A Complete CJADC2 COP on a Biometric Smartwatch

A Situational Awareness and Emergency Notification Biometric Smartwatch

JUPITER, FL, UNITED STATES, September 20, 2024 / EINPresswire.com/ -- Being able to display the Multi Service/Multi Nation CJADC2 Command and Control Common Operational Picture, or COP, on a Smartwatch Seems Impossible But it isn't.
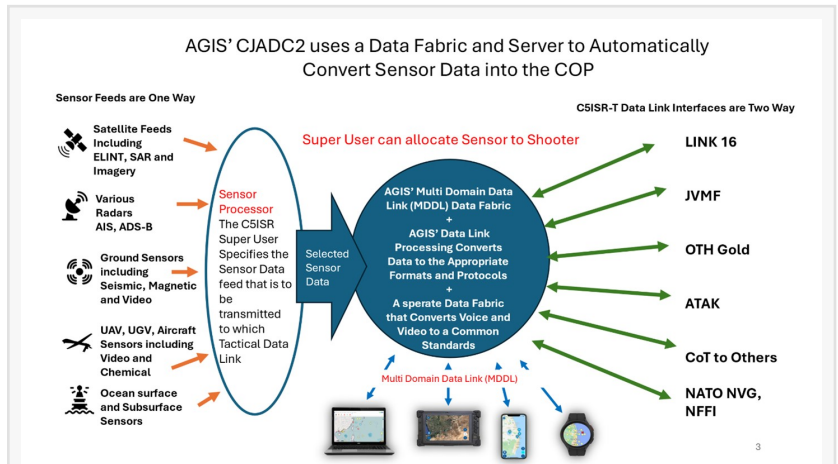
This AGIS software represents the Art of the Possible.

Here is how AGIS was able to accomplish this.

CJADC2 is the U.S. effort to enable U.S., Five Eyes (FVEY), and NATO Air, Ground, Sea, Space, Command and Control (C2) systems to interoperate so that data can be viewed as a Common Picture by all the systems on their own Command and Control / Weapon System displays.

Automatically Converts Sensor Data for COP Display

Biometric CJADC2 Smartwatch

AGIS enables a CJADC2 COP by using our Data Fabric/Server software which interfaces with Tactical Data Links; Link -16, JVMF, OTH Gold, CoT and NATO NVG, AHEM and NFFI used by U.S., FVEY, and NATO. The AGIS Data Fabric/Server enables interoperability between these data links and converts the data to an internal superset format MDDL (Multi Domain Data Link). The AGIS Data Fabric/Server also provides an interface to 25 different types of sensors. This sensor data is likewise automatically converted to MDDL. The AGIS SuperUser can selectively enable appropriate sensor data to be automatically converted into the Tactical Data Links, as shown in the diagram.

AGIS' MDDL and access to the Server's data is used as the AGIS internal Tactical Data Link to the

AGIS PCs, Smartphones and now Samsung Smartwatches. MDDL provides 1. The COP, 2. PTT, 3. Video, 4. Chat, 5. Messages, 6. Video calling, 7. Video Teleconferencing, 8. AIS and ADS-B Sea and Aircraft data, 9. Satellite location data, 10. Maps / Georeferenced Satellite images and other data providing up and down Chain of Command communications from the Division to the Fire Team users.

All receive the COP. The Server also regulates the amount of COP data that is transmitted based on the Bandwidth and display filter range of the receiving units. A Division Commander is not normally interested in directly communicating with a Squad Fire Team member who is wearing a Smartwatch. To better organize the flow of communications, AGIS 's software provides for the segregation of data into Groups appropriate to each Command Level. However, when needed, a SuperUser can enable data of high importance to flow freely between any of these Groups.

To see a video of the Overall AGIS CJADC2 C5ISR System, click on https://www.agisinc.com/videos/LifeRingOverview.mp4

Since the Smartwatch also interfaces with the Data Fabric/Server, it receives and displays the entire air, ground, sea, and space COP. Additionally, the Smartwatch provides the health data of the wearer. When this data falls outside of standard health parameters, the next higher command level is alerted as to the potential serious injury of the wearer.

AGIS has addressed security up and down the Chain of Command at every level - from required onboarding users. Users must have a registered account on the server and access permission must first be granted by the System Administrator. The user registration procedure includes the required entry of a Profile photo, valid email, password, full name, display name, organization name, ID number, position title and an optional phone number. Furthermore, as mentioned, users can be separated into Groups which are established by separate communications (i.e., if you don't know the name of a Group, you are not aware of its existence). Groups can be 50-character password protected to protect the data from insider security threats. All MDDL data is encrypted using AES 256-bit encryption and re-encrypting using NSA's CSfC or Type 1 encryption for data communications between authorized users. To make sure a device has not been captured and in use by an unauthorized person, we can display their Profile and then ask them to enter their one of their email addresses. If not correct, the AGIS SuperUser can remotely temporarily or permanently disable the information flow to or from the device.

Since AGIS develops the totality of the CJADC2 C5ISR system software in house, integration of new capabilities is relatively simple. Other C5ISR CJADC2 systems typically depend on multiple software contractors to provide software components, which are then integrated to create their C5ISR Systems. Sometimes these components themselves require additional Plugin software from various vendors. When one of the suppliers update their software, the other suppliers' code may or may not be affected. Furthermore, while the source code associated with parts of

the overall system may be available, software source code for the totally integrated system is not available. This makes development and maintenance of the software more difficult, and especially with a Smartwatch.

When all components of the CJADC2 system are developed by a single supplier, they are designed to work together from the ground up. This ensures that data from various sensors and data links can be easily shared and interpreted across the entire network, reducing the risk of compatibility issues and data silos. This also enables new features and capabilities to be introduced more rapidly. This agility is crucial in keeping pace with the fast-evolving technological landscape and ensuring that the CJADC2 system remains at the cutting edge of military technology

By consolidating development, maintenance, and support under one supplier, the military can substantially reduce redundancy and streamline operations. This leads to lower overall costs and allows for more efficient allocation of resources. AGIS's willingness to supply source code assures that the Government can always shift to another supplier or in-house personnel to maintain and upgrade the system.

However, if it is desired to continue to have multiple software vendors, AGIS's Biometric Smartwatch is capable of being interfaced to ATAK through a CoT interface.

To see a video of the Biometric Smartwatch in action, click on
https://www.agisinc.com/videos/watch-mast.mp4

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