

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)
)
Request by Miami-Dade County for Waiver)
of the FCC's Rules In Order To) PS Docket No. 06-229
Deploy A Network In The 700 MHz Public)
Safety Broadband Spectrum)

REQUEST FOR WAIVER—EXPEDITED ACTION REQUESTED

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I. SUMMARY OF REQUEST FOR WAIVER.

Pursuant to Section 47 C.F.R. § 1.925(b)(3), Miami-Dade County, Florida (“Miami-Dade”) respectfully requests that the Federal Communications Commission (“FCC”) waive its 700 MHz public safety early deployment rules¹ and provide Miami-Dade the authority to deploy and operate an advanced broadband wireless data network dedicated to the County’s police, fire, emergency medical, and other public safety services on the 763-768/793-798 MHz band class 14 segment.² The network would be deployed, managed, and maintained under the supervision of Miami-Dade. The requested waiver will serve the public interest by providing a countywide integrated wireless broadband data network for public safety. Depriving Miami-Dade the spectrum and opportunity to deploy this powerful countywide wireless data network will impede the county’s ability to fully protect the citizens of Miami-Dade, and provide rapid response and recovery to disasters of all types and sizes—man-made or natural, local or large scale.

¹ See, e.g., 47 C.F.R. § 27.1330 (2009) and 47 C.F.R. § 90.1430 (2009).

² In the FCC’s Order granting 21 Waivers for early deployment in the 700 MHz public safety broadband spectrum the FCC stated that it expects the Public Safety and Homeland Security Bureau “will be able to act on future waiver requests quickly and consistent with the [FCC’s decision], after issuance of an appropriate Public Notice seeking comment when a new waiver is received.” Requests for Waiver of Various Petitioners to Allow the Establishment of 700 MHz Interoperable Public Safety Wireless Broadband Networks, *Order*, PS Docket 06-229, FCC 10-79, ¶ 68 (rel. May 12, 2010) (“*Waiver Order*”).

II. MIAMI-DADE NEEDS BETTER PUBLIC SAFETY BROADBAND COMMUNICATIONS AND IS PREPARED TO DEVOTE RESOURCES TO DEPLOY AN INTEROPABLE 700 MHZ BROADBAND NETWORK.

The FCC's grant of the requested waiver would allow Miami-Dade to commence deploying a robust broadband Long Term Evolution (LTE) network in the 700 MHz band. The LTE technology has been endorsed by the National Public Safety Telecommunications Council (NPTSC), the Association of Public Safety Communications Officials (APCO), and the Public Safety Spectrum Trust (PSST). This LTE system will be deployed to operate on a paired assignment of 5 MHz wide channels in the public safety broadband block between 793-798 MHz for mobile transmission and 763-768 MHz for base station transmission. At a minimum, the equipment operating in the band will be compliant with Band Class 14 as specified in the 3GPP Release 8 standards.

It would also enable a proof-of-concept demonstration, as well as the potential deployment of a converged mission critical voice and data network by Miami-Dade in the near future.

Specifically, a grant of this waiver request would allow Miami to commence planning for the deployment of a 700MHz broadband network to provide portable and in-building coverage for public safety users and enhance day-to-day, task force and mutual aid response through support of a full spectrum of interoperable IP multi-media applications.

A. MIAMI-DADE FACES UNIQUE CHALLENGES THAT REQUIRE A ROBUST BROADBAND NETWORK

Miami-Dade comprises an area in excess of 2,000 square miles—an area that is larger than the states of Rhode Island and Delaware, and a population greater than 17 states—and has over 2.3 million residents living in 35 municipalities and the unincorporated area. Miami-Dade is also one of the most diverse major counties in the nation and continues to

stand as the meeting ground for numerous multinational businesses and banks. The county is anchored by its seaport and airport, which serves as the North American gateway to Latin America and the Caribbean.

Miami International Airport (“MIA”) has the third highest international passenger traffic in the United States, serving as a vital gateway between the United States and Latin America. MIA ranks first among U.S. airports for international freight and third for international cargo. More than 100 airlines flew over 31 million passengers into and out of MIA last year. In addition, the Dante P. Fascell Port of Miami-Dade County is the largest container port in Florida and the largest cruise home port in the world. Over 3.6 million passengers transited the Port for cruises during fiscal year 2005 as well as over 9 million tons of cargo. The Port's five year capital program exceeds \$316 million. Public safety requires high density bandwidth applications to keep both the airport and port, respectively two of the worlds busiest, secure.

However, as a result of its geography, status as international travel hub, and standing as a world renowned tourist and economic center, Miami-Dade faces a number of unique concerns that could be addressed by additional access to public safety broadband communications.

1) **Terrorism**

Various institutions and events, worldwide, have been targets of terrorism in the past and are still considered potential targets today. Miami-Dade has local targets that are concerns based on assessed vulnerability. While Miami-Dade enjoys over 20 miles of sandy white beaches, over 645 miles of our boundary is comprised of tidal coastline, one of the largest open borders (by sea) in the nation.

2) **Hurricanes**

Traditionally, hurricanes have been identified as Miami-Dade's biggest threat due to its proximity to the Atlantic Ocean and Caribbean Sea. Hurricanes have the potential to impact the entire county, depending upon their origin, makeup and path. Since 1904, 32 hurricanes and tropical storms have traveled within 75 miles and/or directly passed over Miami-Dade; Hurricanes Andrew (August 1992), Georges (September 1998), Floyd (September 1999), Charley (September 2004), Frances (September 2004), Jeanne (September 2004), Katrina (August 2005), Rita (September 2005) and Wilma (October 2005).

3) **Technological Accidents**

Miami-Dade has an abundance of Hazardous Materials ("HAZMAT") that are manufactured, stored and transported throughout the county. Miami-Dade is also the home of FPL's Turkey Point nuclear power plant. Therefore, the County must take the necessary precautions to plan for and respond to a potentially dangerous HAZMAT or nuclear accident.

4) **Flooding**

Because Miami-Dade is located in a unique low-lying area, it is particularly susceptible to flooding from major rain events and storm surge from tropical weather. The county is surrounded by and interspersed with canals, lakes, rivers, the everglades, the Atlantic Ocean and Biscayne Bay. Miami-Dade lies close to sea level, and its water supply lies just below the surface of the ground. Major rain events sometimes leave rainwater nowhere to drain, causing flooding in parts of the county. Total structures last counted in the unincorporated area of Miami-Dade consist of over 112,000 structures in Special Flood Hazard Areas and nearly 135,000 are outside the legally defined floodplain, but are still vulnerable to flooding.

5) **Mass Migration**

From the Mariel boatlift in 1980 to the constant stream of Caribbean island refugees seeking freedom in America, Miami-Dade continually prepares for mass migration incidents.

6) **Miami-Dade Transit Infrastructure**

Miami-Dade Transit Department has the largest rail system in the state of Florida and among the largest in the nation, composed of Tri-rail, AMTRAK, Metrorail, and Metro Mover as well as its fleet of more than 1,000 buses with a total annual ridership of over 164 million passengers.

**B. MIAMI-DADE CURRENT RADIO COMMUNICATIONS
INFRASTRUCTURE CAN BE LEVERAGED TO DEPLOY 700 MHz
BROADBAND NETWORK**

Miami-Dade operates and maintains its own public safety radio network infrastructure comprised of an 800 MHz trunked simulcast Harris EDACS radio system network across nine (9) radio sites in support of Police and General Government agencies. The system is also utilized by most incorporated cities. The Fire Department relies on a 450 MHz simulcast radio system for fire & rescue communications. The combination of these systems form one of the nation's largest radio communications network with over 30,000 subscriber radios used by approximately 100 local, state and federal agencies generating over 90 million transmissions annually. 911 dispatching operations are conducted in a recently renovated \$53 Million facility serving as a Regional 911 Backup Center. To augment coverage in the county and to provide public safety with a highly redundant system, the Miami-Dade will be deploying a 25 channel 700 MHz narrow band voice

network that has been acquired as a result of a \$3.7 million PSIC Grant. This system will be operational fourth quarter of calendar year 2010.

Miami-Dade also has a world-class Fiber Optic Network linking County operated facilities for access to enterprise applications. The Optical systems currently is comprised of more than 100 km of fiber optic cable, spans 16 host sites. Backbone bandwidth is facilitated by carrier class; Dense Wave Division Multiplexing (“DWDM”) at the core with Synchronous Optical Networking (“SONET”) layered on top to provide a resilient optical ring.

Miami-Dade’s 800 MHz public safety infrastructure is in the process of being rebanded and it is anticipated that the process will be completed over the next four years. In parallel with the rebanding process, an interoperable Project 25 800 MHz Land Mobile Radio system will replace the existing EDACS infrastructure. In addition, a 700 MHz narrowband 4-slot network to support the Transit Department’s data requirements for their CAD/AVL system will be deployed concurrent with the P25 800 MHz system. Miami-Dade has invested millions of dollars to build, own and operate the new infrastructure which includes sites, towers, backhaul, power systems, and personnel. Infrastructure investments for the network have begun, with the intention to take advantage of the 700MHz narrowband spectrum recently made available to public safety users. Moreover, more than 24,000 800/700 MHz dual band P25 radios will be deployed. Interoperability among these systems is provided via an IP backbone network.

Miami-Dade’s goal is to fully embrace common management systems and technologies to enable communication to all agencies across local and regional jurisdictions as incident needs dictate. Although Miami-Dade’s interoperability preparedness is in an advanced

state of readiness, it requires continued expansion. Miami-Dade stands ready to commit the resources to fully deploy a 700 MHz public safety broadband network to fully utilize and integrate into a nationwide public safety broadband solution when it is available. It is estimated that when fully developed over 50,000 public safety and public service users would have access to critical data, video, and voice applications in order to meet public safety's diverse mission critical objectives.

III. THE FCC WOULD SERVE THE PUBLIC INTEREST BY EXPEDITIOUSLY GRANTING THE REQUESTED WAIVER.

The public interest will be served by the FCC granting the instant waiver request and allowing Miami-Dade to engage in early deployment of a 700 MHz public safety broadband network. To obtain a waiver under the FCC's rules, a petitioner must demonstrate either that: (i) the underlying purpose of the rule(s) would not be served or would be frustrated by application to the present case, and that a grant of the waiver would be in the public interest; or (ii) in view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome, or contrary to the public interest, or the applicant has no reasonable alternative.³ An applicant seeking a waiver faces a high hurdle and must plead with particularity the facts and circumstances that warrant a waiver.⁴ Although a successful waiver petition needs to satisfy only one of the two tests, Miami-Dade's Request for Waiver satisfies both tests.

³ 47 C.F.R. § 1.925(b)(3) (2009).

⁴ WAT Radio v. FCC, 413 F.2d 1153, 1157 (D.C. Cir. 1969), *aff'd*, 459 F.2d 1203 (1973), *cert. denied*, 409 U.S. 1027 (1972) *citing* Rio Grande Family Radio Fellowship, Inc. v. FCC, 406 F.2d 664 (D.C. Cir. 1968).

A. Waiver is Appropriate as Enforcement of the FCC’s Early Deployment Rules Would Frustrate the Underlying Purpose of the Rules.

Recognizing the enormous benefits of wireless broadband services for first responders, the FCC has appropriately made broadband access to public safety and other users of critical communications users a priority. While the FCC’s recommendations in the National Broadband Plan⁵ and determinations in the FCC’s *Order* granting 21 Requests for Waiver for early deployment in the 700 MHz public safety broadband spectrum (“Waiver Order”)⁶ provide a path forward, there is no assurance that final FCC rules and grant funding will be adopted in the near term. A fully deployed 700 MHz public safety broadband network for interoperable mission critical broadband communications throughout the United States remains a distant goal. Providing public safety users in Miami-Dade access to the 700 MHz public safety spectrum at this time would result in better utilization of system resources and components to maximize radio capabilities while minimizing equipment costs, operational costs, and promoting capabilities and efficiencies such as data sharing, cost sharing and shared software and hardware platforms. Furthermore, waiver would allow Miami-Dade and its neighboring municipalities the ability to utilize the public safety broadband spectrum to supplement the Project 25 Voice Radio Network, and to deploy both an interoperable voice and broadband data network within the region. Waiver will provide Miami-Dade the opportunity to work with neighboring municipalities, public safety and public service users to leverage existing infrastructure.

Denial of Miami-Dade’s Petition for Waiver, or failure to act in an expedited manner, would frustrate the FCC’s own articulated goal to provide prompt public safety broadband

⁵ Report to Congress, A National Broadband Plan For Our Future, Federal Communications Commission, pp. 311-330 (March 16, 2009), available at <http://www.broadband.gov/download-plan/> (“National Broadband Plan”).

⁶ Waiver Order, *supra* note 2.

access in the 700 MHz public safety broadband spectrum.⁷ Miami-Dade would lose an immense opportunity to form inter and intra county partnerships, leverage infrastructure for deployment, and obtain funding to deploy a countywide public safety broadband network. Instead of realizing the benefits of a broadband network in the next few years, Miami would have to wait an unknown period of time for the FCC to finalize rules, re-form partnerships, and identify new sources of funding.

B. Granting the Request for Waiver Would Serve the Public Interest.

Granting the instant waiver request would unequivocally serve the public interest by providing citizens of Miami-Dade the benefits of enhanced capabilities for first responders to prevent and respond to all types of disasters. Deployment of such a network in County will enhance day-to-day, task force and mutual aid response through support of a full spectrum of interoperable IP multi-media applications that are critical to the areas unique public safety needs, and include:

- Streaming video (surveillance, remote monitoring)
- Digital Imaging
- Computer Aided Design plans access for utility workers
- Automatic Vehicle Location
- Telemetry/Remote Diagnostics
- Computer Aided Dispatching
- Web Access
- Email
- Mapping/GIS
- Remote Database Access
- Report Management System Access
- Text Messaging
- Hazardous materials information access
- Building plans access for first and second responders

⁷ “Our goal is to develop the best short-term and long-term plans for America’s first responders. Public safety must have consistent and prompt access to secure, robust networks of the highest quality and first responders should be equipped with state-of-the art devices and applications that are 100 percent interoperable and easy to use.” Julius Genachowski, Chairman, Federal Communications Commission, Public Safety Briefing, p. 1 (Feb. 25, 2010), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-296504A1.pdf.

Moreover, the public interest benefits of granting the waiver would extend beyond Miami-Dade. As recognized by the FCC, early deployments can provide interested governmental entities, most notably the FCC's Emergency Response and Interoperability Center ("ERIC") and the National Institute of Standards and Technology, the opportunity to evaluate and understand the full value of public safety broadband access. The nation's homeland security would also be improved by providing enhanced public and private first responder communications capabilities within a major United States population and tourist center.

Miami-Dade is ready to commit resources to bridge current broadband gaps that exist amongst these entities so they can utilize broadband technology to protect life and property immediately. While the country waits for the FCC to adopt final rules for a nationwide 700 MHz public safety broadband network, the public interest requires that local, state, tribal, and regional authorities, like Miami-Dade be allowed to deploy their own interoperable, broadband public safety communications network. In circumstances in which jurisdictions have designated a clear path forward for deploying a 700 MHz public safety broadband network, permitting early deployment is clearly in the public interest and will move the Commission one step closer to achieving its goal of establishing a nationwide interoperable broadband wireless network for public safety.

C. Denying the Waiver would be Contrary to the Public Interest and Would Leave the Miami-Dade with No Reasonable Alternative.

The public safety broadband spectrum is Miami-Dade's only reasonable option for a dedicated mission critical broadband communications network. Miami-Dade has no reasonable alternative to seeking a waiver. Previously, spectrum allocations to public safety have been fragmented throughout the frequency ranges, and have only been made available

for voice communications. Furthermore, the 4.9 GHz spectrum, although an important component of the overall broadband capability for local area broadband applications, is not adequate for large scale, wide area deployments, as its propagation characteristics require significant investment in infrastructure. All other potential spectrum options, including 2.4 GHz Wi-Fi, and television white space, fail to allow for licensing, rendering systems susceptible to interference and thus not appropriate for public safety as a sole means of broadband communications. As recognized by the FCC and Congress, the 700MHz public safety broadband spectrum is the best solution for deploying a cost effective, interoperable, nationwide public safety wireless broadband system.⁸

IV. THE NETWORK WILL BE ROBUST AND WILL SATISFY THE TECHNICAL SPECIFICATIONS PROPOSED BY THE FCC IN THE *WAIVER ORDER*.

Miami-Dade agrees to adhere to all technical requirements⁹ and procedural criteria¹⁰ set forth by the FCC's *Waiver Order* and subsequently established by ERIC via FCC rules. At a minimum, the Miami-Dade system deployed in the 700 MHz public safety broadband spectrum will initially support the applications specified in the *Waiver Order*: (1) Internet access; (2) VPN access to any authorized site and to home networks; (3) a status or information "homepage,"; (4) access to responders under the Incident Command System; and (5) field-based server applications.¹¹ Miami-Dade also recognizes the valuable information the FCC, public safety, equipment vendors, and other interested parties can gain from early

⁸ "In 1997, Congress directed the FCC to provide public safety agencies with spectrum in the 700 MHz band, considered prime spectrum for public safety communications...the FCC adopted rules to promote the construction, deployment and operation of a nationwide and seamless 700 MHz public safety broadband network...." The National Broadband Plan, *supra* note 5, p. 315.

⁹ Waiver Order, *supra* note 6, ¶ 36 (setting forth technical requirements associated with a FCC grant of Waiver for early deployment, such as LTE, roaming, coordination, out of band emissions, interoperability and other technical issues).

¹⁰ *Id.* at ¶¶ 20-35 and 62-65 (establishing procedural criteria including reporting requirements, evidence of funding and spectrum leasing requirements).

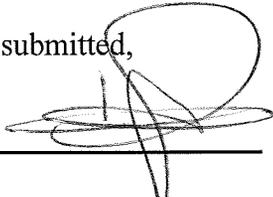
¹¹ *Id.* at ¶ 46.

deployments. Thus, Miami-Dade commits to complying with all filing and certification requirements set forth in the *Waiver Order* and subsequently issued *Public Notice*¹² providing further guidance for completing waiver recipients required interoperability showing.

V. CONCLUSION

For the aforementioned reasons, Miami-Dade respectfully requests that the FCC move quickly to grant the waiver as requested herein. FCC approval would significantly advance the cause of public safety by granting Miami-Dade a waiver to deploy a public safety broadband data network. Miami-Dade stands ready to begin deployment of life-saving public safety broadband services.

Respectfully submitted,



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¹² Public Safety and Homeland Security Bureau Offers Further Guidance to Conditional Waiver Recipients on Completing the Interoperability Showing Required by the 700 MHz Waiver Order, *Public Notice*, PS Docket No. 06-229, DA 10-923 (rel. May 21, 2010).