

# AssistMATE™

Autonomous Virtual Assistants  
for complex human tasks.



## WHAT IS IT?

AssistMATE is a virtual assistant that can help human operators perform a variety of tasks to make their jobs easier, whether it's walking an astronaut through a procedure or enabling a single operator to manage multiple unmanned systems (UxS) simultaneously.

## HOW DOES IT WORK?

AssistMATE provides a natural interface for human operators to engage complex systems and orchestrates tasks across multiple sub-systems to make them easier to use. AssistMATE uses multiple intent recognition and fusion technologies, multi-modal dialogue with the user, situation recognition and assessment, planning technologies, and interfaces to other systems to help the operator perform complex, high-workload tasks.

AssistMATE is the result of R&D over the last 16 years in human-machine interaction and leverages the Soar cognitive architecture to make using complex systems simpler.

## WHAT DOMAINS CAN IT IMPACT?

Manned-Unmanned Teaming in multiple domains ♦  
System Operations and Maintenance ♦ Human-System  
Interaction ♦ Simulation

## Capability Overview

- **Acts as a teammate** helping an operator perform complex tasks.
- **Reasons and interacts flexibly** like a human.
- **Orchestrates tasks** among multiple existing sub-systems.
- **Integrates with existing tools** to make them easier to use.

## Proven Use Cases

- Manned-unmanned teaming with multiple UxS in different domains (air, ground)
- Counter-UAS operations
- Natural interfaces to complex systems (UxS, shipboard systems)
- Walking an operator through complex task steps (e.g., system maintenance)

## Let's Chat!

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