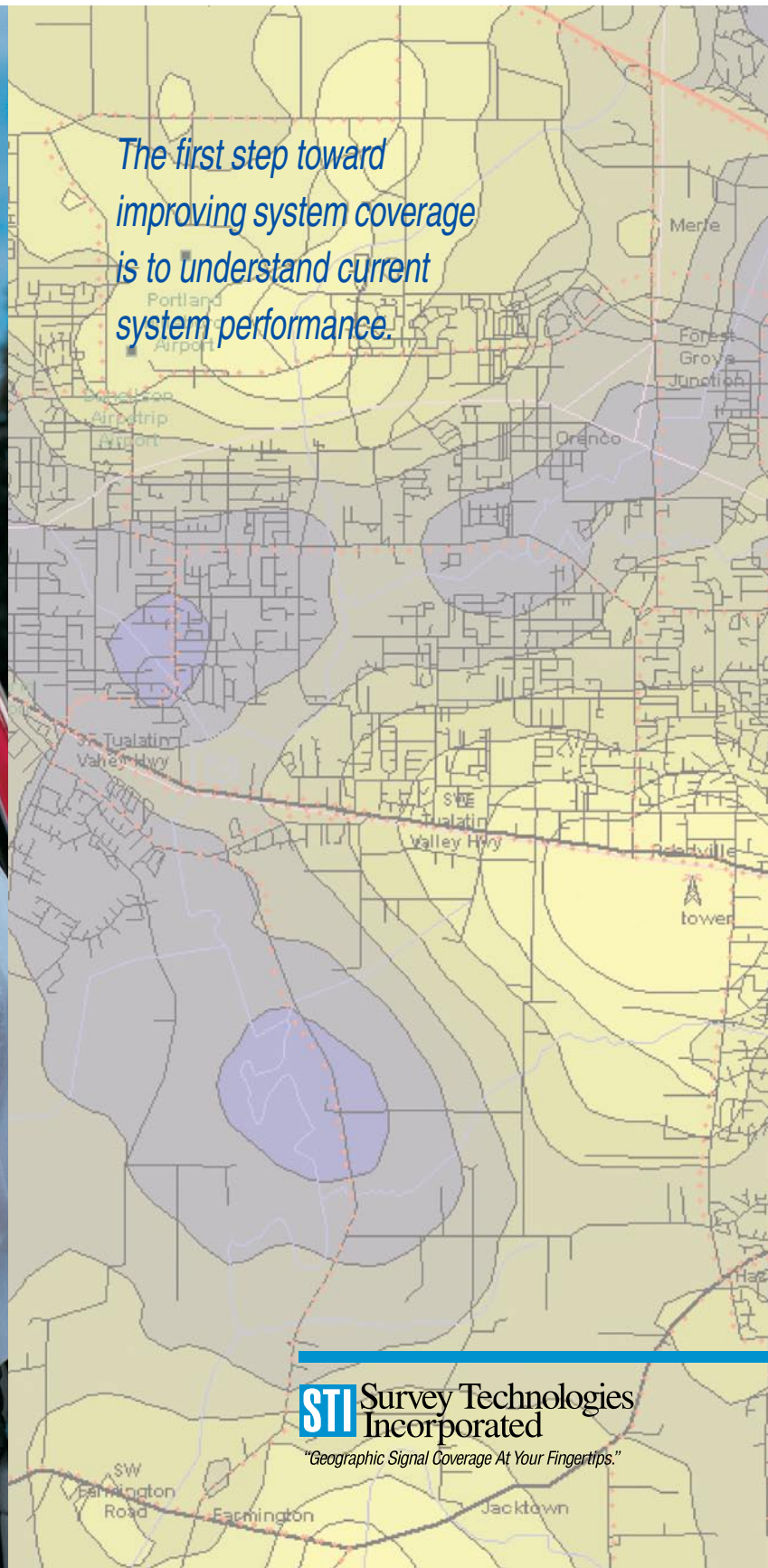


STI Field Test 6

Geographic Signal Coverage at your Fingertips.



The first step toward improving system coverage is to understand current system performance.



STI Survey Technologies Incorporated

"Geographic Signal Coverage At Your Fingertips."

Setting the Standard for Automated Measurement, Analysis and Report of Wireless System Signal Coverage

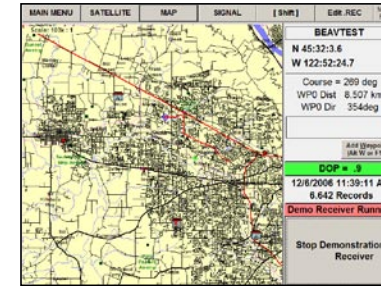
Survey Technologies can supply a variety of application specific receivers with STI Field Test 6. Currently, interfaces exist for many popular spectrum analyzers, service monitors, and field strength meters you may already own. An interface is also available for direct connection of analog signals through an A/D converter. Currently, parameters such as RSSI, P-25 BER, and Audio SINAD can be measured. STI has the ability to design custom interfaces for any kind of instrument with an RS-232, network, GPIB or TTL communications port and interface specification document.

STI Field Test 6 is automated signal measurement and analysis software that can be interfaced with most signal measurement instruments or RF receivers. STI Field Test 6 consists of a GPS receiver, street map data for the entire USA, measurement and analysis software and one year warranty, allowing you to utilize your laptop PC to integrate a Field Test System that meets your drive test requirements.

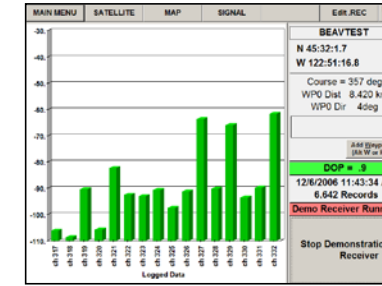
The versatile STI Field Test 6 interface software allows for connection to the proprietary or application-specific receivers of your choice. The types of signal measurements taken are limited only by the capabilities of the RF measurement instrument used. This unique feature ensures a long and useful life for your STI system.

From digital BER, to analog SINAD, to signal strength, STI Field Test 6 is the automated field measurement and analysis kit to measure mobile communication system coverage and performance.

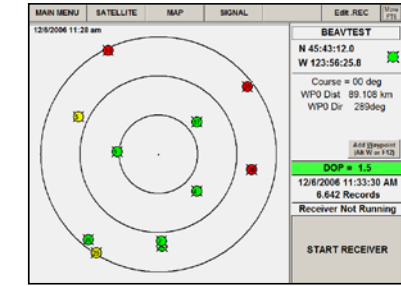
STI Field Test 6 Acquisition Displays



Map Display
Showing measurement locations and current position on the map.



Signal Display
Last set of signal measurements.



GPS Display
Current GPS satellite constellation.

Automated Signal Measurements with STI Field Test 6



Setting Up Drive Test Parameters

Follow these simple steps to set up your STI Field Test 6 Software:

Within the setup mode you may either create a new project or select an existing project to continue data collection.

To create a new project, select a receiver driver from the menu for the receiver you intend to use. A separate receiver driver is needed for each receiver used.

Select a receiver setup file containing the test commands the receiver requires and the list of frequencies to be measured. STI provides a default project for you to use as a starting point. It's easy to select the default setup then add or change settings to tailor the measurement cycle to your current project requirements.

Signal Acquisition Has Never Been This Easy

Simply start the signal measurement process and drive your STI Field Test System throughout an area of interest, acquiring an adequate density of measurements. STI Field Test 6 will automate signal strength measurements at each specified frequency, average the

measurements according to your setup, combine latitude and longitude information from the GPS and create a Microsoft Access™ measurement database. Measurement data can be exported as Excel, comma or tab delimited files for further manipulation or import into coverage prediction applications.

Acquisition Displays

As measurements are taken, signal readings and their locations are displayed in real time.

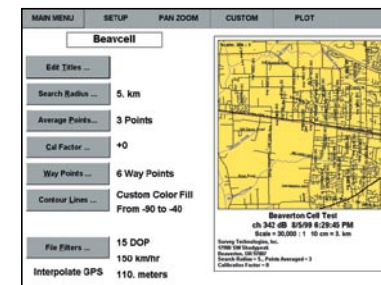
The Map Display in STI Field Test 6 is a real-time display showing measurement positions during the drive test. Street Map data for the United States is included. Optionally, the user can provide .TAB file map data to be displayed.

The Signal Display is also a real-time display showing the results of each signal measurement cycle. Channel names and "y" axis of this screen are entered in the initiation file for each project.

The GPS Display is generated from GPS receiver information and shows the constellation of satellites and the level of reception from each.

Contour Plots (Macro Analysis)

The primary form of signal coverage analysis is a contour plot generated from measurements taken during the drive-test. Contour plots are the best method to graphically display large amounts of data in an easily understandable format. Blend and Custom are the two types of contour plots. Blend Plots display signal strength variation across



Contour Plot Setup Window
Contour plots can be created and viewed even in the field, or printed as an easy to understand report document.

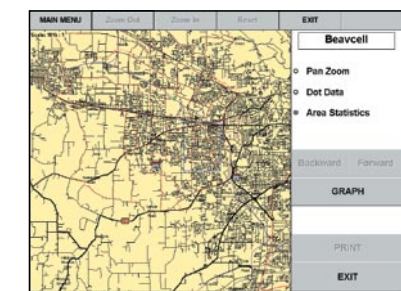
geography; Custom Plots demonstrate coverage as grades of service.

Point and Area (Micro Analysis)

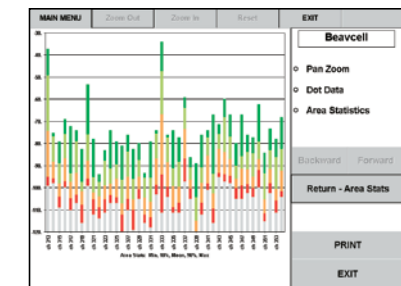
Once signal anomalies have been identified with a contour plot, point and area analysis allows the raw data to be recalled and analyzed in detail. In area analysis mode a rectangle can be scribed over a subset of data points to view signal value statistics within that region.

With data point analysis, select a single data point to recall and display measured values graphically, in bar chart form. You may step forward or backward along the drive path recalling information specific to each measurement point.

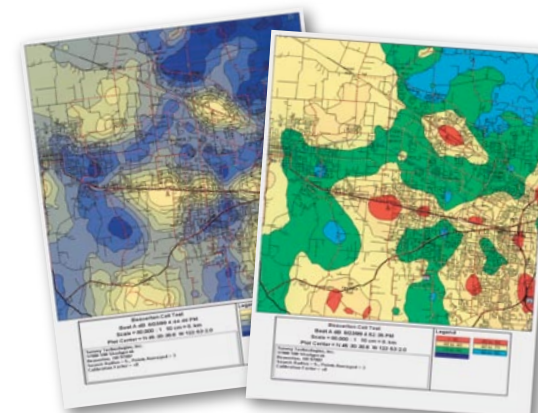
STI Field Test 6 automates the field testing process and translates large amounts of signal measurements into clear concise reports in a cost effective manner. This type of system verification is critical for new site set-up, coverage verification, system optimization and ongoing maintenance.



Point and Area Analysis Display
Identify an area of measurements to be analyzed and/or a single measurement to be recalled.

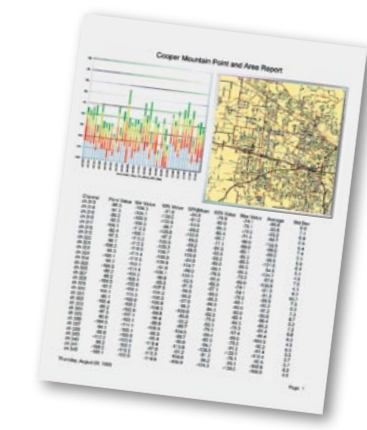


Area Analysis Display
Displays maximum, average and minimum values of signals within the specified region.



Blend Plot
Signal strength contours are displayed at periodic levels such as 5 dB, and can be converted to the units of your choice, such as, dBuV, dBm or dBu.

Custom Contour Plot
Custom contour plot showing grades of service.

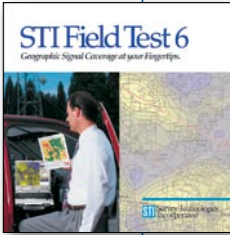


Point and Area Analysis Report
Quantitative point and area report results.

STI System Configurations and Options

STI Field Test 6 Software

STI Field Test 6 CD has a demonstration mode that allows you to view a drive test and an indoor test conducted previously. You can view acquisition displays, analyze data with contour plots, conduct data point analysis and create reports of the indoor and drive test projects just as you will with your STI Field Test System.



STI Field Test 6

Follow the instructions on the STI Field Test 6 CD for installing the software on your compatible PC, print the Field Test 6 Demo pdf found on the CD in the Read Me directory or on your PC once the software is installed at C:\STI6\Read Me\Field Test 6 Demo.pdf and follow along in the Field Test 6 software.



STI-9400

The STI 9400 System

The STI-9400 is a turn-key Field Test System also available from STI integrated to meet your measurement requirements. The STI-9400 comes with a ruggedized touchscreen laptop PC, STI Field Test 6 software, GPS receiver, Street data for the entire USA and one year warranty integrated with selected receiver options to meet your specific RF coverage measurement requirements.

Tile Analysis and Report, Option 71 – Tiling

Tiling is an optional software function of STI Field Test 6 that provides a means of quantifying signal coverage for system acceptance and proof of performance testing. In this mode a region of interest is divided into equal-size geographic areas called tiles. Data acquisition is conducted as usual. The grid of geographic tiles is displayed during data acquisition to indicate to the operator when a qualifying number of measurements have been made in each tile area.

After data collection, the area of interest can be analyzed statistically. A verifiable specification statement for a communications system using this quantitative form of analysis might read, "Tile sizes will be 1 minute rectangles. After qualifying 80% of the tiles in this geographic area with at least 10 measurement samples, at least 95% of the qualified tiles must have 100% of their measurements above -95 dBm."

You can automatically produce tile reports indicating the number of measurements in every tile, the percent of measurements above the threshold level for every tile and summary statistics for the entire area of measurement.

Option 72 – .TAB File Map Interface

STI Field Test 6 includes street map data for the entire USA. Option 72 allows international users to supply .TAB file data for streets, roads, highways and other important features.

Option 81 – Indoor Measurement Hardware and Software

Automated signal coverage measurement and analysis is now possible for office buildings, hospitals, parking structures and shopping malls. An STI Field Test System equipped with the indoor measurement option allows you to import a building floor plan for referencing measurement locations during mobile or stationary indoor tests. A Software only option is also available.



Above: Option 81-Indoor Measurement Hardware

Right: Indoor Test Results of Shopping Mall

Company Profile

Survey Technologies, Inc. was founded in 1991 to improve and automate the acquisition, analysis and report of RF signal coverage.

The primary output of STI systems are various reports containing accurate signal

measurement statistics and plots of coverage created from drive test measurements.

Corporate headquarters are located in Portland, Oregon, USA.

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