



## Worldwide C5ISR / Satellite Intelligence White Paper



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### ***Introduction***

For almost two decades, system developers at Advanced Ground Information Systems (AGIS) have been incrementally designing, developing and successfully delivering C5ISR systems. See <https://www.agisinc.com/videos/LifeRingOverview.mp4>. During this time, as the system advanced from a simple Squad level system to a full Worldwide C5ISR system, the U.S. JCS J6 has been continuously testing it and using it on various military exercises.

This C5ISR system includes communication interfaces to Link-16, OTH GOLD, JVMF, NATO data links and radar processing. It has most recently been expanded to include commercial satellite and ELINT processing, SAR satellite processing and taskable Imagery Satellite processing along with other worldwide Satellite sensor feeds. The system uses AWS GovCloud processing or dedicated on-premises Servers. To assure continuity of operations it automatically provides failover from Cloud to alternate Cloud or Cloud to dedicated on-premises Servers in case of Server or communications failure. This failover provides the warfighter at the edge reliable access to data and capabilities that were not previously possible. The system operates either as an App or as a compatible Web-Client. This enables some users to be using systems with no classified software resident on their PC, Android, iPhone or Mac while others with classified inputs can operate in a full up classified military C5ISR system mode.

### ***Communications and Networks***

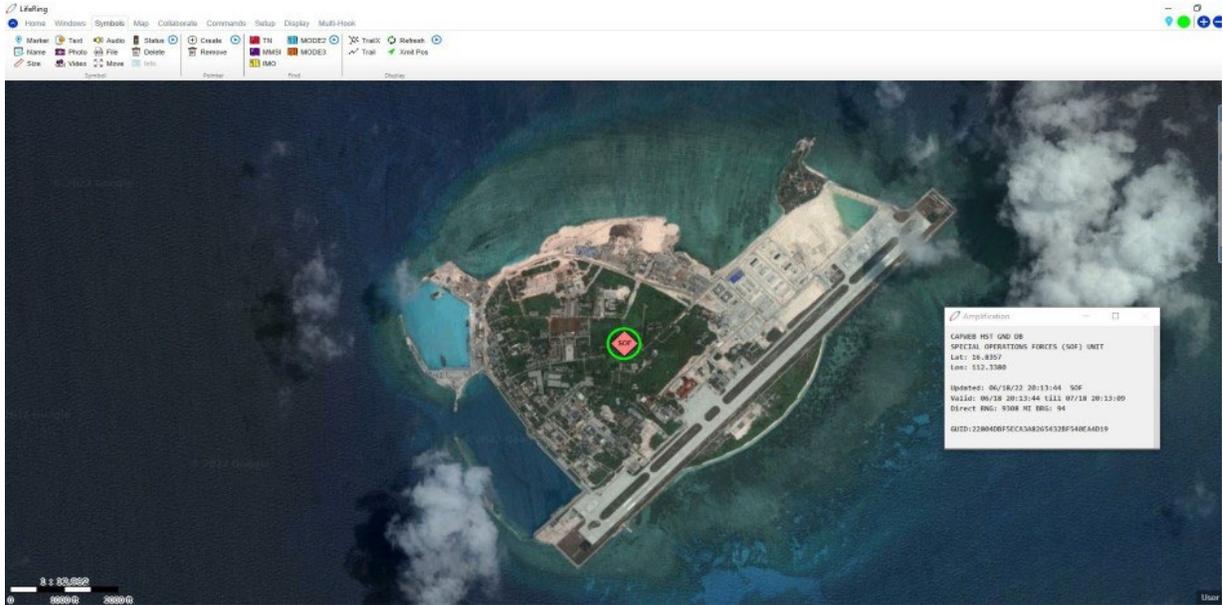
AGIS' C5ISR system architecture accommodates and has been tested with HF radios, VHF radios, 5G cellular and multi spectrum MESH devices and various satellite networks either separately or in differing configurations.

### ***Commercial and Military Satellite Sensor Reports Processing***

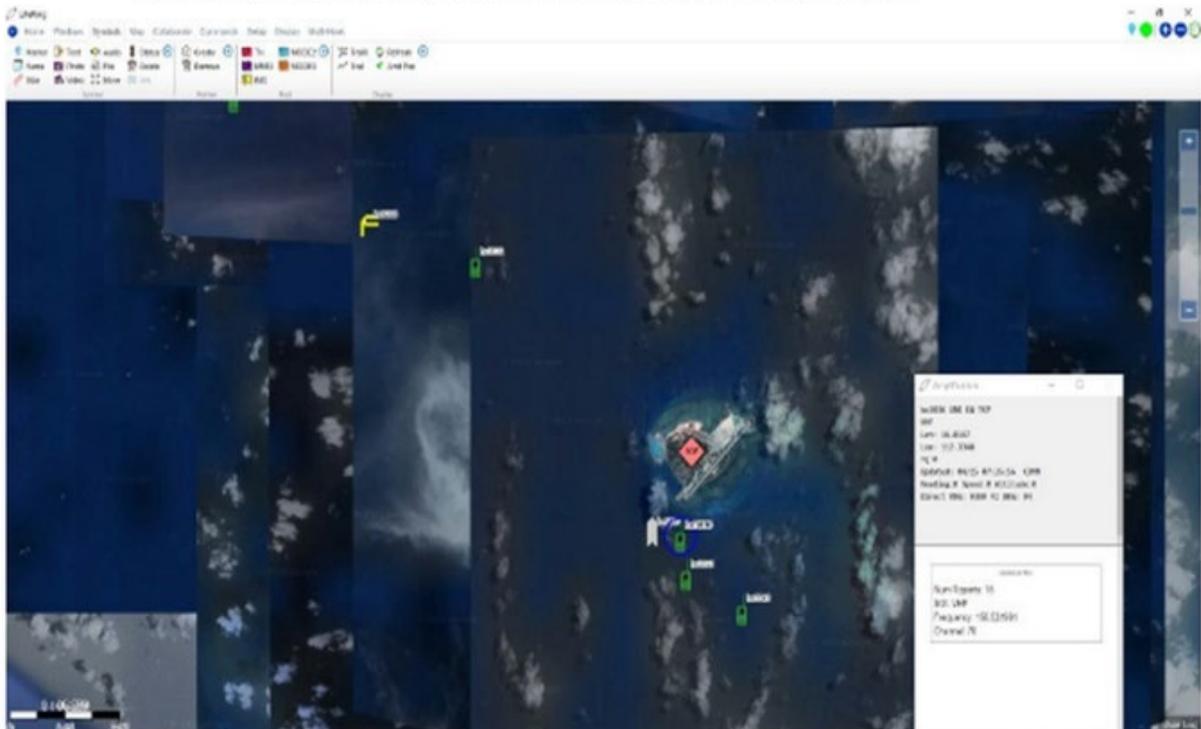
AGIS' C5ISR system is the only C5ISR Link 16 / OTH Gold / JVMF / NATO system capable of processing 20,000+ near real time sensor reports along with satellite imagery (IMINT) from

various sources and satellite ELINT and SAR data to provide Worldwide Command and Control capabilities. See the following screen shots of our processing commercial satellite ELINT and taskable commercial satellite IMINT.

The Chinese Militarized Island



Chinese Militarized Island with Data in the Blue Circle ELINT VHF Radio Reports



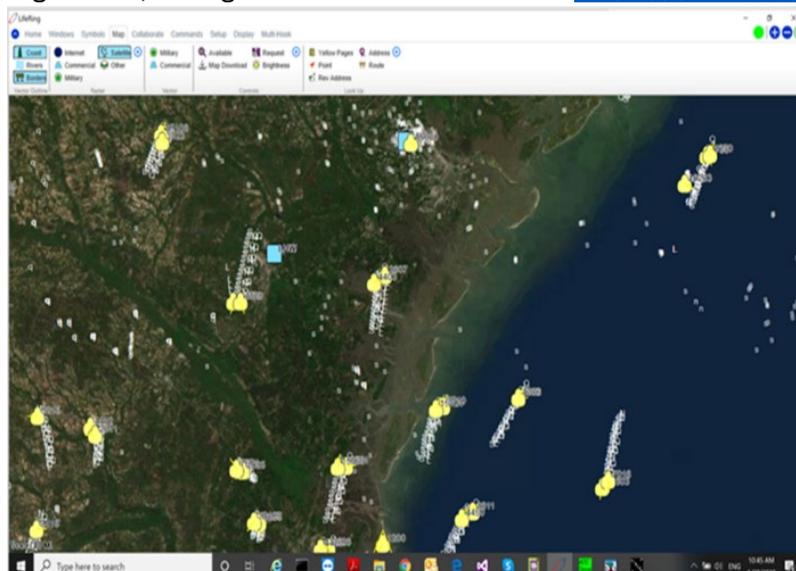
## Satellite Ukraine Imagery Being Processed on AGIS' Multi Domain Air, Ground and Sea System Simultaneously Supports 1000s of users and 10,000 Real time Sensor Reports



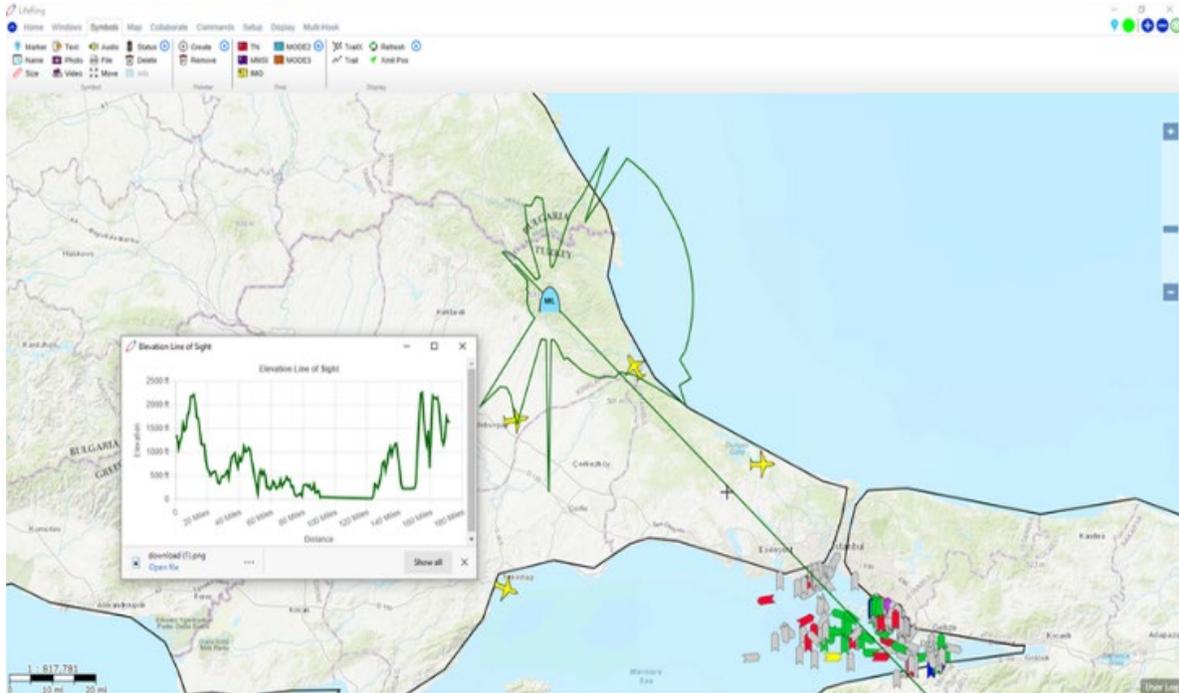
AGIS' C5ISR system also simultaneously monitors and displays worldwide ship (AIS) and aircraft (ADS-B) transmissions. This capability to process, display, overlay, translate and transmit data is made operationally possible by AGIS' Multi Domain (MDDL) fabric which also enables the exchange of this data with current US Army, Navy, Air Force, Marine Corps and NATO C5ISR systems, thus creating a synchronized COP for all to use to enhance Joint Forces Operations.

### ***Civilian and Military Radar Processing***

Additionally, AGIS' C5ISR system processes radar that is in daily use at the Savannah Combat Readiness Training Center, Georgia Air National Guard. See <https://youtu.be/6l8cBeoHVv0>



AGIS' C5ISR system can also create radar aircraft coverage diagrams, thereby allowing timely analysis when radars can acquire aircraft at different altitudes. See below:



### ***Massive Databases***

Receiving 10,000 to 100,000 real time sensor returns every minute requires massive databases and processing. Cloud technologies (AWS GovCloud and Azure) provide our MDI C5ISR system this capability either remotely or locally using devices such as the AWS Snowball edge. To assure distribution to all AGIS MDDL Systems, the Server senses the receiving units' capacities and appropriately proportions the rate, frequency and volume of data transmissions to the tactical edge. The number of functions and volume of data an AGIS C5ISR operator can access on a Smartphone is immense. View this 1-minute video of an AGIS C5ISR Smartphone processing 10,000+ sensor reports at: <https://www.youtube.com/watch?v=YlIKd1bKID0>

### ***Maps and Charts***

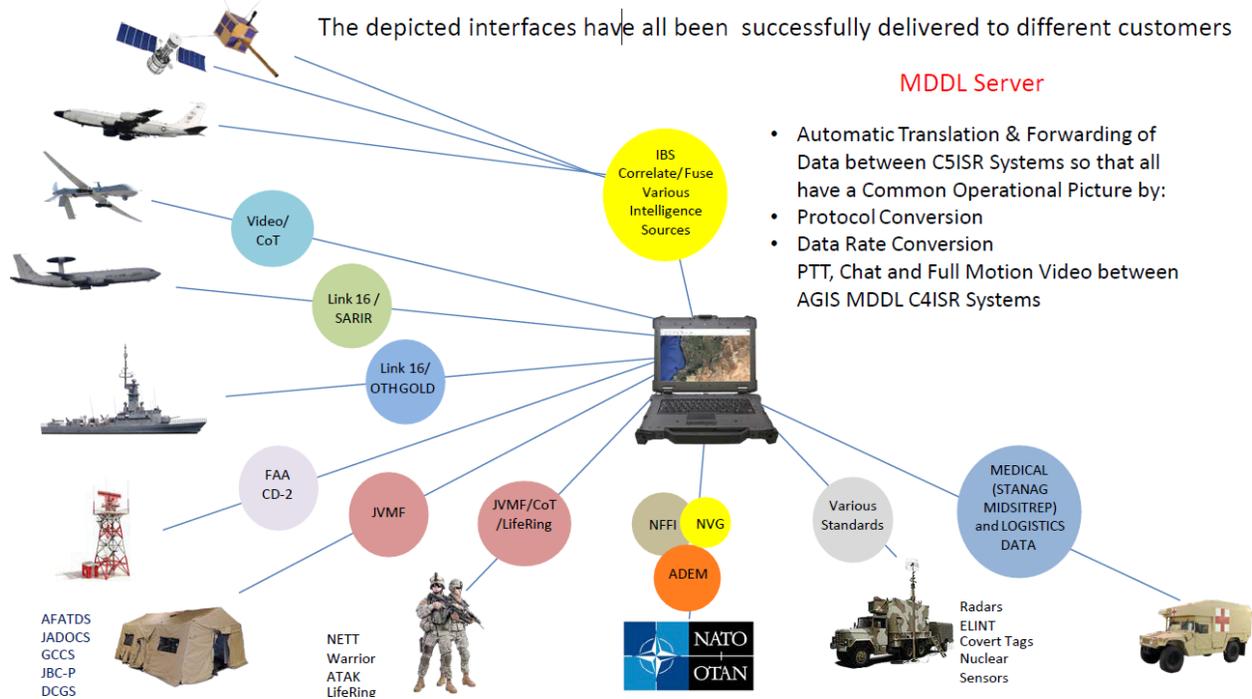
The AGIS C5ISR system includes: 1. A worldwide map database on a solid-state disc along with worldwide terrain elevation data, 2. An interface to the Internet for world satellite imagery and 3. The ability to interface to Army maps. Up to 80 different map formats are supported. AGIS is currently working on enabling the integration of standard U.S. Naval Charts.

### ***Interoperability and Incompatibility Issues***

Our MDDL processing enables us to resolve different data link incompatibility issues. Essentially, we convert each of the interacting data links into a common MDDL data link fabric

which then is used as the basis for reformatting the data into the data link speed, protocol and format of the interfacing data link. This enables us to quickly resolve these data link interoperability format issues. As an example, recently, in less than two weeks, AGIS enabled ADS-B / Link- 16 interoperability. When activated, this permits Link-16 aircraft to view civilian aircraft beyond its radar's range.

## AGIS' MDDL Server Resolves Data Link Providing ALL Interoperability and an Integrated COP and Processes 10,000s of Sensor Reports



### Ease of Use

AGIS's C5ISR System has been designed with ease of use. Users are provided a very familiar MS Windows / Google Android / iPhone UI (User Interface) along with built-in video training for each operator function. Use of a mouse, trackball or touch screen allows for many-to-many secure encrypted voice, data, and video exchange even while on the move.

AGIS' C5ISR is available on GSA Advantage under Contract# 47QTC A22D000R.

The major USG stakeholder for AGIS software is Joint Chiefs of Staff J6, Suffolk, Virginia 23435.

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