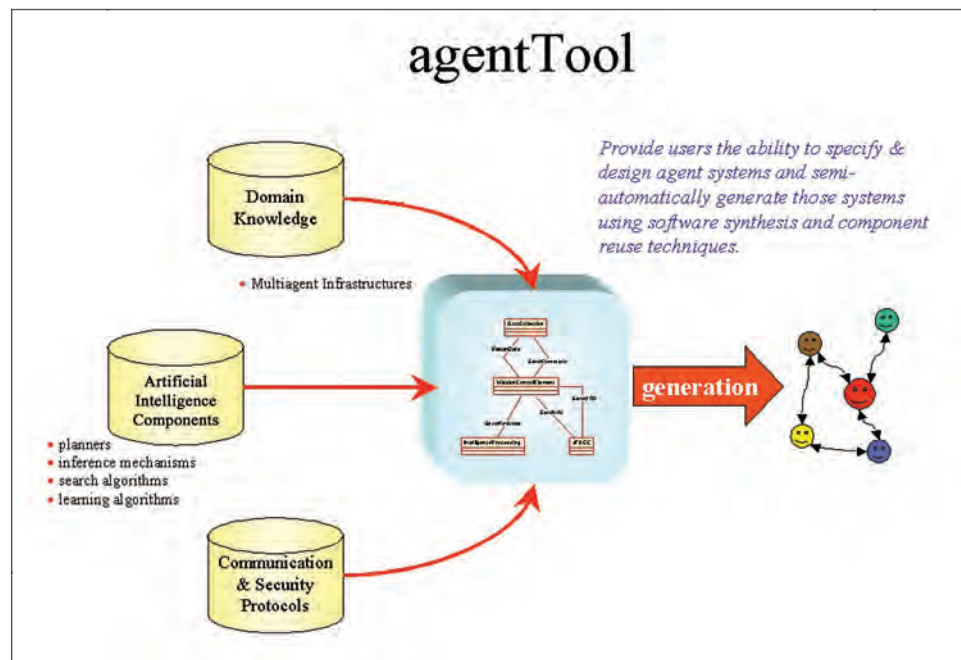




Success Story

MULTI-AGENT DISTRIBUTED GOAL SATISFACTION DEVICE



The Multi-Agent Distributed Goal Satisfaction (MADGS) device, a JAVA™-based, mobile-agent system, could help ease the burden of planning and executing large-scale missions. MADGS is a sophisticated system that fully understands how to retrieve, analyze, synthesize, and disseminate information to commanders on and off the battlefield. MADGS also factors in incomplete or uncertain information and addresses working with a large number of people, limited resources, external influences, and nearly every other conceivable obstacle.



Air Force Research Laboratory
Wright-Patterson AFB OH

Accomplishment

Dr. Eugene Santos, an Air Force Office of Scientific Research (AFOSR)-funded professor of computer science and engineering at the University of Connecticut, developed a field-savvy, Palm-Pilot-like device, called MADGS, loaded with advanced logistics system software. Armed with MADGS, leaders no longer have to worry about items sent to the wrong location—a factor in determining the success or failure of a mission.

Background

AFOSR's Mathematics and Space Sciences Directorate sponsors Dr. Santos' team of scientists. This team includes Drs. Alexander Shvartsman and Steven Demurjian, at the University of Connecticut; Dr. Scott Deloach, at Kansas State University; and Dr. Michael Cox, at Wright State University.

Dr. Santos' team developed software versatile enough for a general in battle or a mayor responding to a terrorist attack by forming a union of five components: Agent-Server (Carolina), mobile-agents, Distributed Goal Satisfaction (DGS), agentTool, and PRODIGY®. To make it work, Dr. Santos' team injected mobile-agents into the system through the agentTool to help the user analyze missions that require complex planning and execution. The DGS module provides users with resource alternatives to the PRODIGY-constructed master plan.

Office of Scientific Research
Support to the Warfighter

Additional information

To receive more information about this or other activities in the Air Force Research Laboratory, contact TECH CONNECT, AFRL/XPTC, (800) 203-6451 and you will be directed to the appropriate laboratory expert. (03-OSR-01)