DowLohnes

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September 19, 2007

VIA ELECTRONIC FILING

Marlene H. Dortch, Esquire
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Notification of Ex Parte Communication
ET Docket Nos. 04-186 and 02-380

Dear Ms. Dortch:

This is to advise you, in accordance with Section 1.1206 of the FCC's rules, on September 18, 2007, Sterling Davis, Vice President, Engineering of Cox Broadcasting, Inc. ("Cox") and Lauren M. Van Wazer, Chief Policy and Technology Counsel for Cox Enterprises, Inc., met with Renee Crittendon of Commissioner Adelstein's office; Wayne Leighton and Amy Blankenship of Commissioner Tate's office; and Steve Jones, Steve Martin, Tom Phillips, Rashmi Doshi, Bruce Romano, Alan Stillwell, Ron Chase, Ira Keltz, Hugh Van Tuyl, Ahmed Lahjouji, Geraldine Matise, and Nicholas Oros of the Office of Engineering and Technology ("OET") to review the arguments that Cox has included in its Comments in the above-referenced dockets and the presentation attached hereto.

Cox stressed that there remain too many unanswered technical questions to permit personal and portable devices at this time, and that significant additional testing and analysis related to both broadcast television and cable services is required to address some of the technical findings in OET's public reports, as well as to address potential interference issues that have not yet been studied. Moreover, the technical questions that have been answered do not support permitting new personal and portable devices. The state of these cognitive radio technologies – as demonstrated by OET's laboratory tests – is too immature to ensure protection of broadcast and cable services. Cox further emphasized that it is important to recognize that this proceeding takes place against the backdrop of the complex and challenging DTV transition, in which government and industry are working hard to ensure that the digital transition is seamless for all consumers. Enabling personal and portable devices could effectively undermine these efforts – introducing considerable confusion, as well as degrading existing services, to the detriment of American consumers. Enabling fixed services only would be a significant win for the American public, since these fixed services can help facilitate broadband for rural America.

As required by Section 1.1206(b), as modified by the policies applicable to electronic filings, one electronic copy of this letter is being submitted for each above-referenced docket.

Very truly yours,

Robert J. Folliard, III

cc (by email):

Renee Crittendon
Wayne Leighton
Amy Blankenship
Julius Knapp
Steve Jones
Steve Martin
Tom Phillips
Rashmi Doshi
Bruce Romano
Alan Stillwell
Ron Chase
Ira Keltz
Hugh Van Tuyl
Ahmed Lahjouji
Geraldine Matise
Nicholas Oros

Unlicensed Devices in the TV Band

Cox Television and
Cox Communications, Inc.

Ex Parte Presentation

September 18, 2007

Overview

- Cox Background
- DTV Transition Implications
- Broadcast -- Interference with Over-the-Air Reception
- Cable -- Interference with Direct Pickup and Cable Headend
- Impact on Consumers
- Conclusion

Cox Background

- Cox Television
  - 15 stations in 11 diverse markets – including Seattle, Oakland, Reno, El Paso, Dayton, Pittsburgh, Charlotte, Orlando, and Atlanta – cover 10% of the U.S. population
  - Longstanding commitment to DTV – first digital station, WSB in Atlanta, went on the air in December 1997
- Cox Communications, Inc.
  - Third largest cable operator serving 35 diverse markets including Orange County, Las Vegas, Tulsa, Northwest Arkansas, New Orleans, and Northern Virginia
  - 99.4% of homes passed have access to Cox broadband

DTV Transition Implications

- Government and industry are working hard to ensure that the digital television transition is seamless for consumers – with the overarching goal of all parties to make sure that consumers get access to all of the benefits of enhanced services that digital technologies can provide

- Important when addressing whether to allow personal and portable unlicensed devices to recognize the contextual backdrop of the DTV transition – everything's happening in the same bands with the same affected parties, and to what end?

DTV Transition Implications – Ensuring Smooth Transition is Challenging and Complex Task

- **Regulatory issues remain** – although much of necessary work has been done, still some important open issues
  - DTV Third Periodic Review NPRM – significant issues teed up -- *e.g.*, for 40% of stations moving to new channels uncertainties in construction timelines (top-mounted analog antenna to top-mounted digital antenna – when can switch be made?); implications of 0.5% interference protection standard
- **Operations issues** – for both broadcasters and cable services providers
- **Consumer issues** –
  - Consumer education – both broadcast and cable; upcoming FCC and NTIA workshops; cable industry launch of $22 million consumer education program
  - DTV Converter Box Coupon program – NTIA-led effort; potentially nearly $1.4 billion program

Personal and Portable Devices –Interference with Over-the-Air TV Reception

- Interference with Over-the-Air Reception -- Proposed Unlicensed Devices Have Potential for Interference within 84% of a Station's Coverage Area for Adjacent Channel Operations (with 100 mW transmit power)
- Technical Issues -- Some Highlights:
  - Spectrum Sensing –
    - Reliability – performance problems of prototype devices
    - Detection Thresholds – what's appropriate?
      - IEEE 802.22 (fixed) suggests -116 dBm, and assumes no co-channel or adjacent channel operation; acknowledges need for additional non-sensing means of detecting signals, including geolocation or professional installation
      - Addressing signal level variability – how?
      - Even if agree on what's appropriate, how do you account for inability of detection of DTV signal if blocked from "view" of unlicensed device – hidden node problem
    - Channel scan times – Prototype devices 4-14 minutes – too long, need to re-do each time after move device

Personal and Portable Devices – Interference with Cable Services

- Interference with cable services with Direct-pickup and Cable Headend
- Technical Issues – Some highlights
  - Lack of TV shielding from unlicensed device transmissions leads to interference; problematic because no “white spaces” for cable
  - Transmit power – 10-20 mW too much; additional testing needed at 5 mW per OET report
  - Could undermine must carry -- Cable headends receive broadcast signals from beyond Grade B contour, including for must carry stations – want coordination outside Grade B contour on both fixed and portable
  - Spectrum Sensing – not clear that spectrum sensing alone will be enough to protect reception at fringe-area cable headends – want geolocation carve out at cable operators’ reception sites
  - Interference occurs over short distances – particular problem in MDU setting

Impact on Consumers -- Use consumer-centric focus to guide analysis

- Who are the relevant consumers? Can all of their needs be accommodated?
  - Over-the-air television viewers?
  - Cable subscribers?
  - Rural broadband users?
  - Potential users of unlicensed personal and portable devices?
- How sure is the Commission that enabling new services for potential consumers of unlicensed personal and portable devices won't adversely impact other consumers?
  - Lab studies suggest that proposed technology is too immature for large-scale consumer devices and, at a minimum, additional testing required. The stakes are high – over-the-air viewers and cable subscribers could have TV channels that experience significant interference or pixelation or, in some cases, go dark.
- Do any of these consumers have readily available alternatives for the applicable services? Are alternatives likely to be developed in the future? *E.g.*, open access band in 700 MHz proceeding as possible avenue for personal and portable device development.
- How do the needs of potential consumers of personal and portable devices balance with the needs of American TV viewers for a smooth DTV transition?

Conclusion

- Too many unanswered questions – appropriate sensing detection threshold; direct pickup; impact on cable headends; DTV converter box sensitivity
- Questions that have been answered haven't supported permitting new devices
- Could effectively undermine already complicated DTV transition
- Consumers could be the real losers
- Enabling fixed services only is still a win -- Commission still able to help facilitate broadband for rural America