

C3 AI Data Fusion

Plan, synchronize, and execute operations using an AI-based decision support agent

C3 AI® Data Fusion provides analysts and decision makers the ability to make faster and more accurate decisions to enhance mission readiness and effectiveness. With C3 AI Data Fusion, users exploit all available data, historical and real-time, and generate operational insights. Analysts and decision makers can:

- Access all relevant structured and unstructured data feeds and view a common operating environment that is kept current using synchronized data management
- Geolocate and identify stationary and moving friendly and enemy entities using AI-enabled aided target detection, and recognition (AiDTR)
- Respond to AI-generated recommendations to activate friendly assets (e.g., sensors and effectors); recommendations leverage an AI decision support agent that analyzes all sensor outputs and contextual information

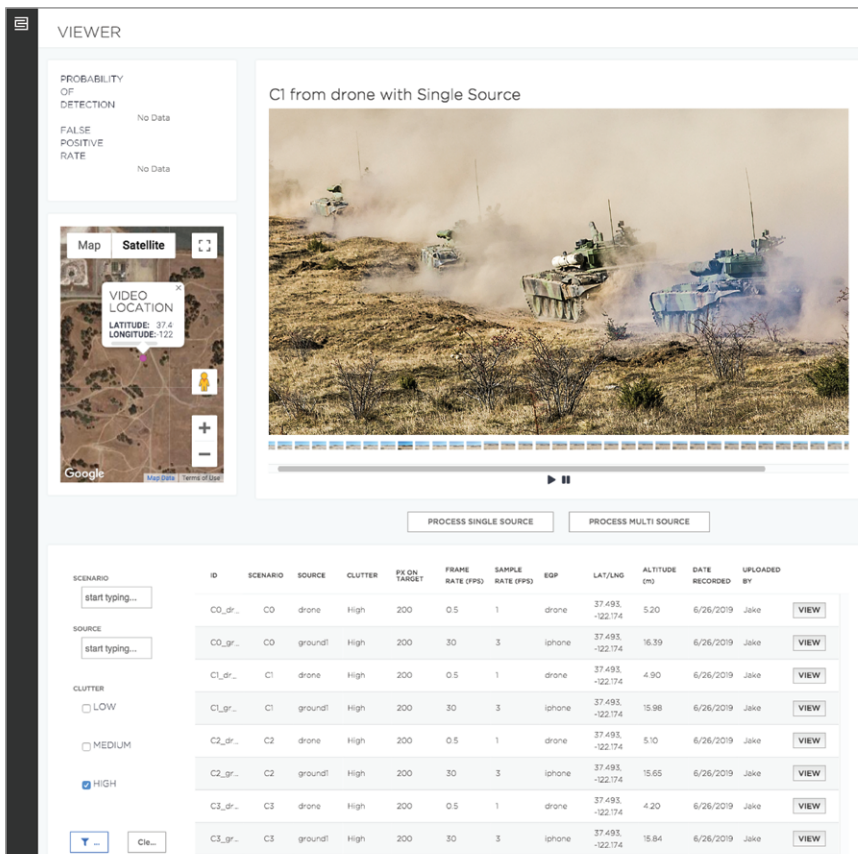
Feature Summary

Ingest all relevant data sources - C3 AI Data Fusion enables the ingestion of relevant structured (e.g., existing curated intelligence databases, detected entities from target identification systems), unstructured (e.g., spot reports, cables, analyst reports, news feeds, images, videos), and sensor feeds.

Identify, extract, and manage entities and contextual data - Natural language processing (NLP) pipelines extract entities and their interrelationships from data and resolve those entities to provide an effective ground truth of the operating environment.

Update a common view of the operating environment in real-time - C3 AI Data Fusion populates all data about entities and their relationships in a graph structure that represents the operating environment; users view and modify the operating environment; updates are persisted and communicated to all nodes.

Respond to recommendations for enhanced mission effectiveness - C3 AI Data Fusion supports contextual analysis of the operating environment and enables decision support for targeting top enemy target entities. Using AI, C3 AI Data Fusion provides users recommendations for tasking friendly assets in the field (e.g., active sensors and effectors).



The screenshot displays the 'VIEWER' interface. On the left, there are controls for 'PROBABILITY OF DETECTION' (No Data), 'FALSE POSITIVE RATE' (No Data), and a 'Map' view showing 'VIDEO LOCATION' with coordinates: LATITUDE: 37.4, LONGITUDE: 122. The main area features a video player titled 'C1 from drone with Single Source' showing a military vehicle in a dusty field. Below the video are buttons for 'PROCESS SINGLE SOURCE' and 'PROCESS MULTI SOURCE'. At the bottom, a table lists various data entries with columns for ID, SCENARIO, SOURCE, CLUTTER, FIX ON TARGET, FRAME RATE (FPS), SAMPLE RATE (FPS), SGP, LAT/LNG, ALTITUDE (m), DATE RECORDED, and UPLOADED BY.

SCENARIO	ID	SCENARIO	SOURCE	CLUTTER	FIX ON TARGET	FRAME RATE (FPS)	SAMPLE RATE (FPS)	SGP	LAT/LNG	ALTITUDE (m)	DATE RECORDED	UPLOADED BY
start typing...	CO_dr...	CO	drone	High	200	0.5	1	drone	37.493, -122.174	5.20	6/26/2019	Jake
start typing...	CO_gr...	CO	ground	High	200	30	3	iphone	37.493, -122.174	16.39	6/26/2019	Jake
	CL_dr...	C1	drone	High	200	0.5	1	drone	37.493, -122.174	4.90	6/26/2019	Jake
	CL_gr...	C1	ground	High	200	30	3	iphone	37.493, -122.174	15.98	6/26/2019	Jake
	C2_dr...	C2	drone	High	200	0.5	1	drone	37.493, -122.174	5.10	6/26/2019	Jake
	C2_gr...	C2	ground	High	200	30	3	iphone	37.493, -122.174	15.65	6/26/2019	Jake
	C3_dr...	C3	drone	High	200	0.5	1	drone	37.493, -122.174	4.20	6/26/2019	Jake
	C3_gr...	C3	ground	High	200	30	3	iphone	37.493, -122.174	15.84	6/26/2019	Jake

As enterprise's operational environments become increasingly instrumented, analysts and decision makers are deluged with large quantities of data in a wide range of formats (e.g., sensor feeds, news reports, intelligence feeds, public datasets, other contextual data), challenging their ability to identify and extract useful information from data feeds. Additionally, the time window to effectively identify and engage with enemy entities is expected to continue to shrink, requiring decision makers to engage enemies faster with the same (or greater) accuracy.

C3 AI Data Fusion addresses these challenges. It enables the ingestion of relevant structured data (e.g., existing curated intelligence databases, detected entities from AiDTR systems), unstructured data (e.g., spot reports, cables, analyst reports, news feeds, images, video), and sensor feeds. C3 AI Data Fusion enables the application of AiDTR algorithms, if required, on these sensor feeds. The solution also enables the application of AI techniques, including natural language processing (NLP) pipelines to extract entities and their interrelationships from data (including people, units, places, activities), compose those entities into a time-varying graph,

and resolve entities to provide an effective ground truth of the operating environment. C3 AI Data Fusion communicates the operating environment to all friendly nodes in the network and enables decision support for top enemy target entities. The application recommends assignment of enemy entities to in-scope friendly assets (e.g., sensors and effectors). Analysts and decision makers can then accept, reject, or otherwise adjudicate each recommendation. Upon accepting a recommendation, a mission plan is sent to the appropriate node in the network. The node can accept or reject the mission plan, and (if accepted) then execute mission plans – e.g., task sensors or leverage effectors to acquire, confirm, and engage targets.

Following the execution of a mission plan, analysts and decision makers assess battle damage and input the assessment into C3 AI Data Fusion. The application uses the battle damage assessment to update information about the threat entity that was damaged in the simulated common operating environment.

Shift Reactive Operations to Predictive Operations

C3 AI Data Fusion Benefits

C3 AI Data Fusion addresses the mission readiness needs of decision makers and analysts. The operational benefits of the application accrue through multiple levers:

- **Enhanced Lethality** through faster detection of threat entities and AI-enabled decision support
- **Increased Mission Capability** through maintenance of a simulated common operating environment that is communicated to all nodes in the network
- **Decreased Operator Fatigue** through a workflow enabled application that focuses an operator's time only on the highest priority information
- **Enhanced Situational Awareness** through the integration of all relevant data sources

Proven Results in 18-24 Weeks

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