

# Testing and Validation Services

## Clairus creates customized test and evaluation plan for your ATC systems.

Clairus analysis tools allow for simple evaluation of system performance by monitoring the ASTERIX output that provide a summary of system performance. These simple tools make use of targets of opportunity, and do not require the airport or airspace to be shutdown for testing.

Additionally, more elaborate testing can be performed using a specifically equipped test vehicle. Clairus can compare the output of your surveillance system to differentially-corrected GPS information. This method allows for a precise measurement of your system's performance.

The various levels of service can be bundled to meet your ATC validation needs. Through regular test events and data analysis, Clairus can help you define, predict, and model the performance of your ATC systems.

Clairus offers three levels of support: [Coach Class Validation](#), [Business Class Validation](#) and [First Class Validation](#).

## Coach Class Validation

- :: Analysis tools passively collect ASTERIX data and provide a summary of system performance.
- :: Tools are simple to use and the results are easy to understand.
- :: Data collected using targets of opportunity – together, we'll define the times of day and the operational configurations that will be used during the collection of your data set.
- :: All data collection is completed without ever requiring a test vehicle and without ever interrupting the normal airport operations.
- :: ADS-B equipped targets and known target paths (along runways, main taxiways, etc) are used to generate implied accuracy statistics.
- :: All targets are used to provide update rate information.
- :: Development of a long-term plan to generally monitor your system's performance as the airport environment changes.

## Business Class Validation

- :: Data collection with test vehicle traversing the entire airport surface or concentrating on a specific area within the airport.
- :: Collection of output from the fusion processor or from a single sensor (for example an SMR or a Multilateration System).
- :: Various ASTERIX output formats can be used.
- :: Comparison to D-GPS positional information.
- :: Provides explicit accuracy, update-rate, and target ID performance information.
- :: Initial data analysis presented the first full day after data collection.
- :: Complete Test Report delivered within one week after data collection is complete.
- :: Economical choice for formal annual or semi-annual system inspections offering an explicit snapshot of your system's performance.

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## First Class Validation

- :: Same ASTERIX output format options, D-GPS comparison, and explicit performance information as the Business Class Validation.
- :: Repeated data collection – collecting data using various system configurations (missing sensors, new sensors, etc), various test setups (simulate a broken transponder), and/or various environmental conditions.
- :: Simultaneous collection of output from the fusion processor and/or from up to 3 individual sensors.
- :: Initial data analysis presented within two days after data collection is complete.
- :: Complete Test Report delivered within two weeks after data collection is complete.
- :: Most complete system validation service offered in the world.

Each coverage volume is unique. The validation needs for each system are unique. Clairus can design the right validation plan to meet your needs & allow you to efficiently monitor the performance of your system.

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Clairus offers a wide range of technical services – assisting you with world-class technical services for your sensor system design, sensor network design, system design, system specification, and/or system validation projects. Clairus provides general systems engineering services as well as specific services to the Air Traffic Control community.



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