

Purpose of Modification

Thursday, September 15, 2005

The purpose of this modification is:

1. To request operation of up to 25 simultaneous instances of our Titan DATD FSS-4180 antenna. This is desired for our load testing and experimental activities. Please note that in all cases, we will be using digital carriers (G7D) FDMA, or MF-TDMA (multi-frequency TDMA) and will be constrained to the bandwidth of spectrum resources which we procure from our satellite services provider and the provisions of this license. In addition, while we are using DS spread spectrum for power spectral power density reduction, we have no plans to perform CDMA.
2. To request the ability to test using different SSPAs, frequency converters, LNBs, and MODEMs for our testing. Emissions would of course be maintained within the provisions of this license. In all cases, we would only use the Titan/Datron 18" tracking antenna (DATD FSS-4180), but we would like to have the ability to use alternate RF and baseband equipment in support of our interoperability testing. Following is our current list of equipment we currently anticipate using:
 - ANTENNA
 - i. Titan DATD FSS-4180
 - RF
 - i. Titan (SSPA) 43777-1
 - ii. Aethercom (SSPA) sspa137-145-30
 - iii. Tampa Microwave (BUC) BUC-13050-10-2
 - iv. AnaCom (BUC and SSPA) Elsat
 - v. Invacom (LNB) SPV-65SM
 - vi. Newtec (L-Ku Band up and down Converter) NTC-2142 1
 - MODEM
 - i. Titan MPM-1000
 - ii. Comtech/EF Data SLM-7650
 - iii. Raydyne DMD-2050
 - iv. ViaSat Skylane
 - Other similar quality RF and MODEM equipment as necessary to support testing and evaluation.

3. To confirm **mobile** rather than **fixed** operation – Our tracking antenna system is intended for use on ground vehicles and as such we desire to perform mobile testing.
4. To confirm permission to operate anywhere within CONUS.

We request that all additional provisions granted, such as those above, be stated explicitly on the license grant.

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