

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

In the Matter of	)	
	)	
Unlicensed Operation in the TV Broadcast Bands	)	ET Docket No. 04-186
	)	
Additional Spectrum for Unlicensed Devices	)	ET Docket No. 02-380
Below 900 MHz and in the 3 GHz Band	)	

To: Marlene H. Dortch, Secretary  
Attention: Chief, Office of Engineering and Technology

COMMENTS

On October 18, 2006, the Office of Engineering and Technology of the Federal Communications Commission (herein, "Commission") released its First Report and Order ("Order") and Further Notice of Proposed Rule Making ("FNPRM") in the above-captioned proceeding. ABSi (Advanced Broadband Solutions, Inc.) respectfully files these Comments with the Commission in response to the FNPRM.

**I. Background**

ABSi is a U.S.-based firm with offices in South Korea and India which provides services to meet market demands for next generation technology in, among other businesses, interactive mobile multimedia. Most relevant to this proceeding, ABSi has partnered with SM CNS, a South Korean manufacturer of mobile video technology, which manufactures products which operate in channels 7-13. SM CNS offers mobile video technology using one of the leading standards in the world today, T-DMB (Terrestrial Digital Multimedia Broadcasting), as well as DVB-H technology. This T-DMB standard, in particular, was first launched in SM CNS' home country

of South Korea, and is increasingly used in many other countries, including India, China and France. ABSi is working with SM CNS in advancing their interests both in South Korea and other countries. This T-DMB standard provides an exciting technological competitor to other developing standards for mobile video, including DVB-H and Qualcomm's nascent MediaFlo standards.

In the United States, like many other countries around the world, mobile video is now emerging as an important addition to the multimedia mix, to provide choice and convenience to the consumer. Whereas mobile video broadcasters in Seoul, South Korea, have added nearly two million T-DMB mobile video users in the last year alone, the United States is just on the verge of implementing mobile video technologies. Regardless of which mobile video technology consumers ultimately prefer, ABSi believes that operators should have access to sufficient spectrum for mobile video technology, so that consumers can make that choice. ABSi also notes that the Commission has a rich history of allocating spectrum for the public benefit. Clearly, the American public would benefit from development of a robust mobile video marketplace.

In January 2007, both IBM and Intel announced that they have developed technology which dramatically improves the computing skills of microprocessor chips. This means that devices which we use for computing will become smaller and smaller, and cell phones and PDA's will take the place of desktop computers. Such a revolution in computational power only serves to demonstrate that the future is wireless and mobile, rather than tethered and desktop. Traditional lines between watching TV at home and working with a computer monitor at work have become

blurred, and those distinctions will soon vanish as the computer continues to merge with the television into a mobile platform device with a screen. Witness the video iPod, for example, and the iPod phone, as two products which further this convergence of the television and computer.

The FCC has an historic opportunity, therefore, to allocate the prime spectrum available as a result of the DTV transition in the channels 7-13. With the backdrop of international economic competition, it is imperative that the FCC not miss the chance to allocate this spectrum to a service which will make American businesses more competitive relative to their counterparts in other countries. Allocation of this spectrum for unlicensed, wireless devices will not serve that need. ABSi believes that allocation of this spectrum for licensed, mobile video technology will serve that need and will therefore be in the public interest. The money raised at auction of this very valuable spectrum will further serve the American public by contributing tens of millions, and perhaps hundreds of millions, of dollars to the US Treasury.

## **II. The Proposed Allocation for Unlicensed, Wireless Products is Unnecessary and Risky**

ABSi agrees with Qualcomm and the scores of broadcasters, all of whom have previously expressed concern that unlicensed spectrum usage will cause interference to existing licensed use by broadcasters. The Commission gives no proof that such unlicensed devices will be capable of turning off when they are located in a geographic region close to an incumbent broadcaster. Instead, the likelihood of this location-sensing technology working is uncertain, since it is to date largely non-existent.

Even if such technology were developed and perfected, it is subject to consumer over-ride, disablement, and flaws. Consumers could disable the GPS device or spectrum sharing device. Or consumers could likely override it with after-market software or hardware changes. Moreover, the devices themselves could fail, causing rampant interference to licensed broadcast users, and their millions of customers in the television viewing audience. Channel 13, for example, exists in such large cities as Los Angeles and Baltimore, and these stations have indicated a desire to continue to operate on Channel 13 post-transition in February 2009. Indeed, there could be hundreds of potential licensees impacted by the failure of spectrum sensing or location-sensitive technology placed in such unlicensed wireless devices.

Even if this location-sensitive technology worked, ABSi agrees with Qualcomm's view that more unlicensed spectrum is not needed today. See, FNPRM, paragraph 30. Ample spectrum has been allocated for Part 15 devices in recent years. ABSi is aware of no situation in which consumers are being forced to return wi-fi products or garage door openers because of a lack of Part 15 spectrum. To the contrary, allocating this prime resource in channels 7-13 to such unlicensed devices would be a wasted opportunity to deploy new technologies, including mobile video technology, in the United States.

In the FNPRM, paragraph 58, the Commission asks whether, given the amount of time which has passed since the proceeding began, other types of devices should be considered for this spectrum. The Commission goes on to ask if the answer to that same question would be different in light of whether the spectrum is unlicensed or licensed.

As explained below, ABSi believes that the time is right for allocation of spectrum for mobile video broadcast transmissions in those channels vacated by broadcasters. ABSi believes that this service, like any service in this band, should be licensed. ABSi further believes that the licensing process should be through auction, in order to provide clear incentives among participants to develop this prime spectrum resource.

## **II. Licensed, Mobile Video Service is the Most Appropriate Use for this Spectrum.**

It is clear that this spectrum band, channels 7-13, works well for broadcasting video. In the United States, it has long been used for video transmission, on a fixed basis, by incumbent broadcasters. In Seoul, South Korea, two channels of 6 MHz each were allocated for mobile video using T-DMB: Channels 8 and 12. Equipment is available for this band, and proven.

In its FNPRM, the Commission at paragraph 23 stated that it had earlier proposed, “that personal/portable devices operate only when they receive a control signal from a source such as an FM or TV station that identifies the vacant TV channels in that particular area.” Only licensed operation of this spectrum will ensure that such personal/portable devices operate in this manner, and that when they fail to operate in this manner, incumbent broadcasters have a licensee to contact for remedial action, rather than trying to locate the tens of thousands of consumers with these devices in their broadcast area.

In paragraph 24 of the FNPRM, the Commission notes that numerous parties filed comments urging that operation be on a licensed, rather than unlicensed, basis. ABSi believes that the best

method of interference avoidance is licensed usage of spectrum. Any spectrum sensing or location-based technology is bound to fail at some time. When this technology is ubiquitously distributed to tens of thousands of consumers, then that failure is much harder to remedy if the spectrum is unlicensed. The end result of this scenario is that the licensed broadcaster will suffer unacceptable interference levels.

### **III. Conclusion.**

The United States has already allocated ample spectrum for unlicensed devices. The real need for spectrum is the mobile video marketplace. That is the area of consumer demand in the near term future. Video iPods, streaming video, YouTube, webcasts of mainstream content: all these trends in American society are leading to the inexorable moment when consumers watch television on mobile devices like their PDA's and MP-3 players.

Will the United States be ready for this coming explosion of demand? Will it meet the needs for its mobile workforce to have productivity tools, which result from access to real-time video on mobile devices?

ABSi believes that part of the answer to these questions depends upon how the Commission resolves the instant proceeding: whether it allocates more unlicensed spectrum for already existing technologies like Wi-fi, baby monitors and portable house-phones, or whether it takes the bold step of licensing this band for personal/portable users in the coming mobile video/Internet age.

For all the foregoing reasons, ABSi respectfully requests that the Commission auction this spectrum on a licensed basis, and develop suitable rules for mobile video transmission in this band so that incumbents are free of interference and new technologies can flourish.

Respectfully submitted,  
ABSi

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