

Beam Switch Analyser Software Tool Satellite Network Operator

About e2E

e2E provides communications systems engineering, technical support and expertise to clients in the satellite communications industry, in both defence-related and commercial domains. Our services are provided across the full system lifecycle.

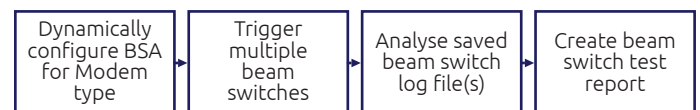
The Challenge

Automatic beam switching is a common functionality for modern satellite communications networks and constellations. The concept allows a modem to switch to a different satellite or to a different beam set within the same satellite for mobility terminals. This functionality allows continuous uninterrupted service to end users therefore significant amount of time is allocated to beam switch testing during the system validation cycle.

When the system is scaled up to multiple end user terminals, manual beam switch testing is not only time consuming, but also limits test coverage and is inherently subject to human errors during data analysis and reporting.

The Solution

e2E created the Beam Switch Analyser (BSA) software tool to automate the full end-to-end test scenario for one of the largest global satellite network operators. Our BSA can be customised to specific customer needs and system setup. It also supports multiple modem configurations by enabling users to dynamically create new modem settings using the tool's user interface.



Customer Benefits

Integrating our BSA solution into our Customer's existing test processes has significantly reduced the overall validation cycle while extending the scope and coverage of the beam switch test scenario. The unmanned approach also managed release resources and focus on manual testing where necessary.

The BSA effectively mitigates risks by removing human error; in fact, its built-in ability to identify issues already at the early stages of the test process results in improved software quality.

The BSA is currently adopted by our Customer to validate the beam switch times, switch type, beam ID and other key features for aero and maritime terminals. It can batch process, analyse and report on hundreds of terminal and modem log files in less than 30 minutes resulting in operation cost savings and high accuracy. The BSA tool can be used with all existing or planned satellite constellations.