

January 31, 2022

In re Application of

Textron Systems  
Unmanned Systems  
124 Industry Lane  
Hunt Valley, Maryland 21030

To operate in the 1350-1390MHz, 2200-2290MHz and 4400-4940MHz Telemetry Bands above Yuma Proving Ground, Arizona.

ATTN.: Microwave Branch

Textron Systems hereby requests Special Temporary Authority (STA) to operate within the 1350-1390MHz, 2200-2290MHz and 4400-4940MHz telemetry bands pursuant to Section 21.25 of the Commission's Rules. Textron Systems requests that the Commission grant it temporary authority to operate on the frequencies centered at 1350-1390MHz (frequency hopping) with a 280KHz bandwidth, 2220MHz with a 15MHz bandwidth, and 4410MHz with a 6MHz bandwidth from February 28, 2022 through February 27, 2023 with intermittent usage. If the 2220MHz or the 4410MHz frequency range is unavailable, any 15MHz channel within the band 2200-2290MHz and 6MHz channel within the band 4400-4940MHz will suffice. As explained below, Textron Systems is filing an STA request to demonstrate their UAV payload capacity as it relates to wide area searches and radar over the Yuma Proving Ground in Arizona. Textron Systems submits that there are extraordinary circumstances warranting a grant of the STA request.

Textron Systems is demonstrating their Aerosonde UAV payload capacity for multiple clients as it relates to wide area search radios, specifically Command and Control, Intelligence, Surveillance and Reconnaissance radios. Due to the extreme frequency congestion in the Yuma area, Textron Systems requests the use of these channels.

Textron Systems certifies that the operation of the requested channels for the purposes specified herein will not cause interference to any established stations.

Grant of the instant request for STA for the 1350-1390MHz, 2200-2290MHz and 4400-4940MHz bands would serve the public interest by enabling Textron Systems to demonstrate how the Aerosonde UAV has the payload capacity to integrate multiple radio systems to support long distance Command and Control, Intelligence, Surveillance and Reconnaissance missions. The proposed service would enable demonstration of multiple radio systems in an aerial exercise.

In accordance with Section 74.633 of the Commission's Rules, the following is provided:

Applicants Name: Textron Systems  
Address: 124 Industry Lane  
Hunt Valley, Maryland 21030

Type and Manufacturer Of Equipment: Textron Systems Unmanned Systems D/B/A AAI Corporation  
Telemetry and Control Modem, L-band, AES Encrypted, 40393-40005-10

Power Output: 1W

ERP: **1W**

Emission: 285KF1D

Frequency: 1350-1390MHz (Frequency Hopping)

Antenna: 1dBi Vertical linear **AERIAL**  
Antenna Gain: 1dBi  
Type and Manufacturer AAI Corporation  
Of Equipment: Telem Modem M13-NCF + 40393-95014-10 Amplifier

Power Output: 20W  
ERP: 485W (dish) / 20W omni  
Emission: 285KF1D  
Frequency: 1350-1390MHz (Frequency Hopping)

Antenna: 16dBi Vertical linear **TERRESTRIAL**  
Antenna Gain: 16dBi  
Type and Manufacturer AAI Corporation  
Of Equipment: Hi-Def Bandit S-band Video TX / 12B01A Amp

Power Output: 10W  
ERP: **10W**  
Emission: 4M79G1D  
Frequency: 2220MHz

Antenna: 0dBi Vertical linear **AERIAL**  
Antenna Gain: 0dBi  
Type and Manufacturer Textron Systems  
Of Equipment: 40393-42280 Wave Relay, C-band w/VHF-3800+FILTR

Power Output: 6W  
ERP: **6W**  
Emission: 4M06D1D  
Frequency: 4410MHz

Antenna: 3dBi Vertical linear **AERIAL**  
Antenna Gain: 3dBi

Type and Manufacturer Textron Systems  
Of Equipment: 40393-42280 Wave Relay, C-band w/VHF-3800+FILTR  
Power Output: 4W  
ERP: **4112W (dish) / 6W omni**

Emission: 4M06D1D  
Frequency: 4410MHz

Antenna: 26dBi Vertical linear **TERRESTRIAL**

Antenna Gain: 26dBi

Area of Operation: 93Km

Coordinates: N 32 52 01.09  
W 114 23 50.77

Antenna Height: **UNMANNED FIXED WING @ OR BELOW 15000' MSL  
TERRESTRIAL 4'AGL**

Dates of Operation: February 28, 2022 – February 27, 2023  
(Intermittent Usage during these days)

Textron Systems requests an STA to operate on the above-referenced frequency for a period not to exceed six months. No application for regular authorization will subsequently be filed.

Textron Systems certifies that no party to the application is subject to a denial of federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C § 853(a).

Should you have any questions regarding this matter, please contact, John Winch, by telephone 626 676 1470.

Respectfully submitted,

By: John Winch  
Frequency Coordinator