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 Below 900 MHz and in the	**) ET Docket No. 02-380**
3 GHz Band	**)**

CONSOLIDATED OPPOSITION TO PETITIONS FOR RECONSIDERATION

Key Bridge Global LLC ("Key Bridge") hereby respectfully submits its consolidated Opposition to certain of the Petitions for Reconsideration filed in the captioned proceeding. The Petitions were filed in response to the Commission's Report and Order ("Order") in the above referenced docket released on November 14, 2008.[1]

As a potential TV Broadcast Bands geo-location database ("Database") administrator, Key Bridge supports the FCC's approach of leveraging industry's capacity for innovation and cooperation to resolve technical problems in a competitive environment. We also support the Commission's balanced approach of requiring strict incumbent protections while providing sufficient flexibility for industry to discover the most efficient methods for operational employment of new unlicensed TV Bands infrastructure and services.

---

[1] *See Unlicensed Operation in the TV Broadcast Bands; Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band*, Second Report and Order and Memorandum Opinion and Order, 23 FCC Rcd 16807 (2008).

Summary

From the perspective of a potential Database administrator the Petition concerns relevant to us follow several broad themes.

- Concern regarding Database authority in the case of multiple administrators
- Active channel management versus responding to regularly scheduled inquiries
- Requirement of certain non-essential features and disclosure of confidential information
- Requiring certain obstacles to a commercially sustainable implementation

Excluding our own, we do not believe any of the petitioner's Database-related concerns warrant a rule change. Nevertheless, we believe most Database-related requests raised by petitioners are benign and could be easily accommodated if adopted. We wish however to express our specific and strong objection to the several Public Interest Spectrum Coalition requests which we believe would severely hinder the Commission's goals for commercial exploitation of unlicensed TV Bands frequencies.

Data Integrity Across Multiple Databases

The Society of Broadcast Engineers ("SBE") expresses their concern that "Multiple database managers would complicate device design and the ability to prevent … rogue database operators." SBE also claims that multiple databases will impose a burden on TV stations to ensure all databases are accurate.[2]

Key Bridge respectfully disagrees with SBE and offers as an example the Internet Forward and Reverse Domain Name system, a globally distributed public information service

---

[2] *Petition for Reconsideration of the Society of Broadcast Engineers, Inc.*, ET Docket No. 04-186, 20 (Mar. 19, 2009).

with multiple, privately operated "root" database servers. While the DNS system is not a perfect metaphor to the envisioned TV Bands Database, the Commission should note that distributed, Internet-based public information infrastructures have a remarkable record of success and that industry groups are actively working to develop a scalable, distributed TV Bands Database architecture.

Key Bridge believes there are no technical reasons why the Commission should not proceed with its original intent to allow multiple commercial Database administrators to compete on value while also cooperating to ensure data integrity and synchronization.

Active vs. Passive Channel Management

IEEE 802 and the WiFi Alliance suggest a Database administrator should be responsible for making channel assignment changes in near real-time for operational Fixed and Type II Television Band Devices (TVBDs).[3] Similarly, the Society of Broadcast Engineers complains the Order does not enable channels to be effectively cleared for nomadic Part-74 microphones for news gathering.[4]

This active management concept can be accommodated and would not create a material burden on the technical infrastructure of a Database administrator. Furthermore, such capability may provide a helpful interference resolution and enforcement mechanism for the Commission. However, Key Bridge strongly cautions that the commercial scenarios described call for a Database administrator with significantly expanded operational authority than we believe either the Commission or Industry had envisioned. Specifically, the authority necessary

---

[3] *See IEEE 802 Petition for Reconsideration*, ET Docket No. 04-186, 6 (Mar. 19, 2009); *Wi-Fi Alliance Petition for Reconsideration*, ET Docket No. 04-186, 3 (Mar. 19, 2009).

[4] *See SBE Petition* at 23.

to implement the described scenarios implies a Database administrator will have near real-time operational influence over all Fixed and Type II TV band devices and consequentially over the networks and systems they support.

Key Bridge respectfully suggests that the employment of a proactive "channel clearing" capability, if adopted, should be reserved exclusively to the Commission and used only for official and emergency purposes but not for common operational scenarios as described by the petitioners.

Enhanced Database Messaging

The Wireless ISP Association ("WISPA") and Public Interest Spectrum Coalition ("PISC") request additional content in the database channel list messages: WISPA asks for channel assignments to be made on a first-come, first-served basis while PISC requests that estimated signal strengths for adjacent and surrounding signals be included.[5] Key Bridge respectfully submits that such enhanced database messaging is neither precluded by the Order nor necessary for its successful implementation. We recommend the Commission maintain status quo and leave industry free to discover, implement and price whatever value-added features the market may demand or require.

Balancing Public vs. Private Interest and Incentive

The Public Interest Spectrum Coalition requests that all information in the database should be public record. The PISC claims a public desire to inspect and verify Database accuracy

---

[5] *See Petition for Reconsideration of the Public Interest Spectrum Coalition ("PISC")*, ET Docket No 04-186, 16-17 (Mar. 19, 2009); *See Petition for Reconsideration of the Wireless Internet Service Providers Association ("WISPA")*, ET Docket No. 04-186, 16-18 (Mar. 19, 2009).

and correctly notes that TV Bands licensing data originates from the FCC. However, the PISC fails to consider several important details and this request should be rejected.

Firstly, the Order obligates Database administrators to import and treat as authoritative FCC source data (CDBS, ULS, etc), which PISC notes is already public record. Key Bridge suggests that PISC's offer for third-party verification would be most effectively directed to the Commission's authoritative source data.

Secondly, Key Bridge believes that certain registrations in the Database will contain sensitive or otherwise confidential company information. This includes the mandatory registration details of Fixed TVBD sites and the voluntary registration details about Cable and MVPD head-ends plus BAS receivers, among others. The PISC petition does not acknowledge that many Cable, MVPC and wireless ISP head-ends are un-manned yet can support several thousand customers. Such physical site locations and their technical infrastructure are almost always considered commercially sensitive and confidential. PISC also fails to note that unlicensed wireless ISPs jealously guard their antenna siting and network coverage details and do not wish them to be shared with competitors.

Key Bridge endorses the vetting of already available FCC public data but cautions that requiring public disclosure of voluntary registration information could create a business security and competitive risk the Cable, Satellite and Wireless ISP industry groups will not tolerate. Such a rule change would impede TV Band adoption and should be rejected.

Non-Profit Set Aside

PISC goes on to advise that the Database administrator function should be deconstructed and that a non-profit organization should be preferred and licensed for

unforeseen query services.[6] Key Bridge respectfully submits that both suggestions are not constructive to the Proceeding and should be rejected. Rather, we support the FCC's original intent and present strategy to foster competition among more than one fully qualified Database administrator, but not to create a situation with potentially functionally overlapping but only partially competent information service providers.

Limitation on Fee Structure

Lastly, PISC suggests that Database fees must be limited to a one-time charge. This should also be rejected. Restricting fee structures only displaces how fees are paid but does not lead to reduced costs. Key Bridge believes the FCC's strategy for competitive Database administrators will ensure services are made widely available and that fee amounts will settle at fair yet commercially sustainable levels. The Commission has struck a good balance in specifying certain allowed and disallowed fee-based services while granting enough flexibility for incumbents, Database administrators, equipment manufacturers and service providers to implement the FCC's requirements and intentions in a commercially sustainable manner. Key Bridge believes the Commission's goals can best be realized when parties are allowed to freely negotiate amongst themselves to establish mutually acceptable price levels and fee structures.

Conclusion

Key Bridge applauds the Commission's efforts to develop rules that introduce new devices in TV broadcast bands while ensuring that incumbent operators receive meaningful interference protection. From the perspective of a commercial Database administrator, Key

---

[6] *See PISC Petition* at 15.

Bridge believes that while several of the Petitions are noteworthy, few are necessary and several would be counterproductive. We believe the Order implements a framework that enables the development of a functional and competent Database, and at this stage the Commission should continue to focus on enabling technically sound, commercially sustainable and price competitive Database administrators. The Commission should reject unnecessary feature-creep and non-competitive or counterproductive restrictions.

_____/s/_____

Jesse M. Caulfield
President & Owner
Key Bridge Global, LLC
1600 Tysons Blvd., Suite 450
McLean, VA 22102
Phone: 703 414 3500
Fax: 703 414 3501
Email: jesse.caulfield@keybridgeglobal.com

CERTIFICATE OF SERVICE

I, Jesse M. Caulfield, do hereby certify that on this 8th day of May, 2009, I caused a copy of the foregoing "Opposition to Petitions for Reconsideration" to be sent via first-class U.S. Mail, postage prepaid, to the following.

Haiyun Tang, Ph.D.
1815 McCandless Drive
Milpitas, CA 95035

Adaptrum, Inc.

Peter Tannenwald
Fletcher, Heald & Hildreth, P.L.C.
1300 N. 17th St., 11th Floor
Arlington, VA 22209-3801

Counsel to Community Broadcasters & Association

R. Paul Margie
Edmond J. Thomas
S. Roberts Carter
Harris, Wiltshire & Grannis LLP
1200 18th Street, N.W.
Washington, D.C. 20036

Counsel to Dell and Microsoft

Susan Eid
Stacy R. Fuller
444 N. Capitol St., N.W.
Suite 728
Washington, D.C. 20001

DIRECTV, Inc.

Michael Lynch
108 Brentwood Court
Allen, TX 75103

Advisory Group
IEEE SA Technical Liaison to ITU-R

Catherine Wang
Tim Bransford
Bingham McCutchen LLP
2020 K Street, NW
Washington, DC 20006

Counsel to Shure Incorporated

Steve B. Sharkey
Robert D. Kubik
1455 Pennsylvania Avenue, N.W.
Suite 900
Washington, D.C. 20004

Motorola, Inc.

Neal M. Goldberg
Loretta P. Polk
25 Massachusetts Avenue, N.W. - Suite 100
Washington, D.C. 20001-1431

Counsel for the National Cable & Telecommunications Association

Linda Kinney
Brad Gillen
1233 20th Street, N.W.
Suite 302
Washington, D.C. 20036

DISH Network LLC

Harold Feld
1875 Connecticut Avenue, N.W.
Suite 650
Washington, D.C. 20009

Public Knowledge

Rich Kennedy
7305 Napier Trail
Austin, TX 78729

Wi-Fi Alliance Regulatory Task Group

Dane E. Ericksen
18755 Park Tree Lane
Sonoma, CA 95476

Michele C. Farquhar
Paul A. Werner
Mark W. Brennan
Hogan & Hartson LLP
555 13th Street N.W.
Washington, DC 20004

Counsel to FiberTower Corporation; Rural Telecommunications Group, Inc; COMPTEL; and Sprint Nextel Corporation

Michael Calabrese
Sascha Meinrath
Benjamin Lennett
1899 L Street, N.W.
Washington, D.C. 20036

New American Foundation

Stephen E. Coran
Rini Coran, PC
1615 L Street, N.W., Suite 1325
Washington, D.C. 20036

Counsel to the Wireless Internet Service Providers Association

Richard A. Rudman
11054 Ventura Boulevard, Suite 700
Studio City, CA 91604

Barry Thomas, CPBE
Christopher D. Imlay, Esq.
Booth, Freret, Imlay & Tepper, P.C.
14356 Cape May Rd.
Silver Spring, MD 20904

Counsel to the Society of Broadcast Engineers, Inc.

David Donovan
Bruce Franca
VictorTawil
4100 Wisconsin Avenue, N.W.
Washington, DC 20016

Association for Maximum Service Television, Inc.