



PAWS Users Group Newsletter

Volume 19 No. 1

April 2002

We apologise for the long delayed production of this long requested Newsletter! I am sure this is old news to all of you, but just in case... TYX was acquired by MAI (Matra Aerospace Inc). a subsidiary of EADS Test & Services, France last summer. TYX continues to sell and support their entire product line of Productivity enhancement tools including PAWS, TestBase, and TRD toolsets. TYX's engineering services subsidiary Access Research Corporation (ARC) continues to be the growth driver as they take on the additional role of providing support to EADS T&S customers in the commercial Airline industry in the US. We feel this is truly a win-win situation for all concerned; TYX in that being part of the second largest aerospace concern in the world is a definite advantage, ARC in that they are able to grow the service and support side of the business to their customer base, and EADS T&S in that they gain the ability to support their customer base in the US from a US based entity.

Program News

We are continuing to make deliveries on all the major DoD programs as well as the multinational programs in Europe. Recently the RTCASS program has ordered the EMD phase systems. We are eagerly awaiting the E-35 Program rollout, as we are confident that the ability to re-host the existing TPS will save the customer the extensive cost of redeveloping these complex TPSs'. The C-17 Depot Tester is currently being used to re-host TPSs' from the older B1 Tester. Last but no least, programs such as the Mil-Star APATS, and the E2C re-host as well as the Boeing PIP development are all on-going or nearing completion.

The TestBase system has been in production use overseas since the middle of last year, and we are currently pursuing some major opportunities for this innovative product. More on some of the new features can be found below, in the section devoted to TestBase.

PAWS in Europe

Our partner company SEKAS has completed the specification of the driver interface for the MARTHA test-system, which is the debut of a new Tester family produced by MARCONI, Italy using PAWS as the software platform. MARCONI is now implementing these drivers, which, along with supporting ATLAS Analog and Timing-constructs, fully support the IEEE716-1989 Bus-Testing constructs for 1553- and ARINC 429 busses for VXI cards of Condor Engineering. SEKAS also provided a fully object oriented switch-control-system for the complex switch-topology of this modern tester. Currently AGUSTA is implementing TPSs' for helicopter testing on this system.

The German Tornado re-host project is now in production usage with all the TPSs' on board for maintenance work. The technology leap frog is highly appreciated by its users.

Our Far-Eastern operations are off to a good start this year, as we are embarking on a major upgrade program as well as building on the success of entering new markets with PAWS last autumn.

Our participation in the CASS off-load program through our engineering services subsidiary, Access Research Corporation (ARC) continues to gain strength. ARC is currently in the final throes of developing TPSs' for Raytheon on the M1 Tank program for an FMS customer. ARC has submitted the F-15 RADATS proposal to the customer and is eagerly anticipating selection. ARC is also active in the IV&V world building on their strength with the State of California as a long term customer. They are currently assisting the State in an IV&V oversight role.

New Product Enhancements

Within the PAWS Developer's Studio, we have developed a file version management tool for PAWS project files. Users simply select a PAWS directory to view version information. The Paws Info tool retrieves file version information, displays information in the viewer window, and saves the information in an XML format. The resulting XML file can be viewed within Internet Explorer or any other XML compatible tool. Default XSD and XSL files are provided in order to control the HTML presentation of the XML file. The file information displayed by the tool or Internet Explorer may be conveniently printed for documentation purposes.

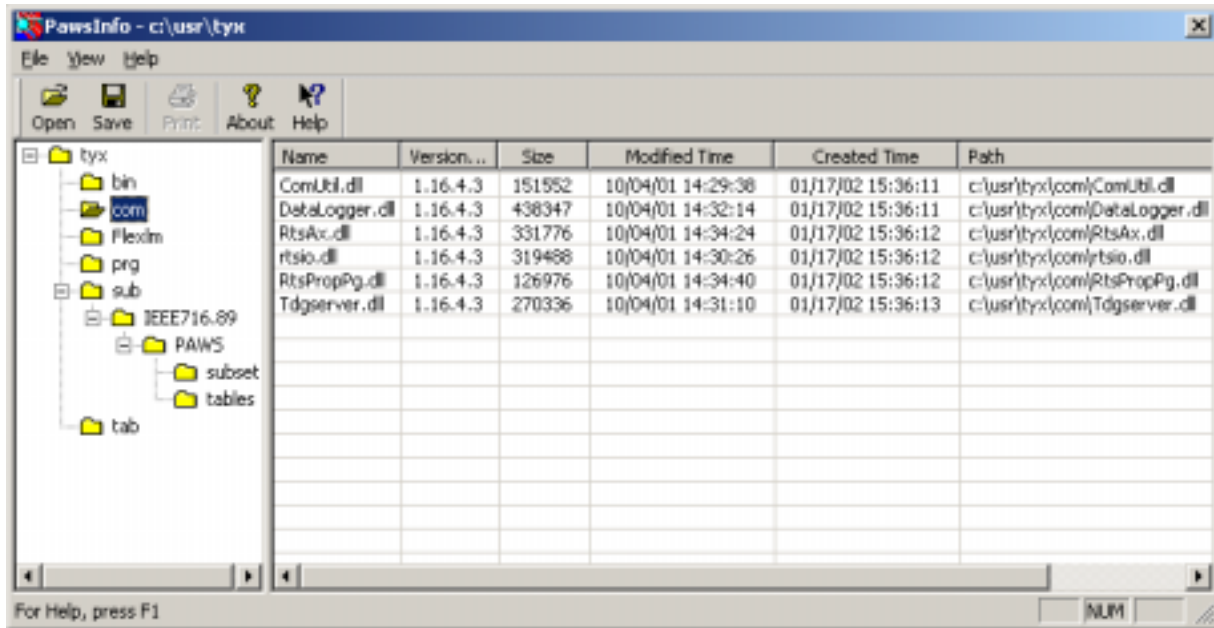


Figure 1. PAWS Info Tool

The **Run Time Test Diagrammer** (RTDG) product replaces the Rapid Parameter changer (RPC). The Part Number (9507) remains the same, but the functionality and performance run circles around the earlier offering. We believe that the diagram below speaks volumes. There are two versions of this product, the viewer option attached to the Run Time System (P/N 9507), as well as the documentation tool (P/N 9505). The viewer provides real time updates of the status of the equipment as seen below. There are a number of options to customize the behavior. We refer you to the Web site for further details or you may call your friendly TYX representative for details. The state of the instruments are depicted vis-à-vis the functions selected, and the components of the signals, including their specific set-ups, are shown in addition. Indeed, the user can select an option to change the specific component values of a given signal.

The performance of this tool is awesome in that we had to add an option to delay the screen refresh by some user specified increment, in order that the hapless user has a chance to see the diagram flash by! In reality, we see this as a trouble shooting aid, since the user would stop and refresh the diagram at some known point in the exercise. The second version of this product is full fledged as a documentation tool in that the user can store the diagram, print it, and even modify it if he chooses. This P/N is 9505.

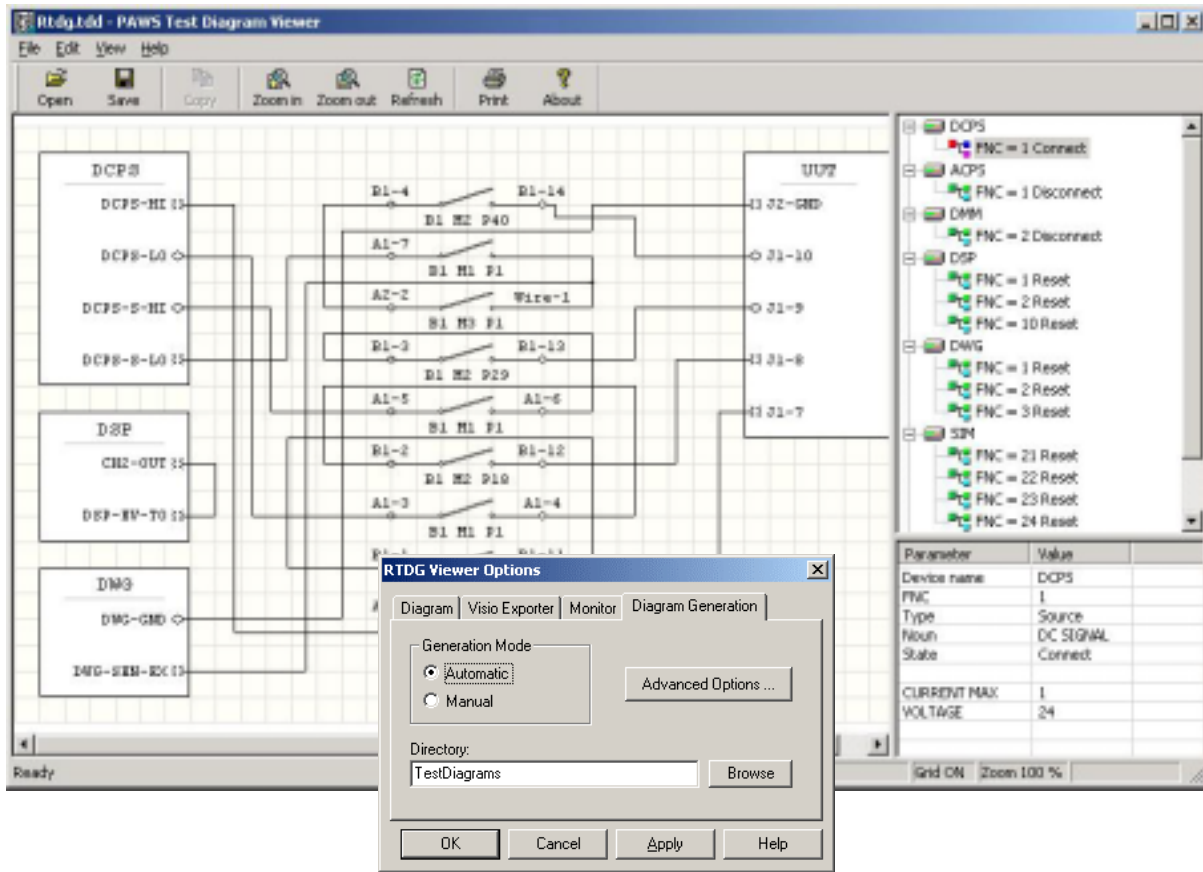


Figure 2. Run Time Test Diagrammer Output

The Test Diagrams Explorer is a new tool that allows the user to explore the test diagrams located in a selected folder and its subfolders. It is a test diagram management tool. The Test Diagrams Explorer is distributed with PAWS Run-Time Test Diagram Monitor and Generator products.

Test diagrams can be displayed by clicking the desired diagram in the tree or by using the animate feature. The animate feature will display the diagrams contained by the selected folder and its subfolders in the sequence they were recorded in with a delay between two diagrams. The animation delay can be changed within the viewer options.

The print behavior is different based on the selected item in the tree. If the selected item is a diagram the diagram will be printed and if the selected item is a folder, all diagrams in that folder and its subfolders will be printed. The diagram and its properties can be edited either in place, or in the application using the edit button in the toolbar. If the editing takes place locally, the properties can be saved.

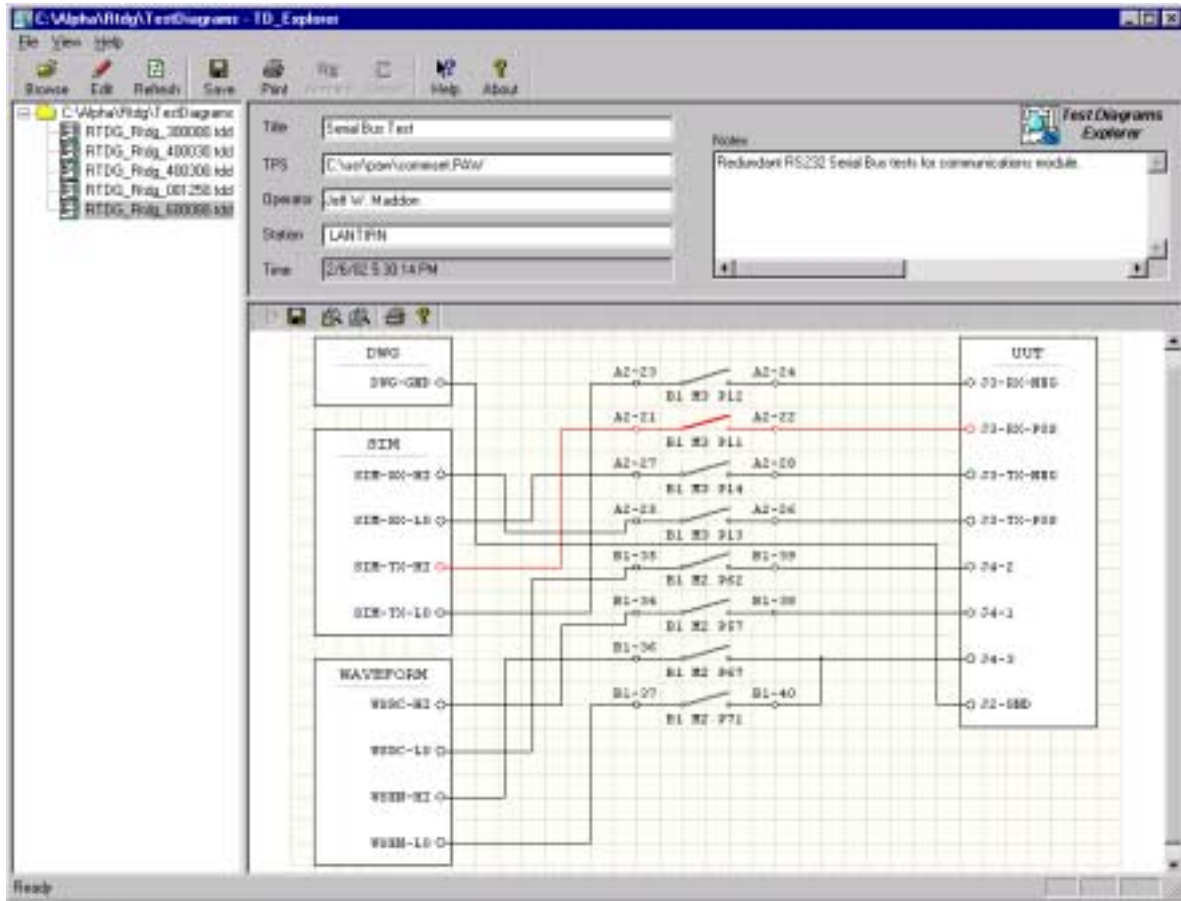


Figure 3. Test Diagram Explorer

TRD 2.0 Product Update

This complete redo of the TRD (Test Requirements Documentation) product line was necessitated by customer demand. Some years back, the DoD decided to abolish Mil-Standards as unnecessary relics of the past. Whereas in some cases, this blanket decision was meritorious, in others such as the Test Requirements arena, there was a vacuum created. This is due to the fact that industry relied on these documents (albeit not with the rigor found in the Mil-specs.) as part of the process of generating Test Specifications

The marketplace is demanding this capability. We first brushed off our old product line, and indeed, have shipped it to a number of customers in the last year. However, we recognized that we had better get busy to update the product, and informed those customers that we would be sending them the new TRD 2.0 product mid-year. The familiar product components are still available as follows:

- HTML based TRD editor, which generates an XML database containing the requirements.

- Flowcharter which generates the Test Strategy flowchart; this product employs VISIO® as the back office tool to mechanise the flow chart.
- Code Generation module, which generates ATLAS as well as having the architecture to generate other languages such as C++, Visual Basic etc.
- Import capability to populate the database from tools such as the dependency modeler eXpress, and other such front-end analysis tools.

The architectural diagram below depicts the components of the TRD product.

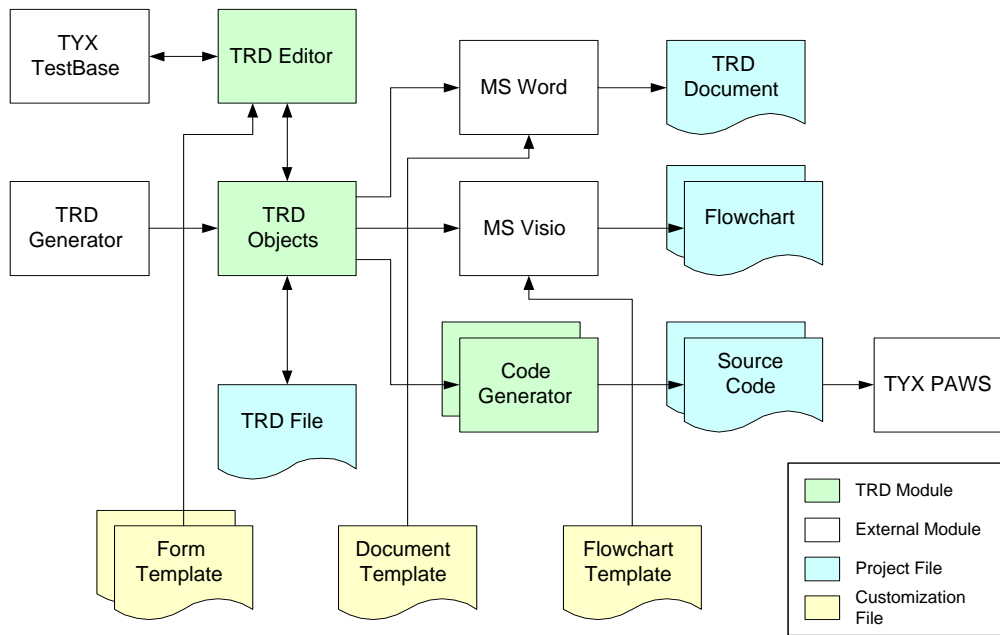


Figure 4. TRD Sub-System Architecture

TestBase Update

TestBase is a next generation test environment utilizing state-of-the-art software technologies automating design-to-test methodologies. It supports system-level testing, providing visual development, data base storage and run-time execution of “fault tree” test strategies. The product has been delivered and installed at several customer sites. The customers continue to place orders for additional systems. Other organizations are in the final stages of procurement in ordering TestBase. We are pleased to have found the mark with this next generation offering.

TestBase has been updated with a new User Interface for Functional Test (UI-FT). The UI-FT is a TestBase production user interface module. Compared to the default production user interface distributed with the earlier versions of TestBase, this module gives the operator an additional degree of control over the execution sequence in a functional testing scenario. The UI-FT supports debug execution control with sub-selection of tests, step-by-step execution, breakpoints, repeat step, stop on test fail, test skip and looping capabilities. Custom operator security settings

will be available for the following user roles; administrator, developer, and test engineer.

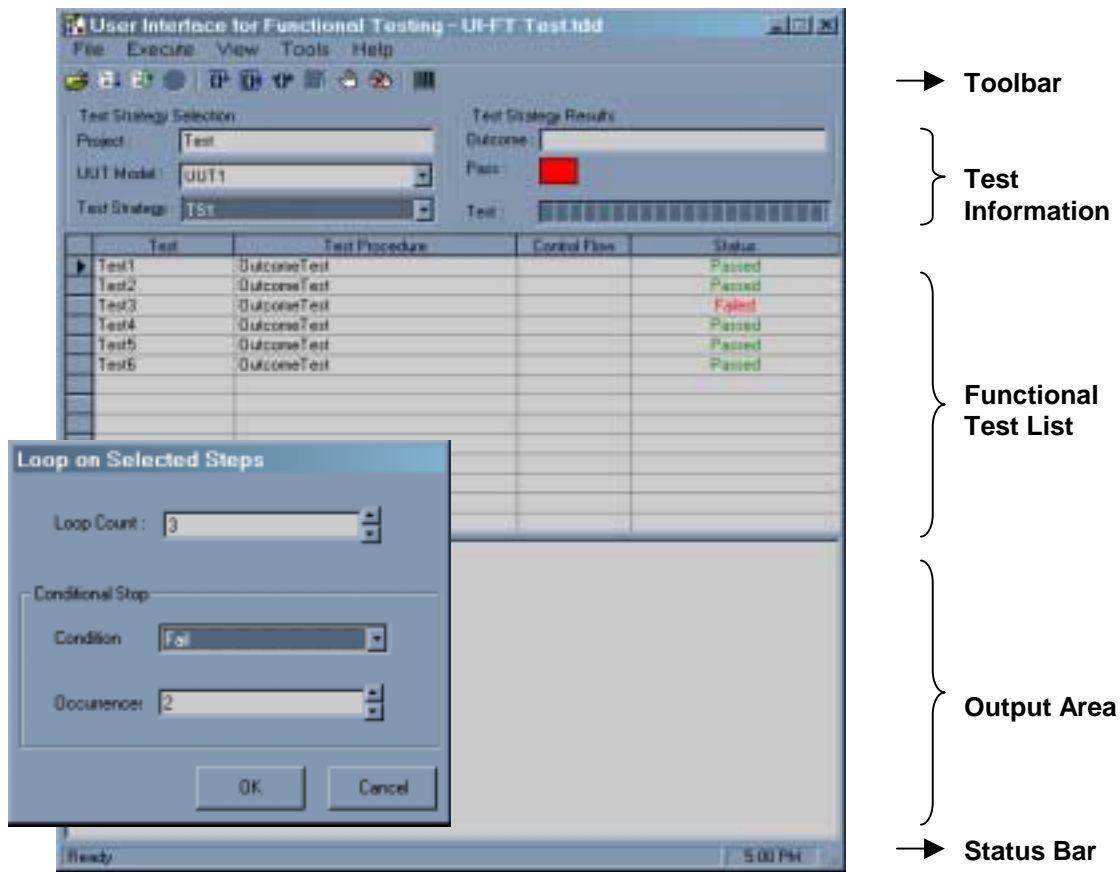
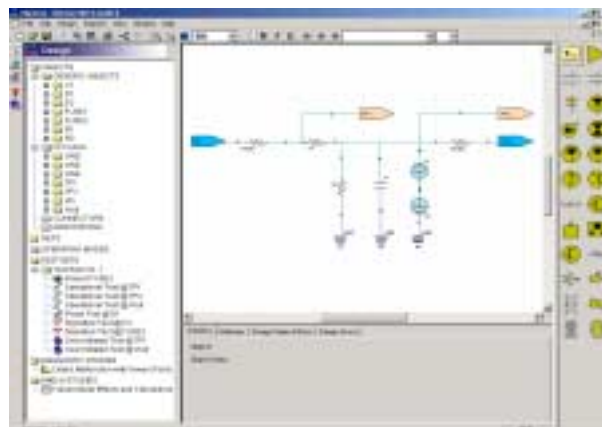


Figure 5. User Interface for Functional Test (UI-FT)

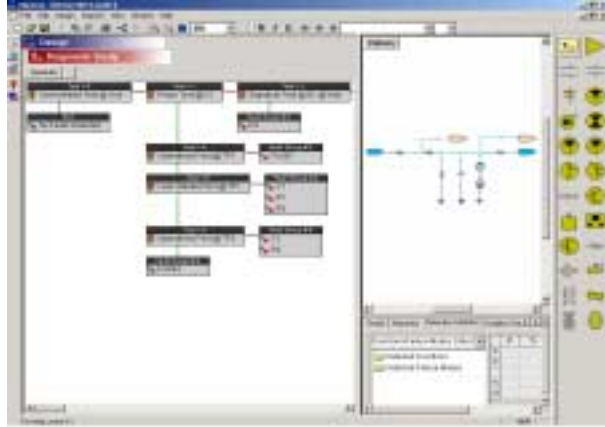
We have completed integration of TestBase with two CAD/CAM tools, namely DSI eXpress and IntuSoft Test Designer. The integration effort is inline with our goal to implement and provide design-to-test methodologies. TestBase supports the capture of test strategy information generated within these two design tools. The figure and steps below highlight the design-to-test capability using eXpress.

Step-by-Step Process using eXpress

1. UUT Dependency Model Capture
2. Test Data Input



3. Test Strategy Generation



4. Test Strategy Import into TestBase

5. Test Strategy Execution

6. Fault Detection/Isolation

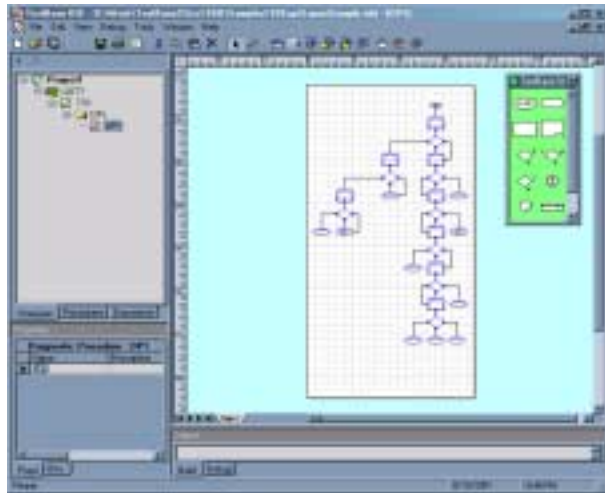


Figure 6. TestBase and eXpress Integration

The figure and steps below highlight the design-to-test capability using Test Designer.

Step-by-Step Process using Test Designer

1. UUT Schematic Capture
2. UUT Simulation
3. Fault Definition
4. Fault Simulation
5. Test Strategy Generation
6. Test Strategy Import into TestBase
7. Test Strategy Execution
8. Fault Detection/Isolation

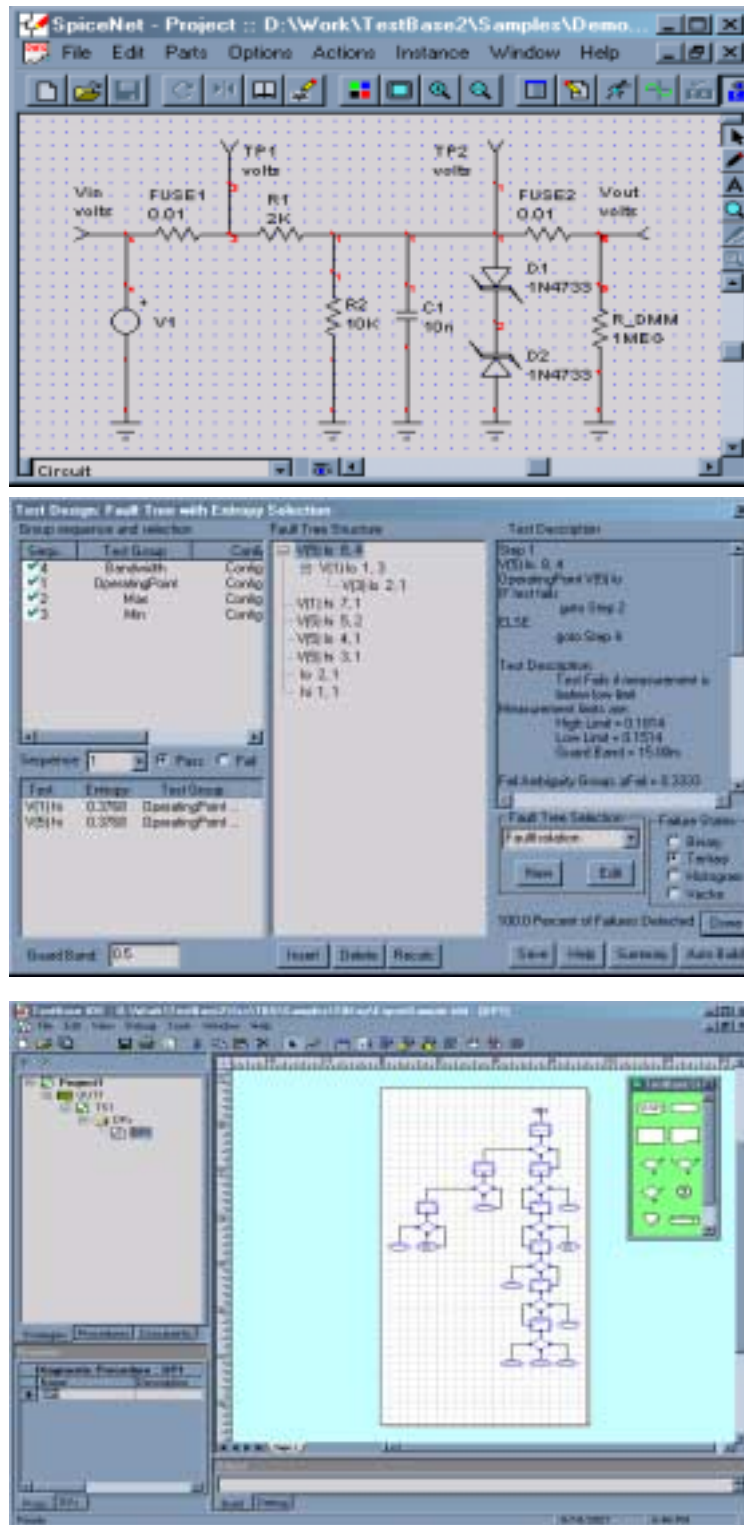


Figure 7. TestBase and Test Designer Integration

PAWS User Group Meetings

We lead off this year's series on June 17, 2002 with a meeting in Tokyo, hosted by our Japanese partner, Y-MAX Systems. In the autumn we are planning our Pan European meeting in Munich Germany (end of September).

Next on the schedule is the US PUG. This year we are considering breaking with tradition and holding the meeting in the Reston Area next to our HQ, so that the attendees may get exposure to the back room operations at TYX. Currently we are planning an early September date. We look forward to seeing you all at one of our User Group Meetings.