Information Required for Experimental License Application
Bldg 59 MFOM Common Test Equipment Lab

Below is the technical information required to properly fill out the FCC Form for Experimental License Applications. Claude Wells with EIS is responsible for filing FCC experimental license applications and can provide additional information if necessary. Supplemental information may be required.

1. Is this application for a new license or modification of an existing license? If existing, then please provide the call sign.
   Modification of Existing License; WE2XEC
2. Is confidentiality required for this license? If yes, then please provide a separate statement explaining why confidentiality is required. There is an additional fee associated with requesting confidentiality.
   Unclassified
3. Is the experimental license to be used for fulfilling a Federal government contract? If yes, then include a detailed narrative statement describing the experiment, government project, agency, and contract number. The experimental description must be answered in enough detail to explain the research project to someone not familiar with it or someone who does not have an engineering degree.
   Yes, the system is in support of the Army GMLRS project. The system is used in the MCTEL facility to support production operations for launcher system checkout prior to delivery and is used as a part of a field service contract to the US Army for resolving problems discovered in the field. The project is in direct support of the US Army. The contract number is W31P4Q-04-C-0137.
4. Is the license to be used for the exclusive purpose of developing radio equipment for export to be employed by stations under the jurisdiction of a foreign government? If YES, please provide the contract number and the name of the foreign government concerned.
   No
5. Is this license to be used for providing communications essential to a research project? If YES, please provide an exhibit with the following information:
   No
   a) A description of the nature of the research project being conducted,
   b) A showing that the communications facilities requested are necessary for the research project involved, and
   c) A showing that existing communications facilities are inadequate.

6. If all the answers to Numbers 3, 4, and 5 are no, then please provide a detailed narrative statement describing in detail the following items:
   Not Applicable
   a) The complete program of research and experimentation proposed including description of equipment and theory of operations;
   b) The specific objectives sought to be accomplished; and

c) How the program of experimentation has a reasonable promise of contribution to the development, extension, expansion or utilization of the radio art.

These questions must be answered in enough detail to explain the research project to someone not familiar with it or someone who does not have an engineering degree.

7. Please provide an estimate of the time required to complete the experimental program – in months or years. The FCC will generally not authorize an experimental license longer than 2 years. However, in some instances experimental licenses are granted for 5 years.
Army GMLRS is an on going production contract. Renewals will be required as long as the contracts with the US Government are in place.

8. The following questions must also be answered:

Will the facilities be located in a wilderness area? **No**
Will the facilities be located in a wildlife preserve? **No**
Will the experiment affect threatened or endangered species? **No**
Will the facilities affect Indian religious sites? **No**
Will the facilities be located in a flood plain? **No**
Will construction of the facilities involve filling in wetlands, deforestation or water diversion? **No**

This is a pre-existing Lockheed Martin Missiles and Fire Control building, located at the Grande Prairie facility, Bldg 59.

If the answer is yes to any of these questions, then significant environmental assessments or impact statements are required. Please contact Claude Wells.

9. Please provide a list of all transmitting equipment that will be used in the experiment. Include the following information for **each** piece of equipment:
   a) Manufacturer; **GPS Networking Inc.**
   b) Model Number; **L1/L2HNRRKIT**
   c) Number of Units; and **One (1)**
   d) Whether the equipment is experimental or unique. **Off-the-Shelf, commercial purchase (See attached data sheet)**

10. Is the transmitting equipment listed in Question 9 capable of station identification? **No**

According to the FCC rules, each experimental station must, unless specifically exempted, transmit its assigned call sign at the end of each complete transmission. The transmission of the call sign at the end of each transmission is not required for projects requiring continuous, frequent, or extended use of the transmitting

apparatus, if, during such periods, the call sign is transmitted at least once every thirty minutes. The station identification must be transmitted in clear voice or Morse code. All digital encoding and digital modulation must be disabled during station identification.

Technical Information:

All questions must be answered completely.

Antenna Information: For EACH antenna, please provide the following information -

1. Is the antenna fixed/base, mobile, or base and mobile?
   Fixed
2. Please indicate the geographical location where the experiment(s) will take place. Specify the datum used in determining the geographical coordinates. The latitude and longitude for locations in the US must be referenced to either the North American Datum of 1927 (NAD 27) or 1983 (NAD 83). Topographical maps should indicate which datum is used (or websites).
   N 32 43'02.75" W 97 02'06.00"
3. If part of the entire operation will be conducted at a fixed site, please provide the state, county, and city of the location.
   Texas, Dallas, Grande Prairie
4. For base and mobile operations, where there is a wide area of operation, provide the approximate area of operation. For example, "approximately 10 km around a fixed location."
   The antenna only radiates into an enclosed lab.
5. If the antenna is directional, provide the beamwidth, horizontal orientation and the vertical orientation.
   180 degrees vertical, 360 degrees horizontal. All antennas are directional facing down towards the ground.

6. Will the antenna extend more than 6 meters above the ground or above an existing building? Will the proposed antenna be mounted on an existing structure or a structure other than a building? If yes, then coordination with the FAA will be necessary.
   The re-transmitting antenna is mounted on the ceiling of the existing lab.

Frequency Information: For EACH antenna, the following information is required:

1. Frequency range (or frequency(ies)): Provide the lower and upper frequencies in MHz. **L1/L2 GPS (1575.42 MHz / 1227.6 MHz)**
2. Power Output: Provide the maximum RF power at the transmitter terminals.
   The amplifier is a 20db gain. The receiving antenna has a 38 db gain.
3. Effective Radiated Power: Provide the maximum ERP from the antenna. If pulsed emission, specify the Peak Power.
   -82 dbm

4. Mean or Peak Power: Is the Power the mean or peak power?
Mean

5. Tolerance: Provide the applicable level of tolerance as a percentage of carrier frequency.
L1/L2 GPS

Emissions Information: For EACH antenna, the following information is also needed:
The system only re-radiates L1/L2 GPS.

1. Emission Designator. Provide the three symbols necessary to determine the emission designator. Emission designators can be found in Section 2.201 of the FCC rules. See http://www.access.gpo.gov/nara/cfr/waisidx_01/47cfr2_01.html for assistance.
Frequency; 1227.6 MHz - 24M0G1D
Frequency; 1575.42 MHz – 24M0G1D

2. Modulating Signal. Provide, as appropriate for the type of modulation, the:
   a) Maximum speed for keying in bauds;
   b) Maximum audio modulating frequency;
   c) Frequency deviation of carrier; and
   d) Pulse duration and repetition rate.
Not Applicable
For complex emissions, provide detailed information describing the modulating signal and indicate the frequency range that it is associated with.

3. Necessary Bandwidth. Provide the necessary bandwidth measurement and the units. Provide how the necessary bandwidth was calculated for all indicated frequencies.
Not Applicable