

GECO

Mission Support System (MSS)

inzipire



Our GECO MSS is designed to meet the demanding situational awareness and safety needs of the military cockpit.

The system combines award-winning software with modern high-performance hardware to deliver the right information, at the right time, in the right format. This enables military aircrew to make quicker and better decisions, ultimately making operations safer.

GECO has been in-service with the UK's armed forces since 2009 and is combat proven during operations in Iraq, Afghanistan, Libya and Syria. GECO is also in service with the Royal Jordanian and Indonesian air forces, and is also supplied to a variety of original equipment manufacturers alongside their aircraft.

There are over 400 GECO systems fielded on over twenty different platforms including Apache, Puma,

Blackhawk and Chinook helicopters, and F-16, Hawk and Texan fixed-wing aircraft. Utilising both 2D and 3D maps and moving imagery, GECO supports users through the whole mission cycle to enhance the planning, briefing, execution, and debrief phases. GECO comprises a comprehensive ground-based mission planning system and a rugged tablet which is used whilst airborne and can be handheld, knee-mounted, or cockpit-mounted.

The ITAR-free software supports fast jets, helicopters, and multi-engine aircraft, and benefits from a modular system architecture which enables integration with secure ground C2 networks and delivers a scalable solution to meet the most demanding of single or multi-aircraft mission requirements.

GECO enhances the delivery and safety of operational flying and training, by day and night, without the need to undertake expensive aircraft modification.

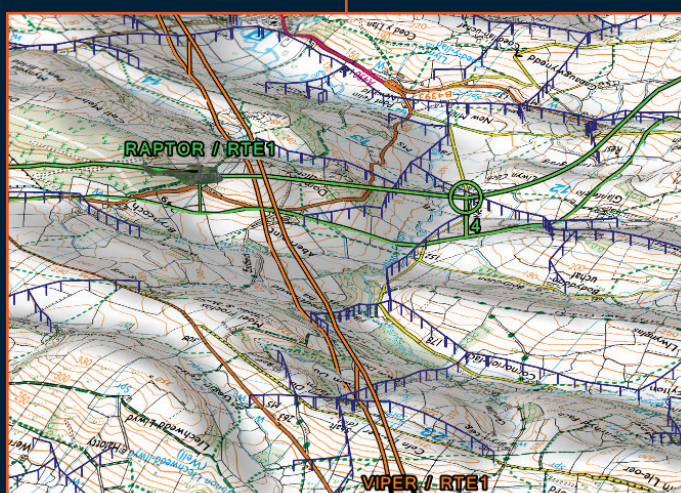
MISSION PLANNING



GECO's mission planning tool brings all critical mission information in to one comprehensive and easy-to-use digital environment, simplifying the planning process for single or multi-aircraft missions.

The tool provides all the information required to plan a safe and successful mission including headings, timings, fuel, safety altitudes and heights. Aircraft performances can also be calculated, and GECO provides performance warnings where they need to be highlighted. Weather data, NOTAMS, and tactical overlays can be imported into the system digitally to enable all external environmental and mission-critical factors to be considered during the planning process.

MISSION REHEARSAL



The GECO Mission Support System facilitates mission rehearsal in a comprehensive and versatile 2D or 3D digital environment, enabling crews to create an efficient and safe mission plan.

The system allows the planned mission to be viewed from multiple aspects simultaneously, including from the cockpit, externally from the aircraft, or from a specific pre-determined geographic location such as a threat-system location or hostile observation position.

The rehearsal view can be changed at any time, played on fast-forward or reverse, and the plan can be modified at any point during the rehearsal to help refine and develop the mission detail. Once the planning phase has been completed, the rehearsed mission can be uploaded to both the aircraft flight management system and to the GECO tablet ready for mission execution.

MISSION EXECUTION



Inspire has incorporated years of operational experience into the creation of the GECCO tablet in order for it to provide the exact information aircrew require throughout a mission.

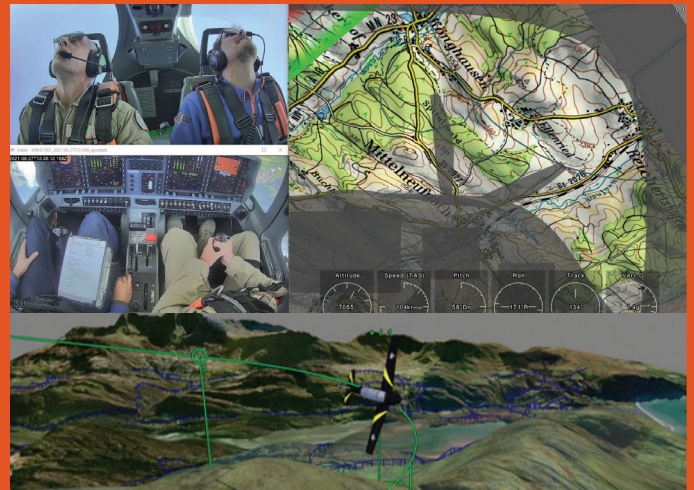
To enhance ease-of-use during airborne operations the tablet can be handheld, knee-mounted, or cockpit-mounted and operated whilst using gloves. GECCO displays the whole mission profile including all tactical and routine aeronautical overlays, whilst displaying a detailed GPS multi-layered 2D/3D moving map.

To enhance aircrew awareness, the tablet includes an in-flight aircraft performance planner which highlights any performance issues and a comprehensive electronic flight bag that quickly displays en-route and terminal aeronautical information and any operational, aircraft or flight documentation manuals.

The ability to react to changes within the operational environment is critical to mission success, and aircrew can modify and add real-time information to the tablet at any time should the mission change from the original plan. GECCO is capable of displaying data from external sources and integrating sensor feeds in the walk-on environment. Current examples of this are ADS-B feeds and AIS information. Thus integrating new sensor feeds in a walk on device. In operational environments, threat systems, bullseyes, airspace coordination orders and other tactical information can be added to the mission plan. Amendments can be shared between tablets in-flight so changes are updated across all aircraft participating in the mission.

A networked capability linking GECCO tablets and GECCO ground stations together enables air-to-air and air-to-ground real-time aircraft position updates and message sharing though beyond-line-of-sight satcom or 3G/4G data-linking.

MISSION DEBRIEF



GECCO delivers comprehensive single and multi-aircraft mission debrief and analysis capabilities for operational or training sorties.

Following completion of the mission, flight and aircraft information can be uploaded to the ground station from either the tablet or aircraft system recording; for fast jets this eliminates the need for a heavy and costly ACMI pod.

GECCO's debrief functionality provides full route profile analysis against the original mission plan and displays in-flight avionics, cockpit video and audio, and HUD information. The system can also be configured to highlight any aircraft limits that were exceeded during the mission, and provides an archived record of all mission profiles.

The mission debrief can be viewed using both 2D and 3D maps and imagery, and combines a variety of maps and satellite imagery in order to create a fully interactive analysis tool, allowing the mission and aircraft performance to be fully assessed.



Customer-Focused Multi-Aircraft Solution



STANDARDS

Safety: Def Stan 00-056

Security: UK MOD accredited to SECRET

Software: RTCA DO-178C (Software Level D), RTCA DO-200

HARDWARE QUALIFICATION

EMC: MIL-STD-461F

Environmental: MIL-STD-810G

Ingress Protection: IP65

POINT OF CONTACT



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GECO SYSTEM DATABASES

Maps and Imagery	CADRG/CIB, ASRP, MrSID, GeoTIFF, JPEG, TIFF, BMP, GIF, PNG
Digital Terrain	DTED, OS Terrain 50
Obstacles	XVOD, AIXM, Shapefile
Aeronautical	Jeppesen, ARINC 424, DAFIF, TAPs, HLS/MAD and Enroute Books
Aircraft Performance	Bespoke databases prepared by Inzpire on behalf of customer organisations
Documents	PDF
Postcodes and Towns	Ordnance Survey Database
Shapes, Lines and Spot Points	KML, GML, AML, Shapefile
Spec Imagery	TIFF, JPEG, BMP, GIF, PNG, MrSID, PDF, PPT
3D Models	GECO bespoke database prepared by Inzpire on behalf of customer organisations

EXTERNAL MISSION DATA

NOTAMS	Live NOTAMS
Route Definitions	CADS, CRD
Tactical Data	ACO, ATO
Weather	GRIB

REAL-TIME RECORDING/DISPLAY

Aircraft Avionic System Data	Information from aircraft data buses/systems (e.g. AIS data) can be displayed on the GECO digital map.
GECO Tablet Flight Debrief Data	GECO bespoke database created by the GECO Tablet during flight
Aircraft Instrumentation	Aircraft flight instrumentation data can be downloaded to the GECO Mission Planning System and 'replayed' using a common timeline in support of mission debrief activities
ADS-B	GECO can display this advanced surveillance technology that shares and highlights local participating aircraft position and track information
AIS	GECO can be loaded with an AIS maritime database and accept AIS information such that a maritime surface vessel picture can be displayed, integrated and recorded

Since 2009 Inzpire's GECO systems have been providing critical on-board and off-board mission support to military operations around the globe.