

AIMES provides motion imagery analysts with the tools they need to exploit and report on vital intelligence

Leidos delivers a Motion Imagery (MI) system that receives, processes, and archives full motion video (FMV) data. Built on a foundation of more than two decades of operational experience, AIMES is both a battle-proven MI solution and a critical enabler for next-generation intelligence enterprises. Leidos designed and implemented the AIMES software suite in close alignment with the Department of Defense (DoD) Motion Imagery Standards Board (MISB) for processing and distribution of MI data.

OUR APPROACH

AIMES 2.0 is the next generation MI processing, exploitation, and dissemination (PED) suite and features an “integration by design” architecture. AIMES provides customers with the ability to create rich interactions and highly tailored workflows within their existing software ecosystems through a JavaScript API and a robust broker-based messaging backend. This open architecture empowers our clients to avoid the vendor lock-in inherent in “end-to-end” platforms, freeing them instead to build their own custom platforms using true best-of-breed components.



AIMES Exploit 2.0 was designed with a dynamic interface using dockable windows to provide analysts with the ability to customize their workspace. This example shows AIMES Exploit running a Video Viewer, GEOINT Viewer, PICTE Status Monitor, Image Viewer, Web Browser, and a video configuration menu.



AIMES Exploit 2.0 offers the ability to connect to UNICORN FTK and UNICORN Chat Monitor to enhance and simplify the MI workflow process. This example shows AIMES Exploit running a Video Viewer, UNICORN FTK, UNICORN Chat Monitor, and Search query from AIMES Server.

BENEFITS

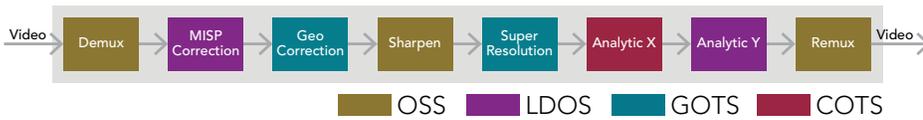
- › Native in Linux® or Microsoft® Windows® Operating Systems
- › Rapidly inserts new analytics or algorithms
- › Deployable to the Cloud, a Virtual Machine (VM), or a laptop
- › Seamlessly integrates with third-party tools
- › Quickly diagnoses and corrects video issues
- › Archives data and or intelligence products for later use
- › MISB and STANAG standards
- › Currently in use 24x7x365 around the globe
- › Reliable and cost-effective
- › Requires minimal servicing (i.e., lights out operation)
- › Demonstrated continuous processing performance
- › Scalable design tailored to user performance and affordability needs
- › Recall and review MI scenes of interest
- › Rapidly generates intelligence reports and products
- › Experienced on-call support team available 24x7x365



DYNAMIC VIDEO PROCESSING FRAMEWORK

AIMES 2.0 video core framework enables video multiplexing, transcoding, data conditioning, and advanced analytical processing that allows dynamic configuration of an end-to-end video processing flow that can be used to transform a stream before rebroadcast, system ingest, or within the end user's client environment (thin or thick). This approach enables customers to configure their own custom video processing stream which can leverage one or more Leidos or third-party algorithms to rapidly integrate new sensors or analytics.

PICTE Processing Example



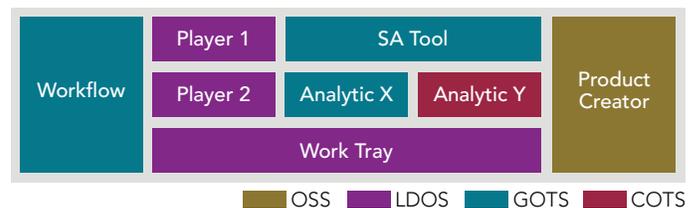
New customer-configurable video processing pipeline allows users to dynamically tailor processing flows inside AIMES and bring their own third-party analytic algorithms, transcoders through a plug and play framework.

KEY FEATURES

- ▶ Intuitive user interface (UI)
- ▶ Supports all video formats (including H.265 and HTML5/MPEG-DASH)
- ▶ Chromium Embedded Framework (CEF) for integrating third-party applications
- ▶ Collaborative desktop environment
- ▶ JavaScript API/SDK access
- ▶ Integrated multimedia intelligence reporting functionality
- ▶ Intelligence product template generation
- ▶ Wide area persistent surveillance
- ▶ Single integrated work environment with real-time tools and alerts

ENTERPRISE-WIDE SCALABILITY

AIMES 2.0 server applies storage abstractions and distributed database technologies (S3, NoSQL) allowing customers to dynamically add and remove server nodes and storage when their system grows, experiences a failover condition, or connects/disconnects from a larger enterprise infrastructure. This flexible architecture enables customers to scale their cloud-based, virtualized, or bare metal infrastructures while maintaining the seamless "one-stop" discovery and playback experience intelligence analysts need.



Chromium Embedded Framework (CEF) technology enables customers to display enterprise-hosted applications (e.g., workflow or system administration tools) as custom panels within the AIMES Exploit interface, while a new application program interface (API) allows those widgets to dynamically pull MI metadata or manipulate video playback.

OPEN AND EXTENSIBLE CLIENT

AIMES 2.0 exploit client is a flexible and extensible application enabling third-party web-based capabilities (e.g., customer-specific workflow tools, external map or system administration tools) to interact with the core GPU-enabled application through a Chromium Embedded Framework (CEF) JavaScript API/SDK. Customers can rapidly integrate existing capabilities from their current mission environment or even create new applications that leverage the AIMES 2.0 advanced MI processing capabilities.

ADVANCED VIDEO DIAGNOSTICS

AIMES 2.0 stream diagnostic capability is a local and remote notification, monitoring, and troubleshooting tool that informs users in real-time of stream degradations which may negatively impact video appearance and exploitation suitability, and records this information for later analysis. Rather than simply react to feed problems, AIMES 2.0 proactively notifies users of problems with the video stream and captures the information where it can be viewed forensically by system administrators.

PROVEN SUCCESS

AIMES is a Program of Record for the U.S. Air Force Distributed Common Ground System (AF-DCGS), U.S. Army Distributed Common Ground System (DCGS-A) and the MI solution of choice for U.S. intelligence agencies and NATO (North Atlantic Treaty Organization) partners.

FOR MORE INFORMATION

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