTV stations comprise sixty seven percent (67%) of the nation's licensed video broadcast service.<sup>1</sup>

2. The CBA recognizes the desire and importance of creating a fertile ground for new, innovative wireless services, particularly broadband access services, to prosper. However, the CBA does not believe that the best way to accomplish this goal is to litter the broadcast television landscape with unidentifiable, interfering users. To protect incumbent broadcasters in

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<sup>1</sup> This percentage excludes UHF and VHF translators. *See Broadcast Station Totals as of December 31, 2006*, News Release, dated January 26, 2007.

the TV Broadcast Band,<sup>2</sup> the Commission must license white space devices; provide for methods to identify interference sources; and protect incumbent broadcasters, especially Class A and LPTV stations that rely on over-the-air reception.

### **Hierarchy of TV Broadcast Band Users**

3. It is critical that the Commission establish a clear hierarchy of signals in the TV Broadcast Band before the Commission proceeds any further down this path – whether the Commission ultimately decides to license white space devices or not. The incumbent licensees of this spectrum – full power TV, Class A and LPTV licensees – cannot be forced to accept interference from junior users when there are simple ways to prevent such interference – namely, the licensing of white space devices and providing for the ability to identify the devices. Even though LPTV stations are secondary licensees, as incumbent users of the spectrum, they must be ranked higher than any junior users of the TV Broadcast Bands.

4. The protected service areas of Class A and LPTV stations are the predicated Grade A contours.<sup>3</sup> In practice, it is unrealistic to assume that over-the-air viewing of these stations is limited to the area from which they are protected by interference in processing applications for new stations or changes in existing stations. Many Class A and LPTV stations are regularly viewed beyond their Grade A contour, evidenced by responses to advertising offers and requests for music videos, which can be tracked by ZIP Code or telephone number, and more general

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<sup>2</sup> The TV broadcast band, for the purpose of this proceeding, is comprised of the following portions of the VHF and UHF radio spectrum: 54-72 MHz, 76-88 MHz, 174-216 MHz and 470-806 MHz.

<sup>3</sup> See Section 74.707(a) of the Commission's Rules.

feedback, though more difficult to track with precision.<sup>4</sup> The audience of Class A and LPTV stations will assuredly receive interference from white space devices.

5. A majority of Class A and LPTV stations are not carried on cable or DBS systems and their viewers depend upon over-the-air reception. Therefore it is critical to protect reception by viewers wherever they are, including forbidding the operation of white space devices at least to Class A and LPTV stations' Grade B contours.

6. Moreover, actual reception of broadcast licensees' signals, including LPTV signals, not just theoretical reception, must be protected, as the Commission recognizes in its standard for all Part 15 unlicensed systems.

### **Licensing**

7. Licensing of the TV Broadcast Band for use by white space devices is the best way for the FCC to implement new services in the TV Broadcast Band, as incumbent licensees will have some method to identify the sources of any received interference. Once an interference source is identified, the parties can proceed to resolve the problem. Without a means to readily identify interference sources, broadcast licensees will be forced to expend unnecessary time and money to ameliorate the degradation of their signals. Class A and LPTV licensees would be especially harmed by unlicensed devices because: (i) they rely on over-the-air reception and (ii) they do not have the resources, neither in manpower nor monetary, to identify and terminate interference sources.

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<sup>4</sup> The analog mileage separation requirements in Section 73.610 of the Commission's rules protect full power TV stations to only their Grade A contour; but in practice, the Commission recognizes viewing to the Grade B contour, and interference often does not penetrate parts of the Grade B service area.

8. Licensing need not be draconian in its implementation. Licensing does not necessarily necessitate auctions, petitions to deny, and other procedures that can delay the initiation of service to the public. It is possible to license multiple parties to use the same spectrum on a shared basis, thereby avoiding the mutual exclusivity that invokes statutory auction requirements. Additionally, the Commission can require the white space device users to develop spectrum sharing protocols, as the Commission has similarly done with Wi-Fi systems.

9. If the Commission insists on unlicensed operation of the TV Broadcast Band, then there must be a centralized control system that assigns transmit frequencies, and individual transmitters must be allowed to transmit only on channels assigned to them by the central source. Additionally, there must be some way to identify each white space device, such as Internet Protocol addresses assigned to computer modems. The white space devices must be required to transmit this identifier unencrypted every five (5) minutes. This would ensure that incumbent broadcast licensees would have some assurance that their signals would not be degraded by interference from junior users, and if interference is received, that the incumbent licensees could identify the interference sources. The CBA has offered to have their member stations serve as "beacons" for such a centralized control system in the past and it reiterates the offer with these Comments.<sup>5</sup>

10. The Commission notes that it does not have a database that could be queried hundreds of thousands times a day, but it acknowledges that a private company could institute such a database. It is essential that some entity takes on this task, be it the Commission or a private company. The funding of the database could come from a one-time fee assessed at the point of purchase of white spaces devices.

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<sup>5</sup> See Comments of the CBA dated November 30, 2004, para. 6 submitted in this proceeding.

11. The use of a signal sensing system is unworkable because television signal propagation is uneven and the receiving antenna in the signal sensing system is inefficient and cannot identify Class A and LPTV signals. The threshold signal to which a signal sensing system must detect is at least a Grade B signal, because Class A and LPTV stations have significant audiences at those levels, even though the stations are protected only to their Grade A contour. To truly protect Class A and LPTV stations, the signal sensing systems must detect signals weaker than Grade B to take into account the variances of television signal propagation. A signal sensing systems would have to check for signals every five (5) minutes, at a minimum, to somewhat address the television propagation issue.

#### **Direct Pickup Interference and Receiver Desensitization.**

12. Finally, the Commission's comment that white spaces devices will not be likely to operate near TV receivers, where the devices might blanket the receiver, is simply incorrect. *See* FNPRM, at para. 63. For example, there are products in the market that link household computer networks through Wi-Fi connections with owners' television sets.<sup>6</sup> The Wi-Fi devices must be placed close to televisions sets and are transmitting continuously. White space devices may be used in similar ways to allow Internet content to be displayed on television sets, but unlike users of the Wi-Fi devices, owners of the white spaces devices will experience interference on their television sets.

#### **Conclusion**

13. The CBA shares the Commission's enthusiasm and desire for the development of innovative new wireless services. However, the CBA urges the Commission to consider that

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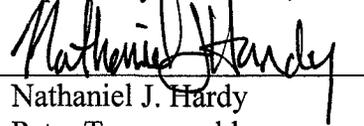
<sup>6</sup> *See* Attachment A, hereto (Connecting a DVR to an Existing Wireless Network, <http://customersupport.tivo.com/LaunchContent.aspx?cid=99dabb90-904a-49c6-b6fe-7c76ffd8142c&anchor=undefined&anchor=undefined> (accessed on January 30, 2007)).

67% of the nation's broadcast video services – Class A and LPTV stations - depend upon over-the-air reception as the rule, rather than the exception. As the CBA stated before in this proceeding, over-the-air viewing must be recognized, taken seriously and protected. The introduction of new services should not come at the detriment of incumbent licensees and the viewers that depend upon their services.

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January 31, 2007

Respectfully submitted,

  
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**ATTACHMENT A**



[Activate or Upgrade TiVo Service](#)

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## Connecting a DVR to an Existing Wireless Network

14-05-01

Search Reference Number

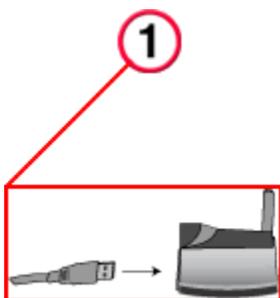
To connect your DVR to your existing wireless network, perform the following steps:



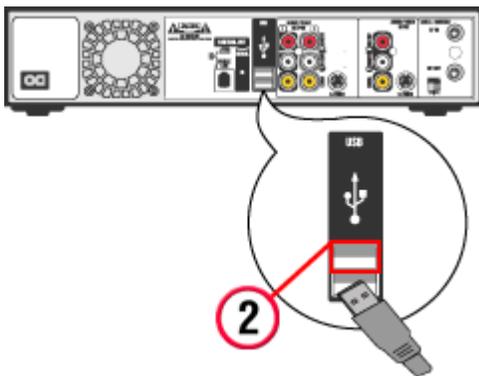
To connect a TiVo Digital Video Recorder (DVR) to a wireless network, you will first need a compatible wireless adapter.

**1**

Connect one end of the USB cable to the USB port on the wireless USB network adapter. For some adapters, the cable may have to be connected a certain direction, so make sure to look for any directional labeling on the USB cable.

**2**

Connect the other end of the USB cable to the USB port on the TiVo DVR. If you have two USB ports on your DVR, you can plug the cable into either port.

**3**

You will need to enter some information about your wireless network so that your DVR can connect to it. For more information go to [Configuring My DVR to Connect to My Wireless Network](#).

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### Other Suggested Articles

- > [Network Error Messages](#)
- > [Getting Started with the TiVoToGo Feature](#)
- > [How Do I Connect a DVR to A Network or Another DVR?](#)
- > [My Phone Jack Is Too Far from the TiVo DVR](#)

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