From: Gary Declue

To: John Kennedy
Date: June 21, 2006

Subject:
FCC File # 0122-EX-PL-2006

Message:

From: Granquist-Fraser, Domhnull
Sent: Thursday, June 15, 2006 12:44 PM
To: john.kennedy@fcc.gov
Cc: Sacks, Joseph J; Wells, Claude R; Declue, Gary L
Subject: RE: FCC File # 0122-EX-PL-2006 [Reference Number: 4399]

Mr. Kennedy,

Thank for your time today.

Your Question:

> Dear Mr. Gary Declue:
> Please explain the purpose of this experiment.

> Confirmation Number: EL251947

> jkennedy@fcc.gov

This license request is for a Global Positioning System (GPS) Real-Time Kinematic (RTK) system.

RTK is a process where GPS signal corrections are transmitted in real time from a reference receiver at a known location to one or more remote rover receivers. The use of an RTK capable GPS system can compensate for atmospheric delay, orbital errors and other variables in GPS geometry, increasing positioning accuracy up to within a centimeter. Used by engineers, topographers, surveyors and other professionals, RTK is a technique employed in applications where precision is paramount. RTK is used, not only as a precision positioning instrument, but also as a core for navigation systems or automatic machine guidance, in applications such as civil engineering and dredging. It provides advantages over other traditional positioning and tracking methods, increasing productivity and accuracy.

Using the code phase of GPS signals, as well as the carrier phase, which delivers the most accurate GPS information, RTK provides differential corrections to produce the most precise GPS positioning.

The RTK process begins with a preliminary ambiguity resolution. This is a crucial aspect of any