

## **STA Experimental License Application Justification**

pdvWireless, Inc. (“PDV”) is a private wireless communications carrier and provider of mobile workforce communication and location-based solutions in the United States. PDV Spectrum Holding Company, LLC is a wholly owned subsidiary of PDV and the entity created to hold its FCC Spectrum.

### **I BACKGROUND**

In 2014, PDV took assignment of the 900 MHz Land Mobile Radio (LMR) licenses from Sprint Corporation (“Sprint”), spectrum that operates under Part 90 of the FCC rules. This nationwide portfolio of commercial licenses, most of which had been purchased through FCC auctions, had been used in Sprint’s nationwide iDen network.

In an effort to increase the efficiency of the 900 MHz LMR spectrum, PDV and the Enterprise Wireless Alliance submitted a Petition for Rulemaking to create a 3X3 MHz allocation to facilitate broadband deployment for business enterprise entities, including those classified as Critical Infrastructure Industry (RM-11738) within the 900 MHz band. This proposal would require realignment of the 900 MHz band. In March 2018, the FCC adopted a Notice of Proposed Rulemaking (WT 17-200) (“NPRM”) in which it has proposed to create a 900 MHz broadband segment in the 897.5 – 900.5 / 936.5 – 939.5 MHz band and to adopt technical rules as set out in the NPRM. PDV intends to use 900 MHz channels in the requested experimental license in a broadband and NB-IoT configuration consistent with the rules governing broadband operations proposed in the NPRM.

### **II REQUEST FOR EXPERIMENTAL RADIO LICENSE**

#### **A Purpose of Test**

While the issues involved in the NPRM are pending at the FCC, PDV requests a Special Temporary Authority (“STA”) experimental license to demonstrate the operation of LTE equipment on 900 MHz spectrum. The underlying purpose is technical radio research: it is intended to confirm that up to a 3 MHz broadband channel can be deployed on 900 MHz spectrum using LTE-certified Band Class 8 equipment without causing interference to systems operating on spectrum adjacent to the proposed 900 MHz broadband allocation.

The demonstration will comply with Rule Section 5.84 and will not cause interference to either co-channel or adjacent channel licensees authorized pursuant to the current 900 MHz band plan. The testing will also be a “proof of concept” opportunity, whereby PDV can validate the benefits of wireless broadband connectivity and confirm that LTE data speeds and capacity can support the important fixed field-area functions and applications that are currently conducted on narrowband systems or on legacy copper-based circuits that may be deconstructed.

#### B     Technical Parameters of Test

This instant STA request will be utilized at various indoor locations throughout the United States. The tests will be conducted at indoor tradeshows events, conferences, convention centers and board room demonstrations. These will be indoor demonstrations/transmissions and will involve wireless connectivity to the transmitter site which will be located inside the designated locations. Details on the transmitting equipment is provided in the technical sections of this application, but it should be noted that this is experimental equipment only to the extent that it has not yet been certified for use on Part 90 spectrum. The models planned for the demonstrations are certified LTE Band Class 8 equipment and have been deployed worldwide at 900 MHz.

As with standard field area network systems, the fixed wireless LTE equipment will be automated to transmit/receive intermittent information between the transmitter and the endpoint devices. The proposed demonstrations will be conducted during normal business hours for short periods of time. Consistent with the requirements of Rule Section 5.107, system management and monitoring will be handled remotely from PDV’s New Jersey headquarters, except for set-up and any equipment adjustments that will be conducted by qualified personnel on site. PDV requests a two-year STA for the experimental license for these demonstrations and to make adjustments to the demonstrations as needed all in accordance with FCC rules.

PDV also notes that the FCC has approved similar experimental licenses for PDV in the past with the similar testing parameters.