LSDL Newsletter

Volume 6, Issue 1
March 2007

Wayne Hawkins
Director

Message from the Director

First Quarter Showcases our Tools and Partners

In January, the team exhibited at the annual Reliability and Maintainability Symposium (RAMS) conference. There were many interesting topics presented during the open sessions. At our booth in the exhibit hall we provided demonstrations of our ASENT and MMIS tools. There was much interest in both tools and we expect that additional ASENT sales will result from the contacts and demonstrations presented at the symposium. Rich Herman and Dan Colica staffed the booth, assuring a rich resource of tool and discipline expertise, and presented many demos of the products to interested customers.

Our team exhibited at the 23rd NDIA Annual Logistics Conference & Exhibition in Miami from the 19th to the 22nd of March. During the conference we had the opportunity to make several new acquaintances with logistics professionals, renew old acquaintances, and discuss our innovative, practical and proven solutions for customer logistics and mission support problems. Barron Del Gaudio and Patty Tyler provided a wide range of expertise to address the questions and requests for demonstrations during the conference.

In January, we hosted a meeting with our business partners from the Peoples Republic of China, Techy Sky. Lisa Zhang, General Manager, presented their marketing and sales plan for 2007, which was very optimistic and shows growth in AIMSS sales as well as the introduction of ASENT and EAGLE. The LSDL team then presented the status of the latest improvements on the tools and showed the development plans for 2007. Mrs. Zhang suggested it would be very beneficial if members of the LSDL management team came to China and visited her customer sites. This would show that Raytheon was truly behind the products and would be there to provide required support. Below in the picture are the leaders of the product lines along with Techy Sky's General Manager and vice president of operations.

F. Roth, R. Schwarzberg, K. Lin, M. Sprague, W. Hawkins, L. Zhang, A. Zucco, Dr C. Yangong

Our EAGLE MMIS solution continues to gain acceptance throughout the industry. After many months of testing and validating the capabilities of EAGLE MMIS, the FAA in Oklahoma City has selected Raytheon to install MMIS and provide consulting services on various FAA programs. The installation of MMIS will greatly enhance their ability to track and manage assets.

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Since the last newsletter we have had an explosion of interest and acceptance in our S1000D solution that we have been demonstrating for the past year. The solution has been chosen by the L-3 Com Joint Operations Group and General Dynamics during the past quarter. We have several customers actively interested and expect additional acceptance announcements in the near future.

The year has started out strong, and continues to build momentum. It is exciting to me to watch these innovative solutions solve customer problems and to talk to fellow logistics professionals about the future directions of the profession. Professional education is always a topic of conversation, and I hope you will take advantage of the opportunities to stay current on the new EAGLE and MMIS capabilities that will be presented at the 2007 iLog Users conference in October. EAGLE training classes are also scheduled throughout the year. For details on the iLog Conference and for Eagle Training Class Schedules, see: http://www.raytheoneagle.com/news_events.htm.

We are looking forward to meeting with all of you and discussing the challenges you face and how we can help you be successful. Come and talk with us. During the next quarter we will be exhibiting at the ITEC 2007 Conference in Cologne, Germany on 24-26 April and at the S1000D User Conference in Melbourne, Australia on 1-3 May. Hope to see you there!

AIMSS Navy Marine Corps Intranet (NMCI) Certified!

AIMSS Runtime Version 4.7 Now Authorized for use within NMCI

What is NMCI?

The Navy Marine Corps Intranet (NMCI) is a comprehensive, enterprise-wide initiative that makes a full range of network-based information services available to Sailors and Marines for day-to-day activities.

Due to the NMCI security posture, many commercial hardware and software products either do not function, do not function without modifications and/or special procedures, or present vulnerabilities which must be mitigated before the products are allowed to be used in NMCI. NMCI certification is a matter of functional interoperability within NMCI information assurance constraints. To ensure that only certified items are installed, NMCI does not allow end-users the ability to independently install software onto their desktops. Therefore, all applications must be packaged and certified for use in an NMCI environment.

NMCI Certification

Within NMCI, the term "certification" refers to the process by which applications are determined to be compatible with the NMCI network and its information assurance infrastructure. Electronic Data Systems Corporation (EDS) was awarded the NMCI contract in October of 2000 and as part of this contract has been tasked with conducting NMCI certification. The certification process involves providing all necessary documents to EDS along with the software to be tested. Once this is complete, EDS creates the software package to be pushed out to select clients for testing.

AIMSS Certified and Streamlined

AIMSS Runtime Version 4.4.2 NMCI certification was sponsored by the United States Navy (USN) Rolling Airframe Missile (RAM) program. Although this version of AIMSS has been certified for some time now, because of certain NMCI constraints, is was deemed desirable to streamline certain AIMSS capabilities to support the tightly controlled NMCI environment. With these software modifications complete, it was now time to move forward with the recertification process.

AIMSS Runtime Version 4.7 Certified!

Most recently AIMSS Runtime Version 4.7 has been sponsored by the United States Marine Corps (UCMC) Expeditionary Fighting Vehicle (EFV) program and final NMCI testing is complete. According to Pete Pulido, EDS NMCI Applications Project Manager, AIMSS Runtime V4.7 has passed all operational testing on both USN and UCMC clients, and final certification has been granted. Certification allows for installation and use of AIMSS V4.7 Runtime on any NMCI workstation in the Navy or Marine Corps.

For more information about AIMSS or to arrange an on-line demo, please contact:

Robert Schwarzberg: 866-773-0557

Email: aimss_support@raytheon.com

Or visit us on the Web at:

http://www.raytheonaimss.com

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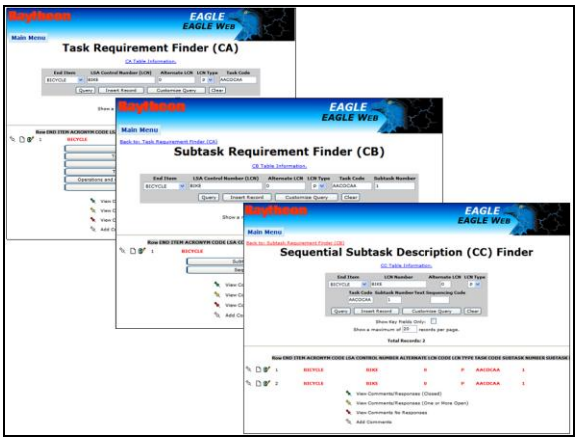
Focus On Products

iLog Web

iLog Web was designed and built as an On-Line tool for total access to LSAR Database records. iLog Web provides a Top-Down style of access to Parent and Child tables for editing, inserting, deleting, commenting and reviewing. iLog Web is a completely thin client application which accesses the EAGLE LSAR Oracle database. It fully supports LSAR/LMI data (Def-Stan 00-60 and Mil-Stan-1388- 2B). Some of the main features of iLog Web include:

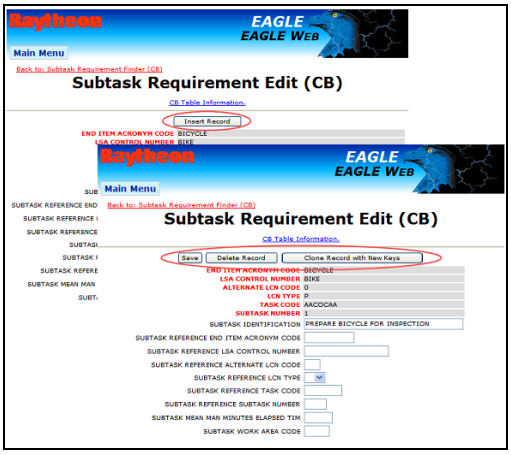
- Full access to EAGLE LSAR Database on the Web.
- Ability to Review, Comment and Respond to Comments for every record in the LSAR Database.
- A Completely thin client application.
- AdHoc reporting.
- Access to data limited by username and password.
- Data available via Internet at virtually any location.
- Allows segregation of data between projects and programs.
- Data access and privileges tailored using roles and usernames.
- Data availability is assured 24/7 mitigating the impact of time zones.
- LSAR Report generation.
- Document Management supports document storage and retrieval in native formats.



Top-Down Navigation

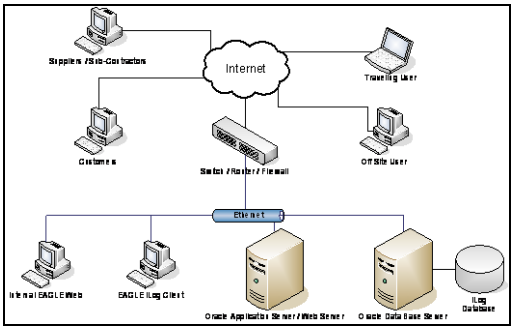
The Top-Down navigation in iLog Web allows users to easily locate data records for each discipline in the LSAR Database. Each selected parent table record allows the user to navigate to each of the parent records' child tables.

iLog Web provides full support for Creation, Modification and Deletion for any record in the LSAR database. Narrative Editors make narrative records easy to read and modify and support cut and paste functions.



Data Manipulation

iLog Web's thin client architecture resides inside the EAGLE LSAR database. It is a 100% thin client application with no enterprise wide client installs.



iLog Web Architecture

iLog Web is an open system running on an Oracle database and Oracle Application server. It uses Oracle Roles and Security. It is deployable on many platforms including HP-UX, MS Windows, Linux and SUN Platforms.

iLog Web provides an easy to use and searchable comment and response system. Every record in the LSAR Database can be reviewed and commented upon with multiple or single comments. Each comment can be responded to with multiple responses. iLog Web makes Comments and Reponses easy to manage with a Comment Finder and Comment indicators for each row of data.

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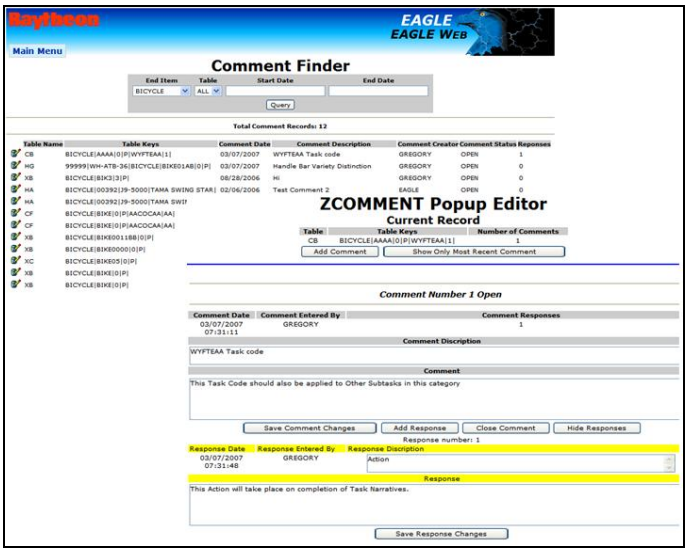
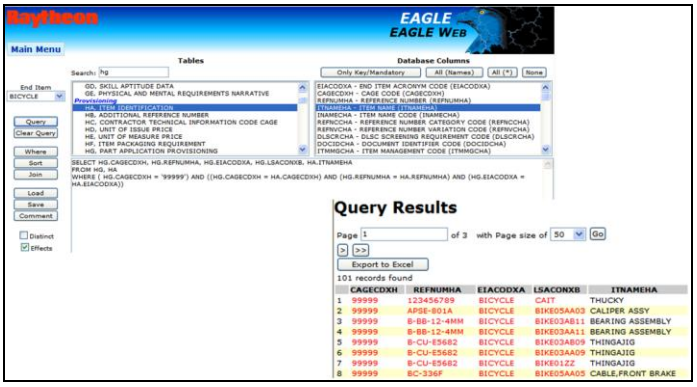


iLog Web Commenting

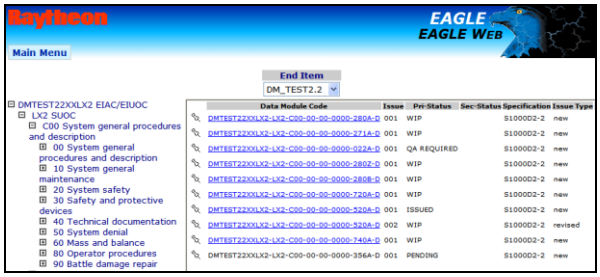
iLog Web supports full AdHoc reporting. All created AdHoc Reports are exportable to MS Excel and can be saved for reuse.

All AdHoc queries are executed on current data allowing all users to view up-to-date Reports. The AdHoc interface allows for easy Report creation with little knowledge of database query languages.



iLog Web AdHoc Reporting

iLog Web supports reviewing of Data Modules from Acquired with full comment and response capabilities. With full SNS tree navigation users can locate review and comment on every Data Module in the Acquired system from the web. Data Modules can be viewed in IETP/IETM and PDF formats.



Acquired Data Module Viewing and Commenting

iLog Web was developed to meet client's needs for LSAR data base support on the web. iLog Web gives instant access to EAGLE LSAR data across the room or across the globe 24 hours a day 7 days a week. iLog Web's thin client solution ensures users are always up-to-date. iLog Web's comment and response system facilitates communication between users and customers for data integrity and completion. iLog Web's AdHoc reports allow all users to view up-to-date data quickly and easily. iLog Web's document tracking system makes documents available to all users at any time. And, Top-Down navigation in iLog Web makes needed data records easy to find.

EAGLE iLog Training Symposium 2007

This year's EAGLE iLog Training Symposium will be held at the Loews Ventana Canyon Resort in Tucson Arizona, hosted by Raytheon Technical Services Company LLC and Logistics Business Systems, Ltd., October 15th through the 18th, 2007. The purpose of the symposium is to present a forum where EAGLE iLog users can receive training and network with other customers, partners, and EAGLE iLog developers. The symposium will provide direct access to senior management and application product developers, who will address various end-user topics through a series of technical sessions, presentations and hands-on demonstrations.

Tentative schedule of events:

Mon 15th

- Registration: 8:00 AM until 1:00 PM.
- Opening General Session:1:00 PM
- Evening Reception: 6:00PM.

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Tues 16th

- Presentations and EAGLE, iLog, and MMIS Forums: 9:00 AM until 5:00 PM.

Wed 17th

- Presentations and EAGLE, iLog, and MMIS Forums: 9:00 AM until 5:00 PM.
- Evening Dinner: 6:30 PM.

Thu 18th

- Presentations and EAGLE, iLog, and MMIS Forums: 9:00 AM until 11:00 AM.
- *Closing General Session: 11:00 AM.*

We have two keynote speakers this year, Mr. Mark Hendrick, Member of Parliament and Mr. Dave Dacquino, RTSC Vice President.

Mr. Hendrick, has served as a member of the European Parliaments Economic and Monetary Affairs Committee and as the Parliamentary Private Secretary to the Secretary of State for the Environment, Food and Rural Affairs. He is currently the Parliamentary Private Secretary to Margaret Beckett MP, the Secretary of State for Foreign and Commonwealth Affairs. He is also a Vice Chair and the Secretary of the All-Party Parliamentary Romania Group.

Mr. David Dacquino, RTSC Vice President, leads Integrated Support Solutions for RTSC. Prior to working for Raytheon, Mr. Dacquino was vice president and general manager of Logistic Services for Lockheed Martin Aircraft & Logistics Centers.

We will also have representatives from the US Army Materiel Command Logistic Support Activity (LOGSA) presenting papers on the new GEIA-STD-0007 Logistics Product Data and on the International Specification for Technical Publications, S1000D.

Hotel reservations can be made at this time. A discounted room rate has been negotiated. Please contact the Resort directly for room reservation and mention you are with the Eagle iLog Training Symposium to ensure the discounted room rate. The direct line to the resort is 520-299-2020, or 1-800-23-LOEWS.

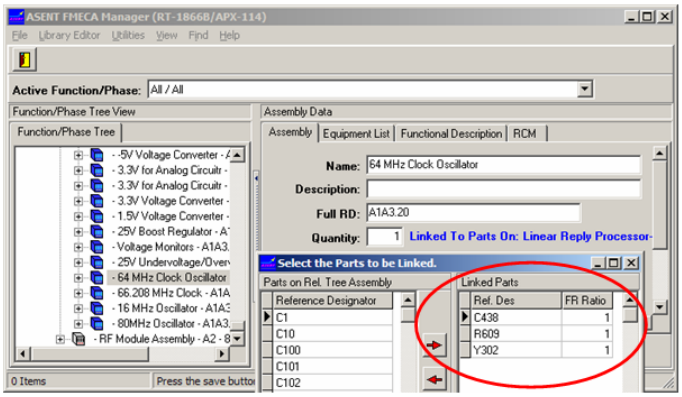
The fee for this years Symposium is $400.00. This will be collected by the Ventana Resort staff when making reservations. Again, make sure you mention the EAGLE iLog Training Symposium hosted by Raytheon when making reservations.

For more information on EAGLE / iLog, contact:
Anthony Zucco at 520-545-6885
Email: raytheoneagle@raytheon.com
http://www.raytheonlogisticstools.com

Highlighting ASENT's FMECA Toolkit

ASENT offers the most robust FMECA capability on the market today. With true relational integrity between causes, failure modes, and effects, you can be assured of the accuracy of your analysis results.

ASENT's FMECA tool supports functional, hardware, or combined FMECAs, and provides you with a unique ability to specify functions and link them to groups of parts from your reliability prediction. As failure rates are updated these new values are readily available to the functions in your FMECA.



A Function Linked to Parts

ASENT lets you perform top-down or bottom-up FMECAs and gives you the flexibility to enter data as it becomes available, rather than in a forced order. Assemblies, boards, parts, functions, and signals can be modeled, as needed, along with their corresponding failure modes and effects. Multiple next effects and end effects can be specified for each failure mode. ASENT's built-in library of part types, along with their failure modes and failure mode distributions, greatly reduces the time involved in performing a piece-part level FMECA.

The relationship between failure modes, effects, and the tree structure are tracked automatically, so that updates are easy to make at any time.

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After the updates have been completed, failure mode ratios and criticality numbers can be recalculated and new reports generated with the simple tap of a key.

Key Features

- **Product tree editor**
- **Built-in failure mode libraries**
- **Mil-Std-1629A FMEA/FMECA**
- **Powerful completeness checker**
- **Failure category tracking**
- **Criticality analysis**
- **Integrated Testability analysis**
- **Integrated RCM analysis**
- **False alarm analysis**
- **User defined fields**
- **Supports graphics and video**
- **Comprehensive Reporting**

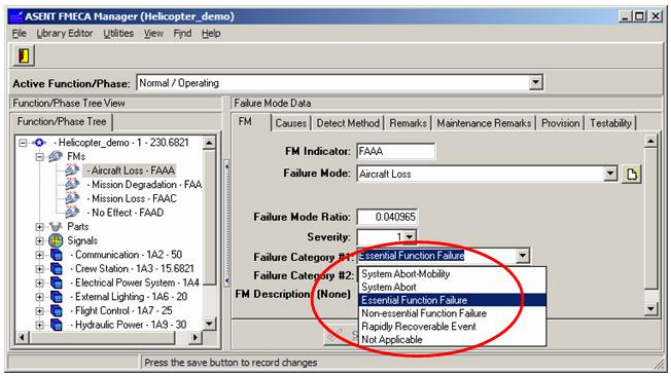
Often, the tree structure used in performing a FMECA differs from the hardware tree used for a reliability prediction. Because of this, ASENT provides full tree editing capability in its FMECA tool.

The reliability tree can be used to whatever extent desired, but you have the flexibility to deviate from it when needed.

Graphics & Video are Fully Supported

A picture is truly worth a thousand words, and short video clips can be even more effective for communicating ideas. Because of this, to better document your analysis, ASENT gives you the ability to store and retrieve video, Acrobat PDF files and Microsoft Word documents. Standard graphic formats such as JPEG, JPG, WMF, GIF, BMP and TIF are also supported by ASENT. This powerful capability can be particularly helpful when managing background data or supporting documents that may have played an important role in your analysis, thereby eliminating the need to manually track this information.

The figure above shows a sample graphic associated with a FMECA for a helicopter. You can manage as many images, drawing sheets, videos, or other documents as needed.



Tracking Failure Categories

In the past, most customers were satisfied with Mean-Time-Between-Failures (MTBF). Today, many programs need the ability to track a variety of failure categories. For example, your customer may want to know the Mean-Time-Between **System Aborts**, **System Abort-Mobility**, **Essential Function Failures**, or other types of failures. ASENT provides the ability to do this by allowing you to define failure categories for each end effect. The figure above shows an example where an end effect is assigned a failure category of 'Essential Function Failure.' From the FMECA report generator you can quickly run a report that shows you the Mean-Time-Between all of your failure categories and sub-categories.

Since the FMECA process can be a considerable documentation effort, ASENT's powerful Completeness Checker helps to assess your FMECA status at a moment's notice and identify any missing data – another great time saver!

FMEA/FMECA data plays an integral part of any Reliability Centered Maintenance (RCM) Analysis or Testability Analysis. Because of this, ASENT includes a RCM Analysis tool and a Testability Analysis tool as part of its FMECA tool suite. These two capabilities are just briefly mentioned here, but we could devote entire articles to each of these powerful capabilities.

One last point that is sure to interest many of you is ASENT's ability to pass all of the FMECA information quickly and easily to EAGLE. This capability alone can save you a tremendous amount of time and energy when populating your logistics database.

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This article just begins to scratch the surface of the capabilities found in ASENT's FMECA tool. Be sure and visit our website for more details.

For further information on ASENT, or to arrange an online demo, please contact:

Rich Herman at: 972-344-6179
Email: rherman@raytheon.com
http://www.raytheoneagle.com/asent

AIMSS Expression Combination & Sharing

AIMSS Version 4.7.1 is to be released in April of this year. The following article highlights one of the main enhancements to this release; Expression Combination and Sharing.

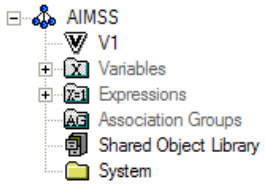
The following list summarizes the main features of the new AIMSS expression combination and sharing enhancement:

- Creation of a New Expressions folder within the AIMSS Structure Editor and combining of like expressions from older IETM projects
- Creation of a New Expression Chooser to allow for ease of sharing expressions
- Modification of the existing Expression Editor to provide a descriptions field and Where Used capability
- Modification of the existing Assertion Editor to allow for expression chooser capability and descriptions

Implementing the above expression enhancements will help to streamline current expression use within AIMSS Author by providing a means to share expressions and providing a common way to maintain existing expressions. This expression feature is also a key element in preparation for implementation of a Table of Contents and Index filtering capability which will utilize existing or newly created expressions.

Structure Editor Expression Folder

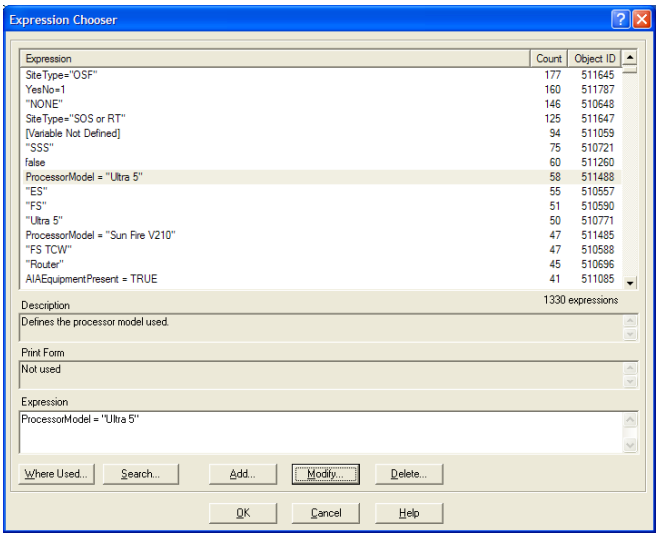
When an Author opens an older AIMSS IETM project they will be asked to convert their IETM to AIMSS Version 4.7.1. After answering in the affirmative, all expressions within the IETM project will be analyzed and like expressions combined. A master expression object will be placed in the Expression folder and references ("blue guys") will be created throughout the IETM to the master expression object. This process will only take a few moments, even within large IETM projects. The following figure depicts a typical AIMSS Structure Editor showing the new Expressions folder.



AIMSS Author Structure Editor with New Expressions folder Containing Master Expression Objects

New Expression Chooser

Now that all master expression objects are contained within the Expression folder, AIMSS Author needed a method to share these expressions, thus came the Expression Chooser. When authoring an AIMSS IETM and an expression is required, the Author is presented with the Expression Chooser. From this point the Author can select an existing expression, or add a new expression by selecting the **Add…** button.



New Expression Chooser with Where Used and Search Capability

The Expression Chooser also provides a means to maintain existing expression by providing the **Modify…** and **Delete…** buttons along with the **Where Used…** button to investigate where expressions are used within the IETM project and **Search…** button to help the Author in locating expressions within the chooser.

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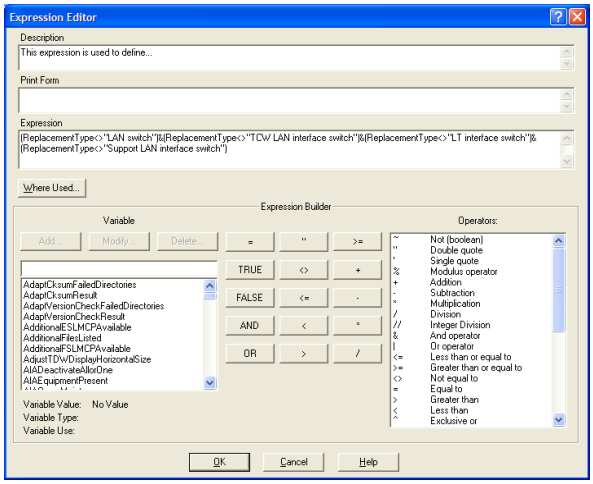
The Expression Chooser also provides a count column showing how many times an expression is used within an IETM project along with an Object ID column which provides the ID of the master expression object. The Expression Chooser may also be accessed from the **Author>> Expressions…** pull-down menu item so that expression can be created ahead of time or existing expressions can be maintained (modified or deleted).

Modified Expression Editor

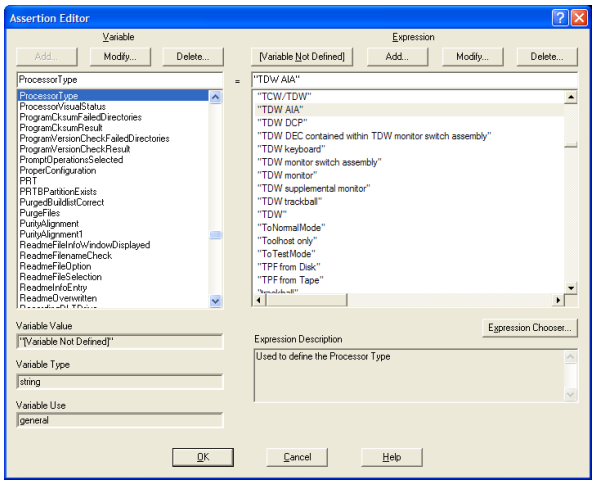
The current AIMSS Expression Editor was modified to create a field for Authors to provide a "description" of each expression. Since expressions are to be referenced, it is desirable to provide a description to help define how each expression is to be used. For example, the expression may be used to define what type of processor is used in a specific system or which site or vehicle is currently under test. The description is useful in multi-authoring environments or when re-visiting an existing expression at a later date. The following figure depicts the modified Expression Editor.



Modified Expression Editor with Description Field and Where Used Capability

Modified Assertion Editor

The current AIMSS Assertion Editor was modified to provide an expression chooser capability along with providing **Add…**, **Modify…**, and **Delete…** convenience buttons. Within the modified Assertion Editor, the Author can scroll to the desired expression or simply type the partial expression into the expression list box. The chooser will automatically scroll to the closest expression matching what was typed. For further help locating an existing expression, the Author may select the **Expression Chooser…** button which will bring up the new Expression Chooser dialog allowing the Author to locate an expression from there or create a new expression. The Assertion Editor also provides the Author with an Expression Description field to help determine which expression is to be used in the given context. The following figure shows the modified Assertion Editor.



Modified Assertion Editor with Expression Chooser Functionality

All of the above functionality has been implemented and will be available in our next release in April.

For more information about AIMSS or to arrange an on-line demo, please contact:

Robert Schwarzberg: 866-773-0557
Email: aimss_support@raytheon.com
Or visit us on the Web at:
http://www.raytheonaimss.com

Latest Version of Our Tools:

AIMSS	4.7.1 (April 2007)
ASENT	12.0 (June 2006)
EAGLE	7.0.0 (October 2006)
iLog	2.1 (October 2006)
MMIS	7.0.0 (October 2006)