

INFO PROVIDED

Following information is included in daily reports:

Performances at System and User level	Summary of performances at System and User Level, per level of service (APV-I, LPV200, NPA...) and per GEO channel
Scenario Specifications	No. Receivers, SV, etc
IGP Analysis	IGP statistics iono availability iono continuity iono accuracy iono integrity
SV analysis	SV statistics SV availability SV continuity SV accuracy SV integrity
HW Bias Analysis	Receiver/SV HW Bias
Receiver Clock offset and Drift	Clock offset and drift status and values
Orbit Determination Process	Orbit status and accuracy
User Domain Performances	Availability maps Continuity maps Accuracy maps Protection Level maps Integrity maps

Other **GMV** products:

Eclayr[®]

Eclayr Tool for Performance Assessment:

<https://gmv.com/en-es/products/space/eclayr>

Check also:

EDAS ftp server:

<https://egnos-user-support.essp-sas.eu/services/about-edas>

GMV Brave[®]

A product by:



Product info at:

<https://gmv.com/en-es/products/space/gmv-brave>



GMV Brave[®]

Brief Report for Analysis, Validation and Engineering of a SBAS



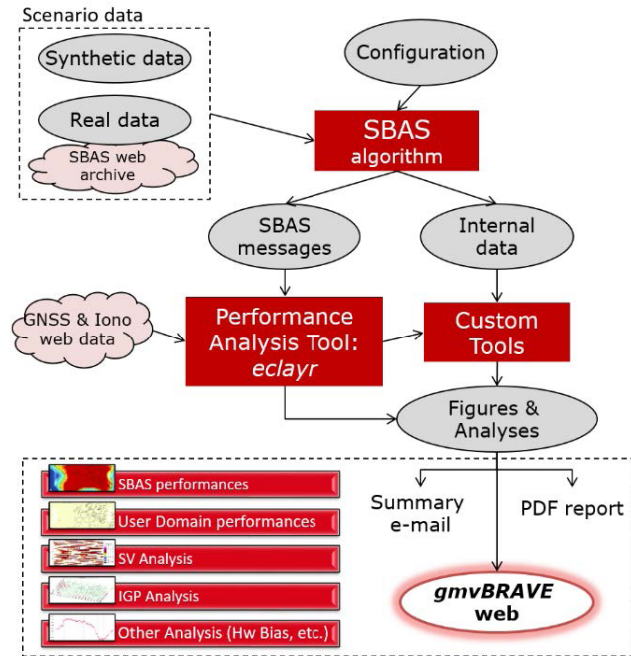
What is **GMV Brave**®?

GMV Brave® is a helpful tool that improves the process of monitoring, reporting and analysing of the daily performances of a SBAS.

GMV Brave® automates the daily executions of the SBAS algorithms, that provide integrity and accuracy information, and the analysis of its performances, generating an extensive set of outcomes which play a key role in the quick detection and analysis of any incidence or performance degradation of a SBAS.

GMV Brave® platform allows:

- **Integration and automation** of several tools for SBAS engineering and analysis.
- **Comparison** between performances of different SBAS versions.
- **Evaluation** of performance indicators to detect degradations or anomalies at system level.
- **Anticipation** to the reporting of anomalous observations.
- **Preliminary analysis** of feared events.
- **Testing** SBAS algorithmic evolutions.



GMV Brave® Monitoring Platform Architecture

Main components of **GMV Brave**® are:

- **Input Measurements:** interface to SBAS input data (e.g. EDAS for EGNOS), GNSS and ionospheric archive systems (e.g. IGS data) through protocols FTP, NTRIP, etc.
- **Algorithm engineering Platform:** SBAS algorithms ported to Linux and customized for providing internal detailed statuses and variables of the algorithms.
- **Eclayr:** PC tool for SBAS performances assessment on Accuracy, Availability, Integrity and Continuity at pseudo-range and user domains.
- **Additional analysis tools:** customizable tools for analysis.
- **Web platform:** user-friendly interface which organizes and displays analysis figures and key performance indicators.

Offered Services

DAILY MONITORING TOOL

- Reliable tool for continuous monitoring of daily performances of any SBAS at system and user level.
- Easy monitoring through a web interface.
- Quick detection of unexpected events providing an initial trace to their causes and origins.
- Archive of historical SBAS performances.

DAILY PERFORMANCE ANALYSIS TOOL

- Preliminary analysis of any incidence leading to performance degradation.
- Production and easy management of extensive outcomes including internal data from algorithms.
- Generation of daily reports.

EXPERIMENTAL VERSIONS TEST TOOL

- Test bench for experimental SBAS algorithms in baseline scenarios.
- Easily scalable: dependent only on hardware, storage and computing power resources.
- Allows platform users to work in reduced scope within a larger project.

Quick analysis, little effort

The comparison of maps between different SBAS versions, and info provided by **GMV Brave**® allows conducting the analysis of anomalies in a straight-forward way for rapid root cause detection.

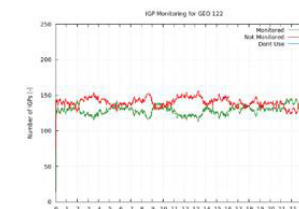
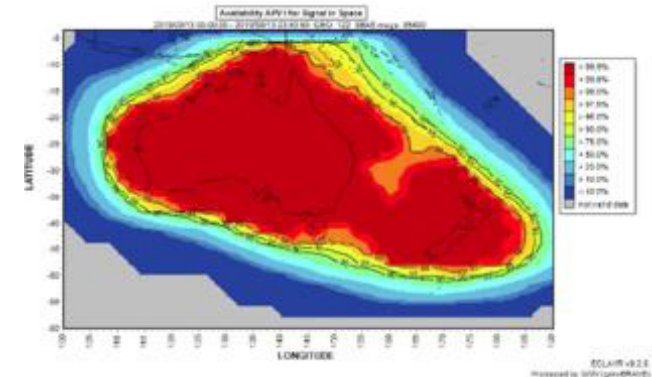
A glance at the future

GMV Brave® can be used for many different purposes and utilities. Modifications are possible under request for particular applications such as:

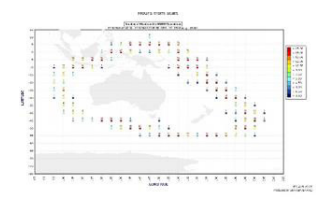
- Performance analysis of Signal-In-Space data (real SBAS messages).
- Analysis of receivers raw measurements.
- Survey of intermediate results: ionosphere models, HW bias stabilities, etc.
- Notification of performance degradation or discrepancies with respect to operational performances.

SBAS algorithm Performances

APV-I Availability Map



IGP Monitoring



IGP Transitions to NM