

Background

Advanced Metering Data Systems, LLC (AMDS) is in the process of designing, manufacturing and marketing radio-based, utility meter reading systems that will operate on licensed spectrum, to the FCC's Rules. Through the use of these products, utility companies will fully automat their meter reading activities. The benefits include reducing peak energy demands, which can help prevent brown-outs or a cascade black-out. The system reduces errors in billing and administrative inefficiencies, lowering costs and providing a higher quality of service to the public. AMDS seeks to develop new products to take advantage of this new technology. As part of its normal product development processes, the applicant must test these devices in the field to study performance of its products under real world conditions.

Therefore, AMDS requests an experimental under Part 5 of FCC Rules. Specifically, the authority requested herein will allow AMDS to:

- test the performance of its meter reading systems in different types of meters to ensure device compatibility;
- test the new technology's ability to overcome difficulties associated with the varying placement of utility meters;
- test the viability and demand for various ancillary data collection services; and
- evaluate the performance of the new equipment in variety of operating environments.

Determining the degree to which utilities in various situations (such as described in this application) find AMDS' meter reading solutions useful in solving problems associated with data collection, and are willing to purchase accordingly, will allow AMDS to tailor the system before the final product design and commercial rollout.

Fixed System Configuration

The AMDS system allows for the collection of meter consumption data from fixed tower locations. One or more base stations are placed in the market of interest. These stations occasionally ($< 1\%$ on time) transmit a signal to interrogate the meter module. The interrogation signal is nominally on the order of 200 watts effective radiated power (ERP) to overcome vegetation and other factors that could block the signal. The meter modules (4 feet from ground level) respond with their consumption data, transmitting the information with approximately 1 (one) watt ERP.

Frequency Bands Requested

AMDS will eventually operate in a variety of bands between 700 MHz and 960 MHz. Current designs are optimized for this range in frequencies. For the testing detailed in this application, AMDS has chosen licensed under Part 101 in the multiple address system (MAS) band generally described as 941/932 MHz. The applicant has requested specific frequency ranges for each test area because the channels were designated for FCC Auction #42, but were not purchased. Therefore, the FCC continues to hold the license for these channels and there are no co-channel users that could be impacted by the instant request.

Channels Requested

AMDS has clients willing to assist in the testing of the meter reading system in the following markets:

Market	Base Station	Meter Module	Radius for
	Frequency (MHz)	Frequency (MHz)	Meters
New Orleans, LA	941.20625 – 941.24375	932.20625 – 932.24375	10 km
Biloxi, MS	941.20625 – 941.24375	932.20625 – 932.24375	10 km
Birmingham, AL	941.20625 – 941.24375	932.20625 – 932.24375	10 km
Lubbock, TX	941.04375 – 941.08125	932.04375 – 932.08125	10 km

Locations

New Orleans, LA

Lakeway Tower
3838 N Causeway Blvd
Metairie, LA 70002
Orleans Parish

Latitude: 30.01813 N or 30-01-05.2 N
Longitude: 90.15481 W or 90-03-17.3 W
AMSL: 0 meters
AGL: 400 feet or 121.9 meters

Biloxi, MS

IMPERIAL HOTEL
BILOXI, MS 39533
Harrison County
Latitude: 30° 24' 33.9"
Longitude: -88° 53' 36.6" |
AMSL: 29 ft or 8.8 meters
AGL: 100 ft or 30.4 meters

Birmingham, AL

1329 18TH AVE. SOUTH
Birmingham, AL 35205
Harrison County
Latitude: 33° 29' 18"
Longitude: -86° 48' 12"
AMSL: 891.00 FT or 271.6 meters
AGL: 100 ft or 30.4 meters

Lubbock, TX

3420 Parkway Drive, Lubbock, Texas 79403 (911)
Lubbock, Texas, 79403
Lubbock County
Latitude: 33 - 35 - 52.9 N
Longitude: 101 - 47 - 51.0 W
AMSL: 3206 ft or 977.2 meters
AGL: 100 ft or 30.4 meters

Number of Units Requested

A critical aspect of the testing involves testing the system under load conditions to model data collisions and other aspects of conducting a wide area data acquisition system. For this reason, the number of units requested in each market is:

New Orleans, LA:	100 units, plus two base stations
Biloxi, MS:	500 units, plus two base stations
Birmingham, AL:	500 units, plus two base stations
Lubbock, TX	300 units, plus two base stations

Testing Plan

AMDS will test various scenarios in each market for a period not to exceed one year. It is anticipated that additional test authorizations will be requested in other markets.

Summary

AMDS has provided a summary of the need for an experimental license, detailed the bands to be tested and provided a general test schedule. The applicant respectfully requests authorization of an experimental license under Part 5 of the FCC Rules.

Please direct questions regarding this filing to H. Britton Sanderford, Jr., AMDS' president. Mr. Sanderford can be reached at (504) 283-9500.