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Subject: Exhibit Government Project Description

Program: NEXCOM Avionics

Contract: Government/Industry Agreement – dated 14 December 2001

Agency: Department of Transportation Federal Aviation Administration

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Overview:

1. A mix of FAA-owned systems and leased services currently comprise the FAA's Communications infrastructure. These systems and services are integrated into a common telecommunications infrastructure that enables seamless exchange of voice and data information.
2. Air traffic management depends on timely and accurate transmission of information during all phases of flight, and for airport operations. For the past 20 years, demands on VHF spectrum for air traffic services have grown by an average of four-percent (4%) each year, saturating the available spectrum in many locations. With this projected growth in air traffic, today's communications systems must be modernized to handle the additional demand and the need for fast and clear transmissions. This modernization will require replacing outdated hardware, better use of the available very high frequency (VHF) spectrum, and integrating systems into a seamless network using digital technology.
3. The FAA National Airspace System (NAS) is moving toward an "all digital" communication architecture. The NEXCOM digital system will be implemented first at the higher altitudes. The NEXCOM program provides a system of ground radios and ground network interfaces that enable digital voice and data communications with aircraft and will replace over 40,000 existing ground radios. During the transition, the FAA will continue to support analog communications.
4. Controller-pilot data link communications (CPDLC) introduces data exchange between controllers and pilots to reduce voice-channel congestion. CPDLC will be available first from a commercial service provider using VHF digital link (VDL) Mode-2 ground and airborne equipment. Digital communications over VDL Mode 3 is expected to provide the significant channel efficiency improvement needed to support projected aviation growth. Digital voice and data communications provided by the NEXCOM program will improve ground and airborne air traffic efficiency. During the ground communications infrastructure transition, network users will continue to use legacy interfaces until digital interfaces are installed. VDL Mode 2 will continue to be available for use by airline operations centers and other users via a commercial service provider.

5. In December 2000, the FAA Administrator formed the NEXCOM Aviation Rulemaking Committee (NARC) to study two candidate technological solutions for the next generation air/ground communication system. The NARC membership represented the aviation industry from commercial airlines to general aviation. Among the NARC recommendations was that the FAA “expedite the demonstration/validation of the VDL Mode 3 system to include both voice and data link. The demonstration/validation must have industry participation, clearly defined success criteria, and must meet all FAA certification criteria for the end-to-end system”.
6. Rulemaking will be required in order to mandate the use of VDL Mode 3. The airlines have stated that they require 5 years in order to both retrofit and forward fit their fleet. Rulemaking must begin in 2004 to support timely NEXCOM deployment. The FAA office of Regulation and Certification (AVR) has stated that a successful demonstration/validation of VDL Mode 3 must take place prior to the issuance of a Notice of Proposed Rulemaking. Therefore, the end-to-end demonstration of both digital voice and data must take place in 2003 in order to begin the rulemaking process.