

NARRATIVE STATEMENT

Del Norte Technology, Inc. ("Del Norte") has developed a Differential Global Positioning System ("DGPS") which will greatly advance the radio art by making corrected U.S. Department of Defense ("DOD") Global Positioning Satellite data available inexpensively to the aeronautical chemical application ("crop dusting") industry. Del Norte's DGPS system, in turn, will enhance the efficient, safe, and environmentally sound use of agricultural chemicals. Aircraft will be able to determine with pin-point accuracy where they are spraying and where they already have sprayed. This will minimize the amount of chemicals used and prevent redundant spraying. If proven successful, Del Norte intends to seek other markets for other entities in need of extremely accurate guidance systems in the aircraft, marine craft, and public safety sectors. Thus, as detailed herein, grant of this experimental authorization to Del Norte will contribute to the development, extension, expansion, and utilization of GPS technology.

NEED FOR DEL NORTE'S DGPS SYSTEM

The DOD's GPS system does not provide data with the accuracy necessary to direct and control small aircraft in flight. The GPS system's publicly available data contains errors, either introduced intentionally by the GPS system operator or caused by environmental conditions. Without incorporating a known differential or corrective factor, it is impossible to use GPS data to track and coordinate agricultural spraying efforts.

Del Norte's system will transmit GPS error rectification to aircraft via fixed, slightly modified, widely available 900 MHz base station facilities. With the corrected data, aircraft flight path, speed, altitude, and other factors can be ascertained with tremendous accuracy. As a result, the growers will be able to determine with accuracy the exact location and level of each application of pesticides, thereby avoiding redundant application of pesticides and the unintended omission of particular areas of crops. The aircraft will not need transmitters, but will employ receive-only radios.

To date, differential GPS systems, which are both accurate and cost-effective, have not penetrated the market. Del Norte is committed to solving this problem and already has invested substantial resources in this area. Del Norte's similar product, designed for the UHF band, has been very popular. Unfortunately, spectrum constraints apparently will limit the company's ability to promote this technology in that band. Given the promise of the technology, significant testing of a 900 MHz DGPS system is necessary to bring this product to a viable position in the spectrum and the marketplace.

PREVENTION OF HARMFUL INTERFERENCE TO OTHERS

Del Norte recognizes that the portion of the 900 MHz band for which it seeks authorization -- the 935-940 MHz band -- is allocated to land mobile systems. The SMR frequencies in this portion of the spectrum, however, have not been made routinely available outside the nation's top fifty markets. Del Norte, therefore, will confine its experiments to areas 50 miles or more outside these top 50 markets, thereby minimizing the possibility of causing interference. Before commencing operations on these frequencies, moreover, Del Norte also will examine the FCC's data files to determine whether there exists any licensed facility which might be disturbed by Del

Norte's use of the spectrum. Del Norte will cease testing if it finds that it is causing a harmful interference to existing users. Del Norte also will consult the Commission's staff in accord with Rule Section 5.67 prior to operation of any facility which might cause harmful interference to any FCC monitoring facility.

Del Norte desires authority to make the required tests and measurements to determine whether its system will perform in all terrain and environmental conditions in the United States. Since Del Norte's experiments will be conducted at temporary locations, Del Norte will comply with applicable notification procedures in Section 5.65 of the Commission's Rules.

MARKET STUDIES

To determine the extent of consumer demand, Del Norte requests authority to perform market studies throughout the United States. Pursuant to Section 5.206 of the Commission's Rules, Del Norte will own and operate all transmitting and receiving equipment used in the tests. Equipment operators and users will be notified that the system and equipment are authorized as experimental and temporary.

DESCRIPTION OF EQUIPMENT

The transmitters to be used in this experiment are type-accepted by the Commission, although modifications will be made to them so as to render them experimental. To ensure aircraft receive accurate data, the data through-put must be substantial. Consequently, Del Norte requests authority to operate transmission equipment with a bandwidth of 25 KHz. Other than the minor modifications necessary to increase through-put, the transmitters already have met FCC performance requirements.

PRECEDENT

The FCC already has granted an experimental license similar to the one requested here to one of Del Norte's competitors; namely SATLOC, Inc. (See FCC File No. 3510-EX-PL-92). This precedential decision fully supports grant of this request and, hopefully, will expedite the processing thereof.

AERONAUTICAL CONSIDERATIONS

Del Norte must install its base stations on towers and similar facilities in order to provide adequate coverage to repeater facilities. On most occasions, Del Norte will mount its antennas on antenna supporting structures which will cause the tip of the antennas to be more than twenty feet above ground level. To comply with applicable FCC and FAA guidelines, Del Norte will ensure that FAA clearance has been obtained for any site upon which Del Norte proposes to mount its equipment. If the site owner or operator does not have a current FAA clearance which would permit Del Norte's installation, Del Norte will not use the site until the proper authorization is obtained. If any doubt arises regarding FAA compliance, Del Norte will seek and obtain specific authorization or confirmation from the FAA regarding Del Norte's proposed installation.

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