

# NEW CAPABILITIES IN FIELD DATA COLLECTION AND MAPPING

RESEARCH PLANNING, INC.

## Introduction

Research Planning, Inc. is pleased to announce our increased capabilities in the integrated field collection and management of spatially referenced environmental data.



We have recently acquired multiple high-accuracy Geographic Positioning System (GPS) units, rugged field computers, and customizable field data collection software. Together, these equipment and software investments extend our ability to rapidly collect and efficiently manage large volumes of environmental data in challenging and remote field locations.

## Hardware

Our Trimble ProXRS GPS units enable rapid collection of high quality positional information in outdoor environments, including the ability to use a variety of differential correction

techniques to achieve *sub-meter* accuracy. The TDS Ranger 200C rugged field computer serves as a controller for operation of the GPS units, as well as a stand-alone Microsoft Windows CE mobile computer. The units are ruggedized to military specifications, and they can operate on a single battery charge for multiple days in difficult conditions. We have successfully used this state-of-the-art equipment for extended periods in extreme environments, including remote coastal terrain under extremes of both heat and cold.

## Customizable Software

Software packages such as ESRI's ArcPad 6.0 and ArcPad Application Builder 6.0, Trimble TerraSync, and Trimble Pathfinder Office represent some of the most advanced software tools available for mobile Geographic Information System (GIS) data collection. Our in-house skills in programming and application development allow us to rapidly design data

collection applications for field personnel. We can effectively build custom software for a specific data collection task, replacing paper data forms with digital ones. We can also develop stand-alone data collection applications in a variety of development environments, including Microsoft eMbedded Visual Tools 3.0 or Visual Studio 6.0, for almost any mobile or laptop platforms - not just our own equipment.

## Applications

This system is ideal for the collection of nearly any type of complex field data that requires a spatial location, including ecological surveys, environmental or chemical sampling, ground-truthing of aerial or satellite imagery, or natural resource inventories. The system is also ideal for situations where the rapid collection and analysis of spatial data are essential, such as emergency spill response or damage assessment. We can integrate nearly any instrument with a digital output—barcode scanners, water quality instruments, thermometers, or digital cameras—with our GPS units to simultaneously collect and store multiple types of data.