

## ST-Ericsson Spirent Case Study

### The Challenge

ST-Ericsson is a world leader in development of wireless platforms and semiconductors. More than half of all mobile phones in use today are enabled by ST-Ericsson's products and technologies-bringing smarter communication, mobile entertainment, as well as benefits of access to mobile and broadband connectivity to people around the globe. As part of its connectivity offerings, ST-E develops GPS and GNSS receiver chips as stand alone and "combo" devices with other connectivity functions (Bluetooth, FM Tx/Rx, NFC, etc).

As part of the extensive testing conducted within the design and development phase, and for proving resilience of operation in harsh environments to customers, ST-E undertake extensive test campaigns in urban canyons, indoors and in heavily shielded or jammed areas. Each customer has its own "favourite" route or black spot, and conducting these trials in real time and on location has proven expensive both in travel and time, especially if development engineers have to be available to "tune" algorithms or performance to mitigate particular circumstances or signal environments (such as multipath).

### The Solution

We chose a record and playback system like the GSS6400 to accomplish capturing the signal and propagation environment for replay later in the development laboratory. An attractive feature of this is that our Field Applications Engineers can collect the data, thus avoiding the need for Development Engineers to be on site for extended periods.

### Benefits

Using local personnel we can get recordings from areas of interest at various times such as light or heavy traffic conditions, good or poor satellite coverage or high multipath conditions. Replay in the laboratory lets us develop algorithms and solutions that handle particular "real life" signal characteristics that are difficult or impossible to simulate. Moreover, we can replay the snippets of most interest over and over again to test out solutions as though we were actually there on site. The test data can also be used as part of the validation process to check out new releases of software.

### Customer Quote

"... working with the record/playback system has freed up development time that would have otherwise been used for generating solutions and testing on-site, and has cut the travel bill substantially. We are able to demonstrate to our customers, performance improvements targeted at their own test environments without the need for development engineering during customer trials."

**Peter Anderson, ST-E Fellow and GPS Systems Manager for the GPS team**

Spirent's unrivalled experience and expertise in GNSS simulation ensures accurate results that customers trust and rely on to evaluate their products and applications. Contact us to find out how Spirent solutions can help you.