General Dynamics Motion GEOINT - Augmented Reality (MG-AR) supports the Motion GEOINT mission by providing Analysts with a platform to dynamically discover, configure and view multiple layers of intelligence synchronized, and geospatially registered with the video.

A core component of the General Dynamics MG-AR capability is the Activity Bus. The Activity Bus is an open, services based platform that leverages the Field of View from the current mission to dynamically discover relevant contextual information. For the Analyst, results are delivered as geospatial-temporal layers to the Augmented Reality tool, which displays them on and/or under the motion imagery based on analyst settings. This helps Analysts keep their eyes on the video.

Using MG-AR reduces information discovery times and increases analyst effectiveness. The Analyst does not need to search for relevant content and is able to visualize intelligence sources without leaving the context of the mission. There are no limits to the geo-temporal tagged information that can be displayed.

**MOTION GEOINT MISSION**

- Reduce information search times with automatic discovery of additional intelligence data based on the view port and relevant mission topics
- Increase operational focus by viewing additional information sources without leaving the mission context
- Provide greater situational awareness by geospatially registering multiple intelligence sources with the video within the exploitation capability
- Improve value of auxiliary intelligence sources including SIGINT, Structured Observation Management (SOM), finished products, reports, and foundation layers
- Data presented in real-time and remains at rest

**THIRD-PARTY INTEGRATION**

The General Dynamics MG-AR Activity Bus utilizes an open API query schema that can be easily integrated and adopted by third-party exploitation capabilities including ELTs, GIS tools and other Motion GEOINT exploitation sources to rapidly integrate and discover data.
MG-AR OVERVIEW

MG-AR uses the Activity Bus to provide contextual information from a range of additional intelligence sources, which are automatically served from live or persistent information based on user needs and current viewport. The results are presented as overlays on motion imagery with selectable layer controls.

Analysts no longer need to search for relevant content. The results are presented as overlays on motion imagery with layer controls, increasing Analyst effectiveness and reducing information discovery time.

The General Dynamics Activity Bus can utilize PKI certificates to establish user credentials needed to access data. Depending on the Analyst’s credentials and permissions, any data associated geo-temporal metadata can be discovered including ISR metadata, SOM, SIGINT, finished products, reports, and foundation features. Each is presented as a specific layer, allowing the Analyst to select those most important to the point-in-time of the video.

MG-AR FEATURES

MG-AR capabilities enable a consolidated user interface by discovering and presenting any standards-based layer to the exploitation tool. In the example, we show how Motion GEOINT is augmented with relevant intelligence sources to improve analytical context. The figure shows how an Analyst’s view of a geospatially registered video, using General Dynamics Mission Monitor capability, is augmented by satellite imagery and relevant content discovered based on their field of view and preferences. This allows an Analyst’s view of information, outside the extant video, to have more context around activities as they occur.

The Analyst also has the ability to see more detailed information about objects by selecting them in the player. This includes viewing observations from a database such as FCMS or content from foundation databases. The benefit of MG-AR is that it provides the Analyst with relevant information based on the field of view for increased situational awareness of the mission area.

Our MG-AR capability screenshot highlights a wide range of geo-temporal tagged information that can be added to a customizable display by the Analyst. This includes Ground Moving Target Indicator (GMTI) for tracking movement; additional Object Details from selected objects; SIGINT information such as cell phone tracking; and observations from FMV or other Analysts. Additional features, including a compass and a Heads-Up Display (HUD) can be added to the display. Overall, our MG-AR capability provides Analysts with a rich suite of visual data that enhances context for the mission and increases analyst effectiveness.