MiDAS

MiSSION DISPLAY AND ANALYSIS SYSTEM

IABG's MiDAS is an advanced software application, which provides users with a powerful suite of display and analysis capabilities for joint distributed and test bed simulation as well as live and simulated weapons system operation on multinational exercises. MiDAS enables coherent display of weapon system data to support operational test & evaluation, decision makers, exercise command and aircrew debriefing. The system offers the possibility to display truth and perceived data on simulation networks and also the downloaded data from weapons system platforms.

Problem Statement

The data generated in joint combined exercises and missions is extensive and multilayered. As a result, it is extremely difficult to structure without the help of advanced software. MiDAS is the solution for today's mission debriefing and analysis. It provides the software algorithms and interfaces required to realise a common picture. MiDAS runs in live and simulated operation modes on IP-based simulation networks and undergoes continual enhancement to provide an optimum tool in order to fulfil future visualisation and debriefing user needs and system requirements.

Use Cases

MiDAS ingests the various data formats, fuses, correlates and displays them in a single comprehensive view.

In this view, time is the common reference to differentiate between the displayed data sets. MiDAS is able to import data from various data sources such as DIS, HLA, EAG, TDMS, SIMPLE (Link 16) and many more. It can be imported online or via data recordings.

MiDAS allows the user to display and analyse tracks and pairing lines, also enabling users to select an object from the screen and have configurable metadata associated with the object displayed in the corner of the screen.

Users can customise how the metadata is displayed based on all the data captured via the tactical data link and simulated messages (e.g., call-sign, STN, velocity, altitude, heading). All data is merged and can be displayed in multiple views and screens. In the case of online data capture, real time mission monitoring and control is possible, including *Real Time Kill Removal*.

MiDAS incorporates Built-in Missile Simulation, Weapon Events, Emission Events, Counter Measure Events, Jamming Events and Sensor Data.

Value Proposition

MiDAS is capable of displaying thousands of entities simultaneously in real time and provides an integrated visualisation capability. That supports the simultaneous display of overlapping and filterable truth and perceived data in either two or three dimensions, as preferred by the user. Hence, users are able to save time and resources when analysing captured or recorded data. MiDAS negates the need for costly role fit equipment.

Key Advantages

- Multi-platform debrief interoperability
- Commercial of the shelf (COTS) Software
- Windows Based Technical Readiness Level 9
- No third party software required
- Flexible configuration and map integration

System Breakdown / Components

MiDAS supports a plug-in architecture enabling flexible extension of the capabilities. Built on modern technologies and supported with quarterly software updates, it leverages state of the art infrastructure such as .NET 5, Windows 10 and OpenGL graphics.

MiDAS supports modern simulation interfaces such as High Level Architecture (HLA), Distributed Interactive Simulation (DIS) and standard interface for Multiple Platform Link Evaluation (SIMPLE) [Link 16] as well as aircraft recorded flight data.

MiDAS includes a Graphical User Interface (GUI) which offers a wide range of display and analysis windows, including 2D/3D display, head-up display and (specific) Players Window.

Furthermore, MiDAS's GUI provides an Event Manager which allows users to view and analyse the time stamped TDL and simulation data as well as any other information supplied to the system. The Event Manager leverages an intuitive and powerful search and display logic enabling fast user interaction and reduced search time.

In support of an ideal user interactive concept, the most common and frequently used display and analysis functions can be reached with the use of the right mouse button.

References

MiDAS was subject to an extensive development program and has since continually been improved and supported by direct user involvement. Formally accepted by the German Armed Forces, MiDAS is used by the German Air Force as the standard software for the Eurofighter mission debriefing.

For the last 14 years, MiDAS has gained exposure and has successfully supported the following exercises focused on the exchange of simulation data and TDL communication:

- AIR DEFENDER 23
- Joint Air Warfare Training Exercise (JAWTEX) and NATO Joint ISR Exercise – Unified Vision
- Brilliant Arrow and BORA
- Joint Air Defense Synthetic Trial (JADSynT)
- NATO Trial Imperial Hammer 2008 & ELITE
- BALTIC CLOUD & GAF CESMO Trials

The following users rely on MiDAS:

- German Air Force EF (Eurofighter) 2000
- German Armies Combat Training Centre (CTC)
- JTAC Competence Center (JTAC CC)
- Simulation and Test Environment of the German Armed Forces (SuTBw)
- Center for Electronic Warfare of the German Armed Forces (ZEK)
- Center of Transformation of the German Armed Forces (PlgABw)
- Officer Academy Officer Academy of the German Air Force (OSLw)

Scope of Delivery / Services

- USB Installer and product documentation
- Supported with quarterly software updates

System Support & Training Services

IABG software products are delivered in accordance with their respective software release plans and maintenance agreements. Support plans delivered with IABG products include regular software and maintenance updates.

IABG training courses deliver the essential content required to ensure trainees are able to apply systems in the context of their operations. All aspects of the use, configuration and administration of the system are covered. Successful completion of the interactive training provides the basis to support continued proficiency improvement.

For further information please contact:
dssolutions@iabg.de

Download this flyer

AUTOMOTIVE

INFOCOM

MOBILITY, ENERGY & ENVIRONMENT

AERONAUTICS

SPACE

DEFENCE & SECURITY