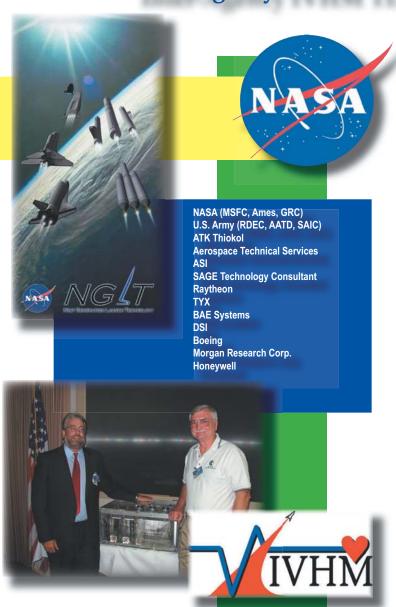


Volume 12, Number 5 Summer 2003

### Inter-Agency IVHM TIM Held in Huntsville



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Through the combined effort of NASA MSFC and DSI, the first TIM of Integrated Vehicle Health Management (IVHM) Technology and Processes was successfully convened at NASA Marshall on July 23, 2003. This event was of historical proportions for two reasons. This was the first TIM in which the participants were provided the opportunity to openly discuss the principles and application of diagnostics, prognostics and the implementation of IVHM. Secondly, the conference table in the room where the first IA TIM was held is of historical significance. It is the same table utilized by Werner Von Braun and his team of scientists during the planning of the United States' entry into the Space Age.

The 47 TIM attendees included representatives from DOD agencies, NASA, and industry. They provided a broad range of experience and expertise on the subjects of diagnostics, prognostics, and IVHM.

The agenda included presentations by DSI, TYX, and NASA Ames on Systems Approach to Diagnostics Development and IVHM Systems Analysis & Optimization. DSI demonstrated its Embedded Diagnostics Demonstrator and IVHM Executive, (EDDIE), which provided real time Integrated Health Management applications in a simulated aircraft fuel system.

Time was allotted for open discussion by the attendees on implementation and application of diagnostics, prognostics, and IVHM. During the open discussions there were two major concerns identified. The first concern expressed by most attendees, was how to force the implementation of well-defined IVHM requirements down to the lowest level under the current procurement specification process. Secondly, there was a general concern with the lack of good system engineering principles during the design process and the apparent lack of teaching of these same principles by academia.

It was agreed by all in attendance that IA TIM provided an excellent forum and should be continued. NASA MSFC commended DSI for being instrumental in pulling the TIM together.

The follow-on IA TIMs will be expanded to one full day in length. The next IA TIM is scheduled for October. If anyone is interested in attending the next IA TIM, please contact DSI, Jim Lauffer at (909) 735-1611 for more information.



### New Documentation: Quick Start Guide & Online Help

#### **DESCRIPTIONS:**

eXpress Quick Start Guide - provides a quick reference book documenting many of the new features in the latest version of the eXpress software.

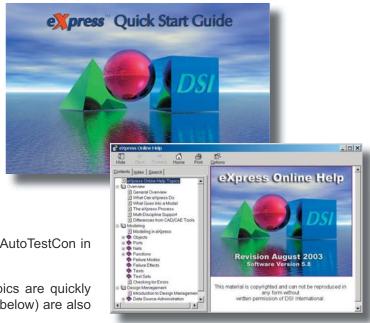
eXpress Online Help - An Online Help menu available from within the eXpress software environment to provide the user with a readily available documentation package. The Online help has been updated to reflect the most recent changes to the software and its contents have been restructured to speed up referencing.

With all the capabilities currently found in the **express** tool, learning how to access and use these features could sometimes be a challenge. To help the user become more efficient in the shortest possible time, we at DSI have developed a Quick Start Guide. This guide provides the user with a quick reference and overview of most all of the menus, features and capabilities in the **express** environment using many screen captures and graphics to "tell the story" and help speed up the learning process. The screen captures help to lead the user through "how to" procedures of the most common tasks.

At press time, the final touches are being made to the Quick Start Guide so that it reflects the latest upcoming release of *express* version 5.8 (see article below for more information).

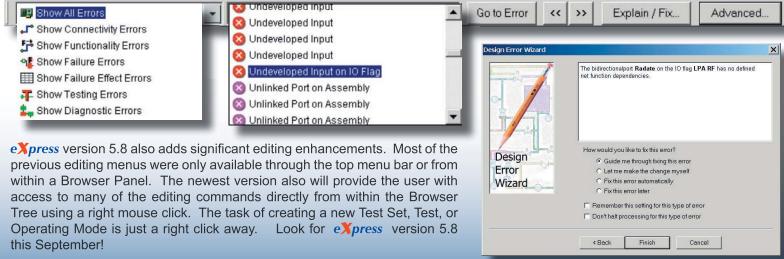
The new *express* Quick Start Guide will be available at this year's AutoTestCon in Anaheim. Stop by the DSI booth and check it out.

The Online Help has been restructured and organized so that topics are quickly referenced when needed. The new capabilities of version 5.8 (see below) are also included in the updated Online Help.



### Introducing express Version 5.8

DSI's commitment to continuous improvement has its benefits! The upcoming version of express includes features to enhance user interface and improve modeling efficiency. The new Error Checker and its associated Error Bar menus (shown below) is just one of the more significant enhancements. The user can now systematically filter and sort errors based on the error type and criticality. By selecting an error from a drop-down menu and clicking on the "Go to Error" button, the user is taken directly to the model object that contains the error. The Design Error Wizard then provides the user with a helpful guide to fix the problem. The new Error Checker improves the users' ability to rapidly establish and validate model integrity.





### **AUTOTESTCON** and the

# eXpress Users Group Meeting



AUTOTESTCON 2003 is quickly approaching and DSI will once again be hosting the annual **express** User's Group meeting in conjunction with the convention. AUTOTESTCON 2003 will be held in Anaheim, California on September 22-25.

The **express** User's Group Meeting Location and Time:

Embassy Suites Friday, Sept. 26

8:30 a.m. to 12:00 p.m.

Workshop: 1:00 p.m. to 3:00 p.m.

Hotel Accommodations: Embassy Suites 3100 E. Frontera St. Anaheim, CA 92805 (714) 632-1221 (800) Embassy (714) 632-3575 (Fax)

Reservations are accepted on a first come first served basis at a room rate of \$119.00 and a government rate of \$109.00 including a King size bed or 2 doubles.

We would like to invite our users interested in attending the **eXpress** User's Group to contact:

Denise Aguinaga at DSI (714) 637-9325) email@daguinaga@dsiintl.com

For more information about AUTOTESTCON please visit the website:

http://www.autotestcon.com/2003/2003.htm

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## eXpress User Group Agenda "The Process of Diagnostic Excellence"

| "The Process of Diagnostic Excellence" |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
| 8:00                                   | Registration & Refreshments                  |  |  |  |  |  |
| 8:30                                   | State-of-DSI International Jim Lauffer       |  |  |  |  |  |
| 8:40                                   | Design-To-Test (DTT) Jack Amsell             |  |  |  |  |  |
| 9:10                                   | Inter-Agency TIM Summary Bob Hickman         |  |  |  |  |  |
| 9:30                                   | 9:30 Diagnostic Design Requirements          |  |  |  |  |  |
|  | Analysis Guide (DDRAG) Steve DeSantis        |  |  |  |  |  |
| 10:00                                  | Break - Refreshments provided                |  |  |  |  |  |
| 10:20                                  | 20 EDDIE Presentation & Demonstration        |  |  |  |  |  |
|  | Dave Tyler                                   |  |  |  |  |  |
|  | Jim Lauffer                                  |  |  |  |  |  |
|  | Dan Hartop                                   |  |  |  |  |  |
| 11:10                                  | Approaches to Embedded Diagnostic Systems    |  |  |  |  |  |
|  | Eric Gould                                   |  |  |  |  |  |
| 11:30                                  | eXpress 5.8 - New Capabilities Overview      |  |  |  |  |  |
|  | Eric Gould                                   |  |  |  |  |  |
|  | Dan Hartop                                   |  |  |  |  |  |
| 11:50                                  | Diagnostics - A Look Ahead & Closing Remarks |  |  |  |  |  |
|  | Jim Lauffer                                  |  |  |  |  |  |
|  | Break - Lunch                                |  |  |  |  |  |
| 1:15 - 3                               | 3:00   |  |  |  |  |  |
|  | Workshop -                                   |  |  |  |  |  |
|  | Personal tutoring and hands-on assistance    |  |  |  |  |  |

### **Training Schedule**

| Course<br>Number | Pre-<br>requisite | Course Description                    | Dates                 | Location   | POC                   |
|------------------|-------------------|---------------------------------------|-----------------------|------------|-----------------------|
| 100              |                   | Concepts and Applications             | 29 Sept, 2003         | Orange, CA | Denise Aguinaga , DSI |
| 110              |                   | Basic Modeling                        | 29 Sept - 1 Oct, 2003 | Orange, CA | Denise Aguinaga , DSI |
| 120              | 110               | Test Concepts and Development         | 2-3 Oct, 2003         | Orange, CA | Denise Aguinaga , DSI |
| 200              | 120               | Diagnostic Development and Assessment | 6-7 Oct, 2003         | Orange, CA | Denise Aguinaga , DSI |
| 210              | 200               | FMECA Development and Assessment      | 8 Oct, 2003           | Orange, CA | Denise Aguinaga , DSI |
| 100              |                   | Concepts and Applications             | 10 Nov, 2003          | Orange, CA | Denise Aguinaga , DSI |
| 110              |                   | Basic Modeling                        | 10-12 Nov, 2003       | Orange, CA | Denise Aguinaga , DSI |
| 120              | 110               | Test Concepts and Development         | 13-14 Nov, 2003       | Orange, CA | Denise Aguinaga , DSI |
| 200              | 120               | Diagnostic Development and Assessment | 17-18 Nov, 2003       | Orange, CA | Denise Aguinaga , DSI |
| 210              | 200               | FMECA Development and Assessment      | 19 Nov, 2003          | Orange, CA | Denise Aguinaga , DSI |
| 100              |                   | Concepts and Applications             | 8 Dec, 2003           | Orange, CA | Denise Aguinaga , DSI |
| 110              |                   | Basic Modeling                        | 8-10 Dec, 2003        | Orange, CA | Denise Aguinaga , DSI |
| 120              | 110               | Test Concepts and Development         | 11-12 Dec, 2003       | Orange, CA | Denise Aguinaga , DSI |
| 200              | 120               | Diagnostic Development and Assessment | 15-16 Dec, 2003       | Orange, CA | Denise Aguinaga , DSI |
| 210              | 200               | FMECA Development and Assessment      | 17 Dec, 2003          | Orange, CA | Denise Aguinaga , DSI |

### **Eric Gould Recognized by IEEE**



DSI's diagnostics specialist, Eric Gould, was recently recognized by the IEEE Computer Society for "leadership in the development of IEEE Standard 1232 - 2002." Mark Kaufman, co-chair of the IEEE SCC20 Diagnostics and Maintenance Control sub-committee, presented Eric with this certificate at DSI's California offices. Eric has also been key player in the development of the new IEEE Testability Standard (recently approved for ballot).

In addition to his support of industry standards, Eric works to enhance the express software (his "day job"). A DSI employee for 17 years, Eric developed the diagnostic and analysis algorithms for both express and STAT (DSI's previous generation diagnostic engineering tool).

In his spare time, Eric enjoys attending concerts and jazz clubs with his daughter, who is an up-and-coming drummer.

Congratulations Eric!!!

### **DSI International**

1574 N. Batavia St., Bldg. 3 Orange, California 92867

Phone: (714) 637-9325 Fax: (714) 637-0584 E-mail: info@dsiintl.com



www.dsiintl.com

As the leading seller of Diagnostic Software, DSI understands the importance of quality service and support. To meet the needs of our customers, we offer a wide array of technical support and service programs developed to address the time-critical issues and stringent diagnostic requirements prevalent on many of today's programs. DSI is ready to help with specialized software development, diagnostic modeling and analysis, advanced mentoring, data management processes and a host of customizable support services to address specific customer needs.

### World Wide Representatives



APSYS Codicote Hertfordshire SG4 8TR

United Kingdom

Tel: 0438-821555 Fax: 0438-821666 E-Mail: keith@apsys.co.uk

www.apsys.co.uk



Systems, Inc.

Y-MAX Systems, Inc. 3-9-6 Hisamoto Takatsu-ku, Kawasaki-city, Kanagawa-Ken



www.v-max.com



Parc d Activate de Cergy 3 Rue de la Grande Ourse Ensemble-Bät: 3; BP8877 95802 Cergy St. Christophe

France

Fax: 33-1-34-22-03-82 E-Mail: michel.schieber@seriem.fr www.seriem.fr

Tel: 33-1-30-30-22-10



Advanced Automation Corporation 16 Thomas Drive Rome, NY 13440

Tel. 315-336-6579 Fax. 315-337-3692 E-Mail: sales@aac-usa.com

www.aac-usa.com

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