

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

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

**REPLY COMMENTS OF  
SAMSUNG ELECTRONICS**

Samsung Electronics Co., Ltd.,<sup>1</sup> of South Korea (“Samsung Electronics”), through its U.S. subsidiaries, Samsung Information Systems America and Samsung Electronics America, is pleased to provide the following Reply Comments concerning the FCC Laboratory report *Interference Rejection Thresholds of Consumer Digital Television Receivers Available in 2005 and 2006* (“FCC Report”) and comments filed with the Commission by various parties dated April 30, 2007.

As a leading manufacturer of television sets and electronic devices, Samsung Electronics has a keen interest in digital television (“DTV”) reception and interference. Over-the-air digital television broadcasting is a vital service for U.S. consumers; a source of entertainment, education, and emergency information; and a revolutionary leap forward from analog broadcasting.

We commend the FCC Laboratory for its thorough investigation of the interference susceptibility of recent-model DTV receivers. The information in the FCC Report will be very helpful in managing the transition to all-digital TV broadcasting and enabling new commercial and public safety services in the

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<sup>1</sup> Samsung Electronics Co., Ltd. is a global leader in semiconductor, telecommunication, digital media and digital convergence technologies with 2006 parent company sales of US\$63.4 billion and net income of US\$8.5 billion. Employing approximately 138,000 people in 124 offices in 56 countries, the company consists of five main business units: Digital Media Business, LCD Business, Semiconductor Business, Telecommunication Network Business and Digital Appliance Business. Recognized as one of the fastest growing global brands, Samsung Electronics is a leading producer of digital TVs, memory chips, mobile phones and TFT-LCDs. For more information, please visit <http://www.samsung.com>.

spectrum in the 700 MHz band immediately above the TV spectrum while preventing interference with TV broadcasting. The promise of these new 700 MHz services is one of the great benefits of the transition to all-digital TV broadcasting.

Samsung Electronics also supports new uses of unused spectrum within the TV bands—the “white spaces”—and the innovations they can spur, provided that broadcast TV is not impaired through interference. For this reason, we fully support efforts to allocate unutilized TV-band spectrum to deploy wireless broadband access networks via fixed point-to-multi-point systems, with geo-location requirements on such systems to ensure they do not operate in locations and frequencies where they could cause interference with broadcast TV. Samsung Electronics is participating in the IEEE 802.22 committee responsible for developing a standard for such wireless broadband networks. We are hopeful that a solution for fixed point-to-multipoint broadband services can be found which fully protects the over-air broadcast service from interference.

We are concerned, however, that permitting the use of white spaces for peer-to-peer communications among “personal/portable” devices that are not under the control of an access network poses a higher risk to TV reception. As noted by the National Association of Broadcasters (“NAB”) and the Association for Maximum Service Television (“MSTV”), the FCC Report finds that DTV receivers may be especially susceptible to interference in many parts of a broadcaster’s service area where the signal is relatively weak.<sup>2</sup> Even very low-power emissions from personal/portable devices operating within broadcasters’ service area in locations where the signal is relatively weak could potentially prevent the reception of broadcast DTV signals.

The FCC Report is a valuable first step, but significantly more testing is necessary before the Commission should permit unlicensed uses of the white spaces by personal/portable devices. The FCC Report illustrates the potential for interference in the most recent DTV receivers; however, many of the millions of DTV receivers in consumers’ homes today are older than these models and may be

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<sup>2</sup> See Comments of MSTV and NAB to the OET Measurement Report on DTV Receiver Interference Rejection Capabilities, ET Docket No. 04-186 (filed April 30, 2007) (“MSTV/NAB Comments”), pp. 2-3.

even more susceptible to interference. Moreover, the FCC Laboratory did not perform tests utilizing prototype unlicensed white space devices as sources of interference, and such testing is still necessary. As NAB and MSTV noted, such testing should evaluate the potential for interference when multiple personal/portable devices are operating simultaneously near a DTV receiver.<sup>3</sup>

Interference with TV broadcasting from personal/portable unlicensed devices would be very undesirable at any time, and especially so at this critical stage of the DTV transition when consumers are buying new DTVs and digital-to-analog converters and are expecting them to work well for receiving over-the-air broadcasts. Moreover, Samsung Electronics has developed an enhancement to the U.S. Advanced Television Systems Committee (“ATSC”) DTV standard which enables mobile reception of a broadcaster’s DTV signal,<sup>4</sup> and we are working within the ATSC to develop an open standard based on this new technology. As mobile services become a growing part of U.S. DTV broadcasting, protection of DTV reception from interference will be even more important than today.

Samsung Electronics welcomes and applauds the FCC Report as a significant step forward to support innovative new services while protecting TV broadcast services.

Respectfully submitted,

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<sup>3</sup> See MSTV/NAB Comments, pp. 4-5.

<sup>4</sup> See, for example, “A-VSB Takes Digital TV on the Road,” *Sound and Vision*, January 15, 2007; “Samsung’s New Mobile Television Technology: A Road Test,” *San Francisco Chronicle*, January 7, 2007.