

Exhibit A

Description of Program of Research, Objectives, and Contribution to the Radio Art

Flight Safety Technologies, Inc. (“Flight Safety”) submits the associated FCC Form 442 seeking modification of its existing experimental authorization (the “License”) for station WC2XTQ in order to expand the research program being undertaken in conjunction with the development and testing of its UNiVersal Collision Obviation and Reduced Near-Miss (“UNICORN™”) system. The FCC has already approved the existing program of research for the UNICORN™ system. See FCC File No. 0113-EX-ML-2005. As explained more completely below, the next phase of development of the UNICORN™ system will include: (1) airborne operations within a defined area near Atlanta, GA; and (2) an increase in the authorized bandwidth and effective radiated power (“ERP”) of the transmitter.

Program of Research

Flight Safety provided the FCC with information regarding its proposed testing program when it initially secured the License. By way of background, UNICORN™ is a light-weight, low-power, low-cost aircraft collision alerting/avoidance system, simultaneously covering the entire anticipated threat region with no moving parts or expensive phased-array elements. It is designed to provide a pilot with early warning of the presence of a nearby threat aircraft within the surrounding airspace, unanticipated terrain or unexpected proximity of the ground. Collision alerting/avoidance systems fall into one of four general categories, depending on whether they rely on active or passive sensors and whether they require that aircraft share information to avoid collisions (cooperative) or act independently (non-cooperative). Passive, non-cooperative systems are generally considered to be unproven technologies. Active, cooperative systems are more common, but are very expensive and require that all aircraft carry transponders. Passive cooperative systems also require that all aircraft carry transponders and operate within coverage of ground radar systems. The UNICORN™ system is an active, non-cooperative collision alerting system, which provides range, bearing and closure rate to any obstacle in the field of view. Nearby aircraft (or any other object) need not be equipped with a transponder in order to be detected. It is a low-cost alternative to the other systems discussed above that also provides superior detection capability.

Modification of Existing Authorization

The testing proposed through this modification application will include two tower tests (from the same fixed location) and two airborne tests (from the same aircraft). The airborne tests build upon the ground-based testing already authorized by the FCC. Flight Safety will use the same 7-horn UNICORN™ subarray antenna for all four tests. The airborne tests will use an aircraft with a UNICORN™ antenna attached to it, and an aircraft without a UNICORN™ antenna serving as a potential collision threat. The aircraft will operate in a narrow rectangular box described in Exhibit B.

Airborne Use -- Flight Safety has already tested the UNICORN™ device at a fixed location near Atlanta, GA (it was authorized to operate at three other fixed locations and

no longer requires authority to test at those sites). Those tests involved the use of aircraft (with receive devices only) operating in the vicinity of the fixed transmitter. Now, Flight Safety wishes to test the UNICORN™ device on an aircraft, which is, of course, how the device will ultimately be employed. The single aircraft on which the device will be mounted will limit its operations as described in Exhibit B hereto.

Expanded Bandwidth -- Flight Safety is currently authorized to operate with 3 MHz, centered on the frequency 5145 MHz. The attached application seeks to add authority to operate with 16 MHz bandwidth (it seeks to retain authority to operate with 3 MHz bandwidth as well). The increased bandwidth will permit Flight Safety to experiment with a spread spectrum transmitted waveform.

Increased ERP - Flight Safety was previously authorized to operate with 62 watts ERP. This application for modification seeks authority to use 316 watts, based on a peak power of 10 watts and a maximum gain of 15 dB. The original system design, described in US Patent 6,211,808 (filed 2/23/99 and granted 4/3/01), incorporated an omni-directional sensor with 0 dB antenna gain. Requirements for additional detection range subsequent to the original FCC authorization (documented in a revised patent application, Serial Number 11/266,031 filed 11/2/05) indicated the need for this additional antenna gain and peak power.

Satellite Operations -- Flight Safety is mindful that the channel on which its operations will occur -- 5145 MHz -- is licensed for satellite earth station use.^{1/} However, Flight Safety believes that the modified operations contemplated by this application will not cause harmful interference to those operations. Globalstar currently holds an authorization for the earth-to-space feeder links for its low-earth-orbit satellite telecommunication system in the 5091 MHz-5250 MHz band. Globalstar is the only licensee in this band and its feeder link earth stations are located in Puerto Rico and Texas. Even with the requested ERP level, airborne operations and expanded bandwidth, Flight Safety will not cause harmful interference to Globalstar's operations in Texas and Puerto Rico because of excessive one-way spreading and absorption losses over the distances between UNICORN™ and each of these earth stations and the fact that the emission is not line-of-sight between them. In fact, it is only 67 nmi to the radar horizon and 58 nmi to the visual horizon for UNICORN™ flying at a maximum 3000-foot experimental altitude (see Exhibit B), much closer than the Atlanta, GA test site is to either the Texas or Puerto Rico Globalstar locations, not to mention terrain obstructions along the way.

^{1/} Flight Safety is currently evaluating the spectrum in which UNICORN™ will be operated on a permanent basis. Because of the use of the spectrum for satellite operations, it does not presently expect to conduct operations on the channel 5145 MHz on a permanent basis. However, because its current equipment has been developed for use on that channel, it seeks continued experimental authorization for that frequency. Flight Safety expects that the frequencies on which the UNICORN™ system will operate on a permanent basis will be available for conforming aeronautical operations.

Objectives

Flight Safety is developing the UNICORN™ early warning system for small aircraft, to provide pilots who previously relied on eyesight alone with what Flight Safety believes to be a low-cost, self-contained system for avoiding collisions with other aircraft or the ground.

Flight Safety is developing UNICORN™'s radar technology based on the unique integration of three distinct microwave antenna horn designs arranged to provide a continuous detection and tracking of nearby threats in three-dimensional space. Upon successful development, UNICORN™ would provide a pilot with both a visual display and aural warnings to alert of approaching aircraft or terrain. Flight Safety is working to design UNICORN™ with a small footprint and streamlined radome, so that the system will have minimal impact on the airframe structure, the flying characteristics or flight performance.

Contribution to the Radio Art

The research program is designed to show that the UNICORN™ system, upon completion of development and testing, will be a compact, lightweight antenna array capable of automatically alerting the pilot to all potential nearby collision hazards sufficiently early to provide the time necessary for taking evasive maneuvers. This lightweight antenna array simultaneously provides coverage of the entire anticipated threat region with no moving parts or expensive phased-array elements.

Developing UNICORN™ technology will help small aircraft operators overcome elements such as ground hazards, other aircraft, bad weather, and sunlight glare. A pilot would no longer have to rely on sight or air traffic controller alerts to be aware of the potential for an accident -- UNICORN™ would provide ample warning.