

## Applicant's Qualifications and Proposed Experiments

Globalstar, L.P., the operator of the Globalstar non-geostationary MSS Above 1 GHz system licensed to L/Q Licensee, Inc., is applying for an experimental license to conduct tests associated with a new ancillary terrestrial component ("ATC") with mobile and base terrestrial stations.<sup>1</sup>

The Globalstar system has been authorized for construction, launch and operation in the 1610-1621.35 MHz and 2483.5 and 2500 MHz bands.<sup>2</sup> The system consists of 48 technically-identical satellites orbiting the Earth in a circular orbit plus two in-orbit spares. All of the satellites have been launched and commercial Mobile Satellite Service is currently available.

The transmitters to be tested under this program are Globalstar GSM Terrestrial Units ("GGTU") and Globalstar GSM Base Stations ("GGBS"). The GGTU and GGBS are required to be field tested to validate the performance prior to the start of ATC service. The experimental GGTUs will be used in the specified U.S. locations to validate their RF performance parameters in conjunction with those of the GGBS. The GGTUs will transmit in the band 1610-1621.35 MHz and receive at 2483.5-2500 MHz. The GGBS will receive transmissions from GGTUs in the band 1610-1621.35 MHz and will transmit to the GGTUs in the band 2483.5-2500 MHz. The program of tests will be conducted over the next six months (for example, 06/01/02 to 12/01/02, depending upon date of grant of application) to ensure that the system can be successfully deployed and tested.

The primary purpose of ATC is to improve the usability of MSS systems outdoors within densely populated urban areas with large buildings and inside structures. Accordingly, locations within and near four urban areas have been selected as test locations, including New York City, Washington, D.C., and San Jose and San Diego, California. These metropolitan areas will provide representative test locations to determine how the GGTU and GGBS perform in the principal areas in which they are intended to be deployed.

The GGTU tests will be implemented in the specified locations within the continental United States. The tests are intended to validate:

- antenna performance and characteristics;
- transmitter performance characteristics;
- radiating pattern characteristics;
- reliability, maintainability, and availability; and,
- overall performance within the Globalstar™ ATC system.
- Interference into and from existing Globalstar™ system

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<sup>1</sup> See Flexibility for Delivery of Communications by Mobile-Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Band, Notice of Proposed Rulemaking, FCC 01-225 (Aug. 17, 2001).

<sup>2</sup> See Loral/Qualcomm Partnership, L.P., 10 FCC Rcd 2333 (1995) (authorizing constellation and use of service links); L/Q Licensee, Inc., 11 FCC Rcd 16410 (1996) (authorizing the use of feeder links).

Additional tests will be performed for the GGBS. The tests are intended to validate:

- antenna performance and characteristics;
- transmitter performance characteristics;
- radiating pattern characteristics;
- reliability, maintainability, and availability; and,
- overall performance within the Globalstar™ system.
- Interference into and from existing Globalstar™ system

### Conclusion

Grant of this application will permit Globalstar to conduct a thorough operational validation of the proposed Ancillary Terrestrial Component for the Globalstar™ system, including system level tests in conjunction with the Globalstar terrestrial base stations. Globalstar's concept for ATC service is a matter of record before the Commission in its *Response to FCC Public Notice DA 02-554*, IB Docket No. 01-185, and ET Docket No. 95-18, filed March 22, 2002. These tests are essential to demonstrate that ATC service can successfully be provided within the Globalstar™ network. The tests will enable this service to commence promptly if and when authorized by the Commission. These tests will provide useful information on the performance of the system, which will promote the development and delivery of the planned ATC service to the public. Finally, these tests will confirm for the Commission the feasibility of enhancing the efficient use of MSS spectrum through careful dynamic channel allocation and geographic channel assignments. For the foregoing reasons, the public interest will be served by grant of this application.