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SHERIFF



MARLON PARKS – BRIAN WHITE
FIRST DEPUTY CHIEF OF POLICE

COOK COUNTY SHERIFF'S POLICE DEPARTMENT

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21 December 2018

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

REF: GN Docket # 17-183
"Expanding flexible use in Mid-Band Spectrum
between 3.7 and 24.0 GHz"
ET Docket # 18-295
"Unlicensed use of the 6 GHz Band"

This is an Ex Parte Communication

Ms. Dortch:

For purposes of introduction, I am the Supervisor in Charge of the Cook County Sheriff Interoperable Radio Systems. I am filing this letter on behalf of The Honorable Thomas J. Dart, Sheriff of Cook County.

I am writing you to express our opposition to the proposals contained in the ex parte document "Frequency Sharing for Radio Local Area Networks in the 6GHz band; written January 2018. This was prepared by RKF Engineering LLC on behalf of various Corporations such as: Apple Inc., Broadcom LTD, Facebook, Inc., Google LLC, Hewlett Packard, Qualcomm LLC, and the Microsoft Corporation.

In summary, we have learned that the proposing parties, Apple Inc. et al. intend to deploy large numbers of high powered, uncontrolled, unregulated, and unlicensed RLAN devices in the 6 GHz bands; with an eye on possibly overtaking other licensed spectrum concurrent with their business models. We strongly oppose this.

First as a matter of record, the Cook County Sheriff's Department operates numerous Mission Critical Public Safety Radio Systems that serve 135 municipalities with life safety radio communications in Cook County Illinois with a population of approximately 5.2 million citizens.

The Radio Systems serve all aspects of the Sheriff's Department as far as Police, Courts, Corrections and Community Based Corrections. Many other Cook County agencies such as Homeland Security, Public Health, States Attorney, and Highway Departments all depend on the Sheriff's Radio Systems for their day to day operations. The City of Chicago Office of Emergency Management and Communications heavily utilizes the Sheriff's Radio Systems for their day to day operations. Over 50 Suburban Police and Fire agencies are dispatched over the Sheriff's Radio Systems. The United States Government has Law Enforcement Agencies such as the FBI, DEA, ICE and the United States Marshals on the Cook County Sheriff's Radio Systems.

All told, the Cook County Sheriff's Radio Systems serve over 11,000 licensed portable, mobile and control station subscribers units; and those units transmit over 80,000 messages a day over the various Radio Systems.

(Continued to Page 2)

21 December 2018

(Continued from page 1)

From 2001 to date, the financial impact to the taxpayer for the purchase and maintenance of the Sheriff's Radio Systems is well over 80 Million Dollars. The safety and security of our citizens is undeniably directly affected by the proper and efficient operation of these radio systems.

In light of this, I respectfully request the Federal Communications Commission to carefully consider the following facts at a minimum while addressing the above dockets:

1. The Cook County is a properly coordinated and licensed incumbent, authorized to utilize radio spectrum in the 6 and 11 GHz microwave communications bands as a critical link between radio sites throughout our jurisdiction. To do this, the Cook County Sheriff possesses 26 different FCC licenses that cover all of our radio system infrastructure and yet an additional license utilized by the Sheriff's Police Bomb Squad Robot equipment.

The Microwave "backhaul network" has proven itself to be resilient in all types of weather conditions and is many times more reliable than our former use of leased T-1 Telephone lines. Even if the business model were to change so aggressively that we were forced to revert back to T-1 telephone circuitry, we would likely not be able to do so as AT&T and the other vendors are doing away with these leased high capacity copper circuits. The Cook County Sheriff's Department and the thousands of other First Responders around the nation depend on clean clear and reliable Microwave back haul.

2. Infrastructure maintenance notwithstanding, it is a daily challenge in terms of tax dollars spent on manpower, equipment and materials to ensure that the Sheriff's equipment is not plagued with interference. Interference is difficult enough to locate and eradicate knowing who and where the other incumbents are located. If the Commission were to cause the licensing rules to be diminished in any way by relaxing the rules for unlicensed use, it will be impossible for virtually any microwave user (licensed or otherwise) to identify and stop interference from unlicensed equipment. This presents a clear danger to the safety of our First Responders that use the Sheriff's Radio Systems and ultimately the Citizens of Cook County.
3. We respectfully urge the Federal Communications Commission to adopt the requirement for the presence of Automatic Frequency Control (or AFC) for all unlicensed devices in the 5925-6425 MHz and 6525-6875 MHz bands. The Commission's own analysis via both the Office of Engineering and Technology (OET) and that of the Fixed Wireless Communications Coalition and others that you have on file with the Commission all prove that AFC is needed regardless of the power level or location of the unlicensed device.

The Cook County Sheriff took these findings quite seriously and purposely went above and beyond the coordination and licensing requirements, and specified both AFC and Automatic Transmit Power Control (or ATPC) in all Microwave backhaul equipment. This was done to ensure that the Sheriff's Department vigilantly maintains the licensed parameters and quality of our Microwave emissions. This was of great additional cost to the tax payer, and was monies well spent. To date, the Cook County Sheriff's Department has never received a single complaint from any other licensed incumbent accusing our Microwave Equipment of causing interference to any other licensee.

4. We respectfully urge the Federal Communications Commission to ensure that the database used for the AFC system is accurate and up-to-date before unlicensed devices are installed.

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21 December 2018

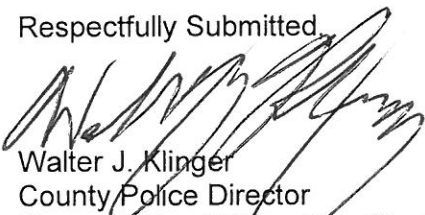
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This means of course that any registry system could not be static in nature. A document or database that has no provisions for update is of no use to any service, regulator or industry. The "AFC Database" would need to be updated regularly to ensure that any new or significantly modified fixed RF links are promptly added to the database.

5. There needs to be a provision for a STA system that will allow other users to challenge any new source of RF signals when interference is suspected. I can tell you from personal experience that the STA system works well. Problems are identified and addressed before a more permanent FCC Station License is issued. Construction Notification is also useful as it tells other incumbents that the new licensed emitter is on the air and presenting the coordinated and licensed signal as per the license document. Construction Notification removes all doubt from other incumbents particularly when addressing adjacent and 2nd adjacent channel interference; as well as noise floor increases, and Intermodulation Distortion Mixes.
6. We respectfully urge the Federal Communications Commission to carefully review the data provided by the Fixed Wireless Communications Commission on the need to ensure that fixed link adjacent channels are fully protected.
7. Looking to the future of Mission Critical Public Safety Communications: the FIRST NET Project will invariably require large swaths of coordinated and licensed backhaul in order to build out our very first nationwide radio communications network. Without clean and clear licensed backhaul spectrum, this nationwide network will be dead on arrival. The Federal Government has invested 47 Billion Dollars in FIRST NET, and this amount is growing exponentially. The very thought of allowing unlicensed emitters on or near licensed spectrum is counterproductive to our nation's goal of seamless interoperable radio communications from coast to coast.

In closing, the Cook County Sheriff's Department remains adamantly opposed to all relevant sections of GN Docket #17-183 and ET Docket 18-295 and respectfully requests that these filings be dismissed immediately with prejudice.

Respectfully Submitted,



Walter J. Klinger
County Police Director
Commanding Officer, Sheriff's Radio Systems Section/E911 Center
Cook County Sheriff's Police Department