The MITRE Corporation
License Opportunities

Modeling Environment for Service Oriented Architecture Analysis (MESA)

MITRE's Modeling Environment for Service Oriented Architecture Analysis (MESA) is designed to assist in Performance Engineering (PE) practices for Service-Oriented Architectures (SOA). MESA addresses PE challenges, such as how to plan and construct an SOA. It also offers capacity planning for SOA deployment. It allows models of SOA infrastructure to be integrated with other models, such as business/user process models.

MESA is implemented using ExtendSim, a software package from ImagineThat, Inc. that supports the graphical composition of simple components into complex Discrete Event Simulation (DES) models. MESA also consists of a library of SOA-specific components, a set of Extend database support tables, and extra Java code to facilitate database creation.

Users of MESA can develop models and other applications in ExtendSim using MITRE's technology, as well as any additional features of ExtendSim required by the models.

Applications

MESA has been applied to provide insights into performance considerations with SOA strategies for military net-centric operations. It has been implemented on several specific net-centric engineering projects to highlight the importance of evolving and refining performance metrics specifications.

MESA may also be used when there are performance variables to consider. For example, a government agency might have a centralized authentication server or a distributed network of server installations; in either scenario, the servers need to incorporate authentication systems that compare credentials with data that users must supply, such as name/password combinations or digital certificates.

Other projects within MITRE have leveraged MESA as a decision engine, modeling human and system behaviors simultaneously.

Benefits

MESA is flexible and its capabilities can be expanded to other applications. MESA operates at a higher level of abstraction than other modeling tools such as OPNET or Hyperformix, which are significantly more expensive tools.

Additional Information and Links

May 2006, "Zapping System Bugs Through Performance Engineering," *www.mitre.org/news/digest/advanced_research/05_06/ar_performance.html.*

Van Metre, J. Patrick, Mularz, Diane, Miller, David J., 2004, The MITRE Corporation, "A Mission-oriented Resource Allocation Decision Engine."

MITRE technology transfer office

MITRE's Technology Transfer program was established in 1999 to place MITRE-developed technologies in the hands of commercial companies that can make them available to our sponsors and the public as supported, affordable products. Working on critical issues of national importance, MITRE continues to develop new and innovative technologies.

The MITRE Corporation
Technology Transfer Office
7515 Colshire Drive
McLean, VA 22102-7539

Phone: 703-983-6053
www.mitre.org/work/tech_transfer/
Email: techtransfer@mitre.org

MITRE

www.mitre.org