BINGHAM

Catherine Wang
Direct Phone: 202.373.6037
Direct Fax: 202.373.6001
catherine.wang@bingham.com

September 25, 2008

VIA ELECTRONIC FILING

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

Re: ***EX PARTE* NOTICE**
ET Docket No. 04-186; Unlicensed Operation in the TV Broadcast Bands

Dear Ms. Dortch:

On September 24th, 2008, Shure Incorporated ("Shure") met with the Office of Engineering and Technology ("OET") to discuss Docket No. 04-186. Julius Knapp, Alan Stillwell, Ira Keltz, Geraldine Matise and Rashmi Doshi were in attendance on behalf of OET. Attending this meeting on behalf of Shure were Mark Brunner, Senior Director, Global Public Relations, Ahren Hartman, Director, Platform Planning and Edgar Reihl, Principal Engineer, along with Catherine Wang and Tim Bransford of Bingham McCutchen LLP, outside counsel to Shure.

During this meeting, we discussed the inability of spectrum sensing technology to reliably protect wireless microphones from interference as observed during the FCC's laboratory and field tests. We discussed a new approach, building on geolocation and protected spectrum concepts already raised by some parties and recommendations that Shure made earlier in this proceeding, to addressing wireless microphone interference. As detailed in the attached presentation, this approach provides a workable interference solution for wireless microphones because it accommodates the different ways wireless microphones are used, provides for very limited but minimally sufficient interference-free spectrum for wireless microphone operations, offers a much-needed transition path for wireless microphones in the 700 MHz band, can coexist with other solutions that the Commission devises to address interference to other incumbents, can be implemented in a licensed or unlicensed context, and accommodates the Commission's desire to open the TV spectrum to new uses without causing interference to incumbent users.

Boston
Hartford
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Orange County
San Francisco
Santa Monica
Silicon Valley
Tokyo
Walnut Creek
Washington

Bingham McCutchen LLP
2020 K Street NW
Washington, DC
20006-1806

T 202.373.6000
F 202.373.6001
bingham.com

If you have any questions regarding this meeting, please do not hesitate to contact the undersigned.

Very truly yours,

/s/

Catherine Wang
Timothy L. Bransford

cc (by email): Julius Knapp
Alan Stillwell
Ira Keltz
Geraldine Matise
Rashmi Doshi

White Spaces Solutions

Shure Incorporated

September 24, 2008

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Status of Proposed Microphone Solutions

- The extensive record in ET 04-186 shows that spectrum sensing-based technology does not resolve complex interference problems in the "white spaces."
  - Many incumbents are at risk with sensing: DTV, wireless microphones, medical devices, radio astronomy
  - Poor results of FCC spectrum sensing tests with wireless microphones, DTV
    - Beacons have not been tested
    - Beacons are not a wireless microphone solution – they depend on spectrum sensing and suffer from similar sensing problems

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Status of Proposed Microphone Solutions

- So far, the only proposal that would protect wireless microphones is one that keeps adjacent TV channels clear of new unlicensed devices

- A workable solution is needed to address wireless microphones in the core TV bands and those transitioning from the 700 MHz band

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Shure White Spaces Proposal Overview

- A new approach is called for. . .
  - All White Space devices are managed by geolocation and online database technology
  - White Space devices may not operate on Protected Channels identified in the database as either:
    - TV
    - Medical telemetry/radio astronomy
    - Wireless Microphone channels

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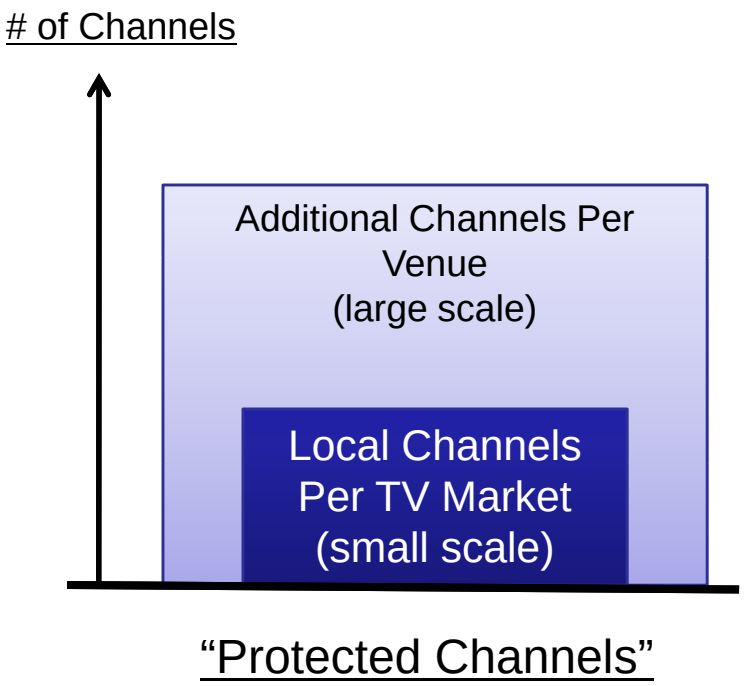
Shure White Spaces Proposal Overview

- Protected Channels for wireless microphones are comprised of two parts:
  1) Locally available VHF and UHF TV channels per market for small scale operations

     -- AND --

  2) Additional channels registered in the database per venue for large scale operations



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Shure White Spaces Proposal Overview

- Protected Channel details:
  - Small Scale operation: Locally available VHF and UHF channels per market
    - For three years following effective FCC order, 6 UHF and 2 VHF channels protected
      - Supports effective 700 MHz transition
    - After three years, reduced to 4 UHF and 2 VHF channels
    - To further conserve spectrum, center UHF protected channels around Channel 37 where available, VHF channels around Channel 11
  - Large Scale operation: TV Channels Protected in the Geolocation Online Database per venue
    - Channels in use by wireless microphones at large scale events, limited by the duration and location of event, and are licensed pursuant to updated Part 74 rules.

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A Workable Solution for Wireless Microphones

- Public interest requires that the original FCC rules be replaced with a workable licensing scheme that reflects today's wireless microphone use:
  - Update Part 74 licensing to reflect expanded eligibility to cover large scale uses that will be protected by geolocation and online database registration
  - "Licensing by operation of rule" pursuant to Section 307(e) of the Act eliminates cumbersome filing requirements for small scale wireless microphone operations in locally specified protected UHF and VHF channels (similar to medical devices)

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A Workable Solution for Wireless Microphones

- This approach provides:
  - Protection that accommodates the different ways wireless microphones are used, *e.g*., roaming news, sports, smaller uses vs. pre-scheduled, large events
  - *Very limited but minimally sufficient* interference-free spectrum for microphone use
  - 700 MHz microphone users a much needed path to support transition of 700 MHz band use per WT 08-186
  - Incentives to manufacturers to increase spectrum efficiency over time

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A Workable Solution for Wireless Microphones

- This approach:
  - Can coexist with other solutions the Commission may adopt to address interference concerns of other incumbent uses
  - Accommodates the Commission's desire to open the TV spectrum to new uses without causing interference to incumbent microphone users
  - Can apply with either a licensed or unlicensed approach to new uses of the unassigned TV channels.

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