MAGIC can handle models of nearly limitless complexity (millions of polygons with complex scene structures) and save the information into a single DTS file to be used within a DON simulation. MAGIC also handles every other aspect of simulation conversion (texture map conversion/creation, support file generation, mission folder, and hierarchy creation, etc.) and can create all the files needed for DON to successfully recreate simulations.

MAGIC is a freely distributable, standalone executable that runs on Windows XP (or later) operating systems. All that is required is to provide MAGIC with the simulation data (models, images, telemetry, etc.) and a configuration file instructing MAGIC what it needs to do, then press "Go!".

This work was done by W.C. Herbert of Kennedy Space Center. For further information, contact the Kennedy Innovative Partnerships Program Office at (321) 861-7158. KSC-13201

Data Management Applications for the Service Preparation Subsystem

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These software applications provide intuitive User Interfaces (UIs) with a consistent look and feel for interaction with, and control of, the Service Preparation Subsystem (SPS). The elements of the UIs described here are the File Manager, Mission Manager, and Log Monitor applications. All UIs provide access to add/delete/update data entities in a complex database schema without requiring technical expertise on the part of the end users. These applications allow for safe, validated, catalogued input of data. Also, the software has been designed in multiple, coherent layers to promote ease of code maintenance and reuse in addition to reducing testing and accelerating maturity.

The File Manager provides an interface for interactively publishing data input files to a relational SQL-compliant database. It extracts/captures metadata automatically for use in building and maintaining the catalog of available data. Also, File Manager visualizes the data catalog in a tree format for easy use.

Mission Manager provides a single interface to define critical parameters describing both flight-and ground-based projects. Log Monitor provides access to system events recorded in execution of automatic generation of support data. This interface is critical in identifying events requiring attention/intervention to meet mission requirements.

The applications comprising the SPS User Interface Portal run on any platform that supports Java Runtime Environment 1.4.2. The UIs can interact with any suitably configured, SQL-compliant database, and the content-driven nature of the UIs allows them to be easily adapted to present custom data. These applications are highly portable, and were designed for automatic deployment as WebStart applications, which reduces the effort involved in installing and updating these programs across dozens of user workstations at various physical locations.

This work was done by Ivy P. Luong, George W. Chang, Tung Bui, Christopher Allen, Shantanu Malhotra, Fannie C. Chen, Bach X. Bui, Sandy C. Gutheinz, Rachel Y. Kim, Silvino C. Zendejas, Dan Yu, Richard M. Kim, and Syed Sadaqathulla of Caltech for NASA's Jet Propulsion Laboratory.

This software is available for commercial licensing. Please contact Karina Edmonds of the California Institute of Technology at (626) 395-2322. Refer to NPO-45021.

Policy-Based Management Natural Language Parser

NASA's Jet Propulsion Laboratory, Pasadena, California

The Policy-Based Management Natural Language Parser (PBEM) is a rules-based approach to enterprise management that can be used to automate certain management tasks. This parser simplifies the management of a given endeavor by establishing policies to deal with situations that are likely to occur. Policies are operating rules that can be referred to as a means of maintaining order, security, consistency, or other ways of successfully furthering a goal or mission. PBEM provides a way of managing configuration of network elements, applications, and processes via a set of high-level rules or business policies rather than managing individual elements, thus switching the control to a higher level. This software allows unique management rules (or commands) to be specified and applied to a cross-section of the Global Information Grid (GIG).

This software embodies a parser that is capable of recognizing and understanding conversational English. Because all possible dialect variants cannot be anticipated, a unique capability was developed that parses passed on conversation intent rather than the exact way the words are used. This software can increase productivity by enabling a user to converse with the system in conversational English to define network policies. PBEM can be used in both manned and unmanned science-gathering programs. Because policy statements can be domain-independent, this software can be applied equally to a wide variety of applications.

This work was done by Mark James of Caltech for NASA's Jet Propulsion Laboratory. Further information is contained in a TSP (see page 1).

This software is available for commercial licensing. Please contact Karina Edmonds of the California Institute of Technology at (626) 395-2322. Refer to NPO-45816.