Exhibit I

By the present application, Texas Instruments, Inc. (TI) requests authorization to conduct experimental operations at its plant and administrative sites in order to complete the design and development of the Texas Instruments Registration and Identification System (TIRIS) prior to certification testing under Part 15 of the Commission's Rules. Because the public availability of specialized RF identification (RF/ID) technology will be accelerated thereby, it is in the public interest to authorize the requested operations.

Public benefits would not be limited to a small class of uses or users. Indeed, many sectors of business would benefit from the accelerated availability of TIRIS technology to reduce inefficiency, labor, and other operating costs.

TIRIS TECHNOLOGY

TIRIS installations consist of one or more low-power RF transmitter/receiver units ("Readers"), a passive transponder attached to each mobile object, and computing units to analyze and store data.

In operation, a TIRIS Reader emits a low-power signal that activates transponders within a range typically limited to 40 inches. The transponders, which are powered by the Reader's signal alone ("beam-powered"), modulate that signal and reflect it back to the Reader. The Reader then receives and decodes the reflected signals. The computing unit at the

Reader location then extracts the identification code from the signal received, adds additional information, and passes the data to a host computer. Remote locations can use lap-top computers for local data processing. Connection to a host computer could include interface to, for example, security control databases and equipment. Data stored at local or central processing units is then available for detailed analysis.

Readers are available in stationary or portable forms. Typically, stationary Readers are installed on gates, animal chutes, assembly lines, or wherever objects with transponders frequently pass. Hand-held portable units are typically used in freight yards, animal pens or other small areas.

Note that the Readers are truly low-power, producing maximum field strengths (measured at 30 m) of only 447 uV/m at the fundamental. Field strengths in practice, of course, are usually even lower than these maximum values. Thus, the equipment addressed herein falls well within Part 15 limits. The authorization requested herein will permit design and development activities prior to certification testing.

Note also that TIRIS transponders are entirely passive. This characteristic has two positive effects: first, the numerous mobile objects to be tracked do not contain active transmitters which could cause interference outside of the very limited range of Readers, and second, the transponders do not require batteries, and thus may be permanently installed in objects.

APPLICATIONS FOR TIRIS TECHNOLOGY

Because TIRIS systems are not affected by dirt, dust, heat, cold, poor visibility or dampness, there are many applications for TIRIS technology not available to non-RF identification systems such as optical bar-code readers. In addition, as mentioned above, the operating frequencies and small size of TIRIS transponders provide a means of identification where direct contact or line-of-sight is not needed or possible.

Container tracking, for example, is an application of TIRIS object tracking capabilities. Using TIRIS technology, a box or crate may be automatically tracked over the course of shipment. TIRIS Readers located along container routes would feed data to a host computer that would allow precision location of the container and tracking of its movement.

Another TIRIS application is the registration and identification of livestock. In the past, animal tracking was accomplished by attaching ear-tags and manually logging animal movements. Injectable TIRIS transponders, however, allow automation of tracking.

Process management is another area for TIRIS technology application. Specifically, TIRIS transponders attached to work products at various stages of production would allow the products to be tracked throughout the production process, and thus, allow managers to identify areas of inefficiency and contingency problems.

Finally, TIRIS technology has application in security and access control settings where positive identification of objects or personnel is required instantly.

PUBLIC INTEREST

The instant request for authorization to conduct experimental operations at three U.S. locations -- Dallas, Austin, and Attleboro -- will allow Texas Instruments quickly to complete the design and development of TIRIS technology. After design review, TI will seek certification of TIRIS equipment under Part 15 of the Commission's Rules. By not delaying the final development -- and thus the subsequent public benefits -- of TIRIS technology, granting the instant request for experimental licenses will serve the public interest.