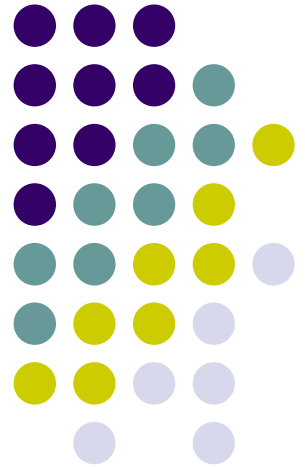


# ATML

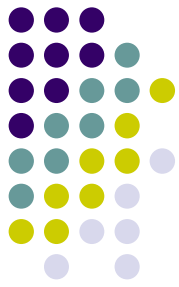
Editors, Tools and Software  
Components to simplify ATML  
Implementation





# Company Overview

- WOSB, Corporate headquarters in San Diego
- Provider of editors, tools, and software to speed ATML implementation
- Leader in SpikeProtected Current Sources used in LED, Laser Diode applications
  - Systems installed worldwide
  - Representation in US
  - Distributors in Singapore, Malaysia, China, Taiwan, Germany and others

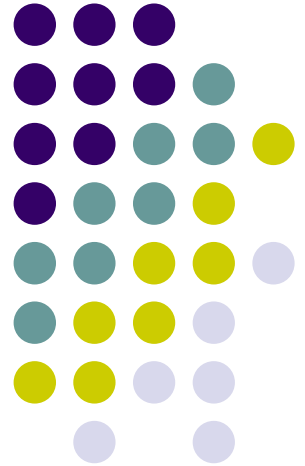


## ATML Automated Test Markup Language

- New standardization effort that provides for the exchange of Automatic Test Systems (ATS) data in a common format
- Now being published by the Institute of Electrical and Electronics Engineers (IEEE) as a family of trial-use standards
- A component of the DoD ATS Framework
- Defines format for test, test sequence, test instrument, test station, signals, UUT, test results .....
- Increases usage of commercial applications

# ATML Test Results

Enhanced Reporting  
TPS Optimization  
Standardized Output Format  
Input to Closed-Loop Diagnostics Reasoners  
Input to Maintenance databases





## Software Components Speed ATML Implementation

- Test Results
  - Software Plug-In integrates into .NET architecture
  - Wrapper isolates applications from changes
  - Standardized test results format supports interoperability
  - Enhanced report generation



# Non-ATML vs ATML Test Report

TPS38\_ete\_results\_0610111.txt - Notepad

```

*****
*
* RECEIVER/EXCITER, RADAR *
* P/N 3173025-115 *
* S/N 0369 *
* TPS CPIN *
* 81K-APG70/R2272-U004-00A REV 004*
* DATE: 10/11/:6 TIME: 10:39 *
* ESTS S/N 006 *
*
*****
RUN MODE: END-TO-END
PRINT MODE: ALL DATA
ATE SURVEY: BYPASS
ITA CONFIDENCE: BYPASS
*****
*
* ITA 2 SIGNATURE/STTO *
*
* TGCM *
*
* DATE: 10/11/:6 TIME: 10:39 *
*
*****
-----
TESTNO UPPER LIMIT LOWER LIMIT MEASURED VALUE DIM STATUS
-----
1500 0.2240E+06 0.2156E+06 0.2203E+06 OHMs PASSED
1505 --- 0.5000E+03 0.5311E+05 OHMs PASSED
    
```

C:\Projects\Mercury\Software\TestResults\ESTS Sample TestResult.xml - Windows Internet Explorer

C:\Projects\Mercury\Software\TestResults\ESTS Sample TestResult.xml

WRAFB ATML TestResults

UUT: RECEIVER/EXCITER, RADAR  
Part #: 3173025-115  
Serial #: 0369

TPS: TPS CPIN  
ID: 81K-APG70/R2272-U004-00A  
Rev: REV 004  
Run Mode: END-TO-END  
Print Mode: All Data  
ATE Survey: BYPASS  
ITA Confidence: BYPASS

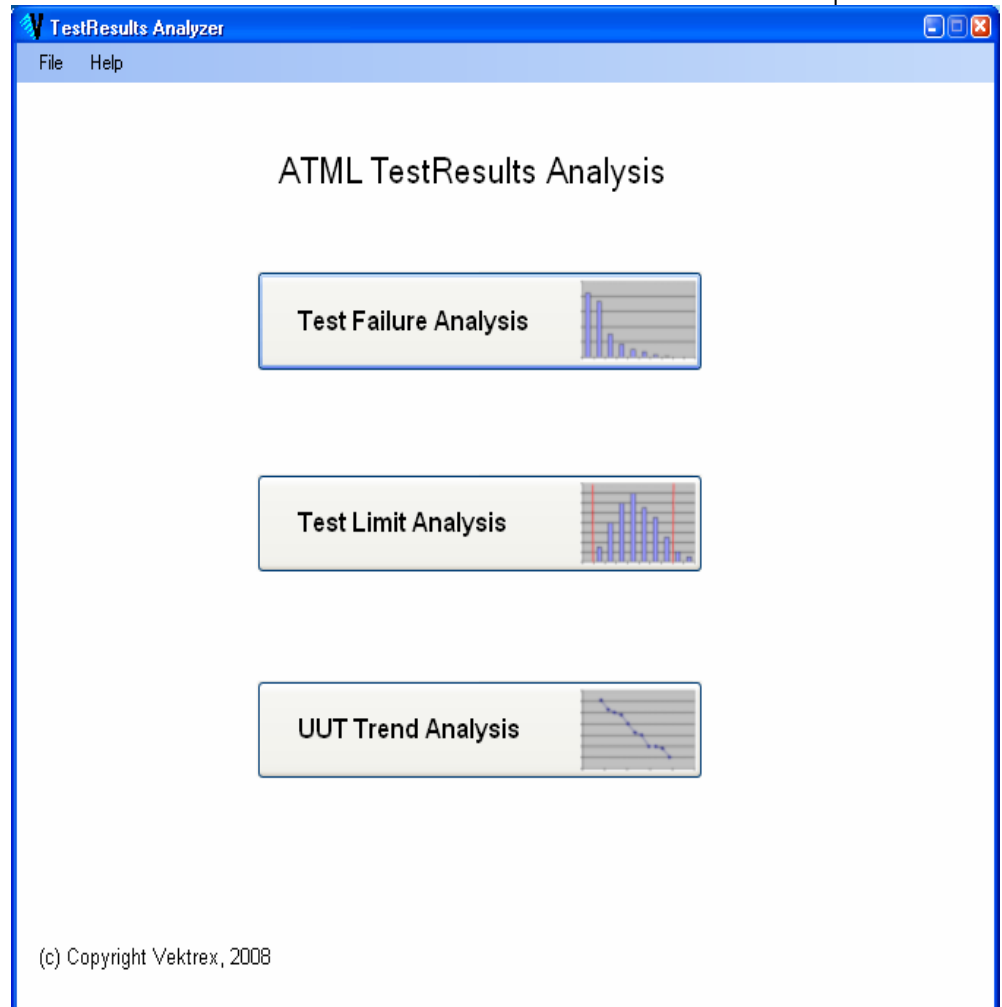
**Test Results**

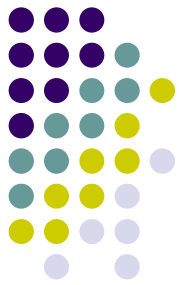
ID	TGCM				
Name:	ITA 2 SIGNATURE/STTO				
Start Time:	2006-10-11T10:39:00.Z				
Test Number	Upper Limit	Lower Limit	Measured Value	Units	Status
1500	0.2240E+06	0.2156E+06	0.2203E+06	OHMs	Passed
1505		0.5000E+03	0.5311E+05	OHMs	Passed



# Analyze Test Results to optimize testing

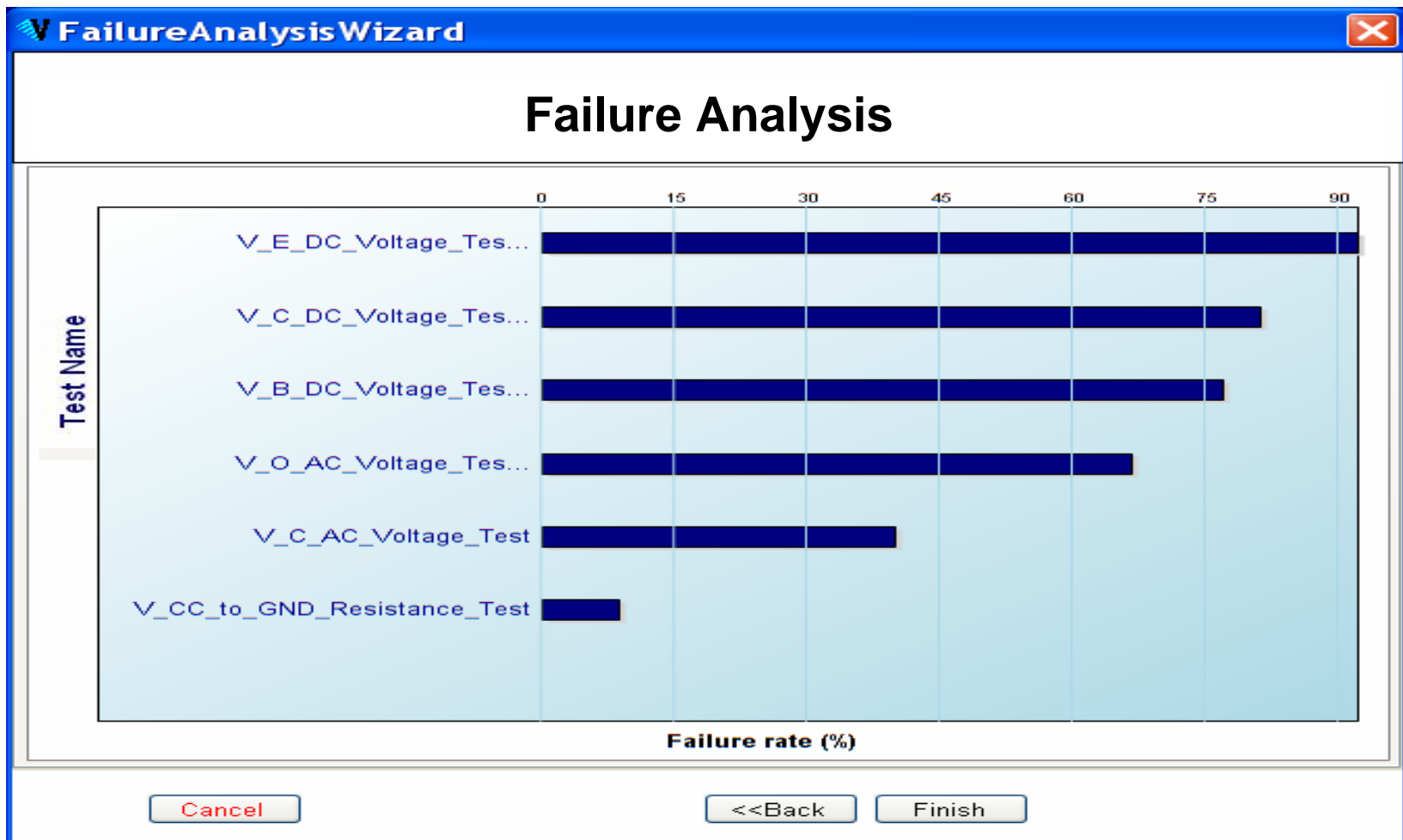
- Optimize TPS
- Eliminate false failures
- Eliminate false passes
- Detect instrument drift
- And others.....





# Test Results Analysis

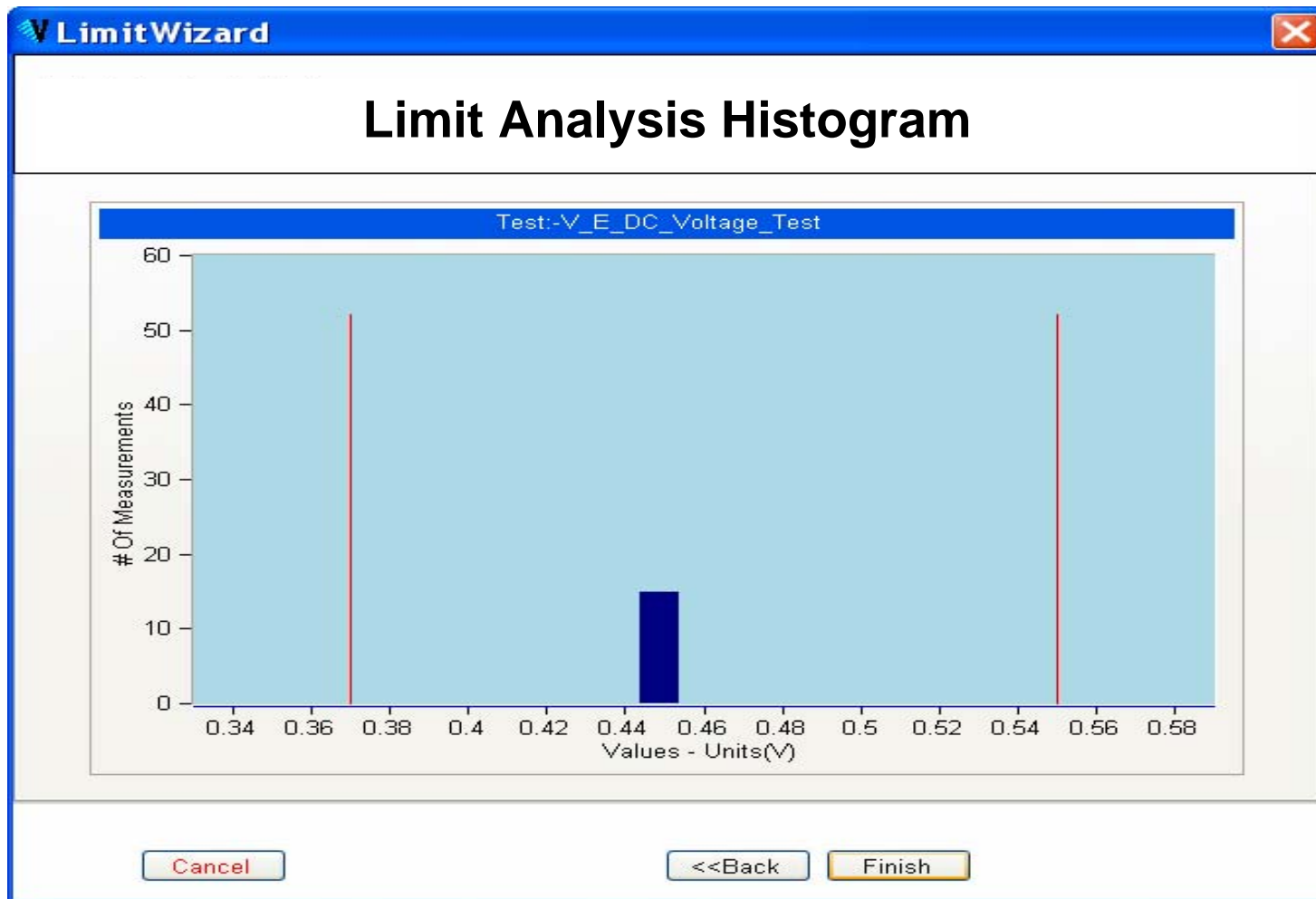
## Data shows test with highest failure rate





# Test Results Analysis

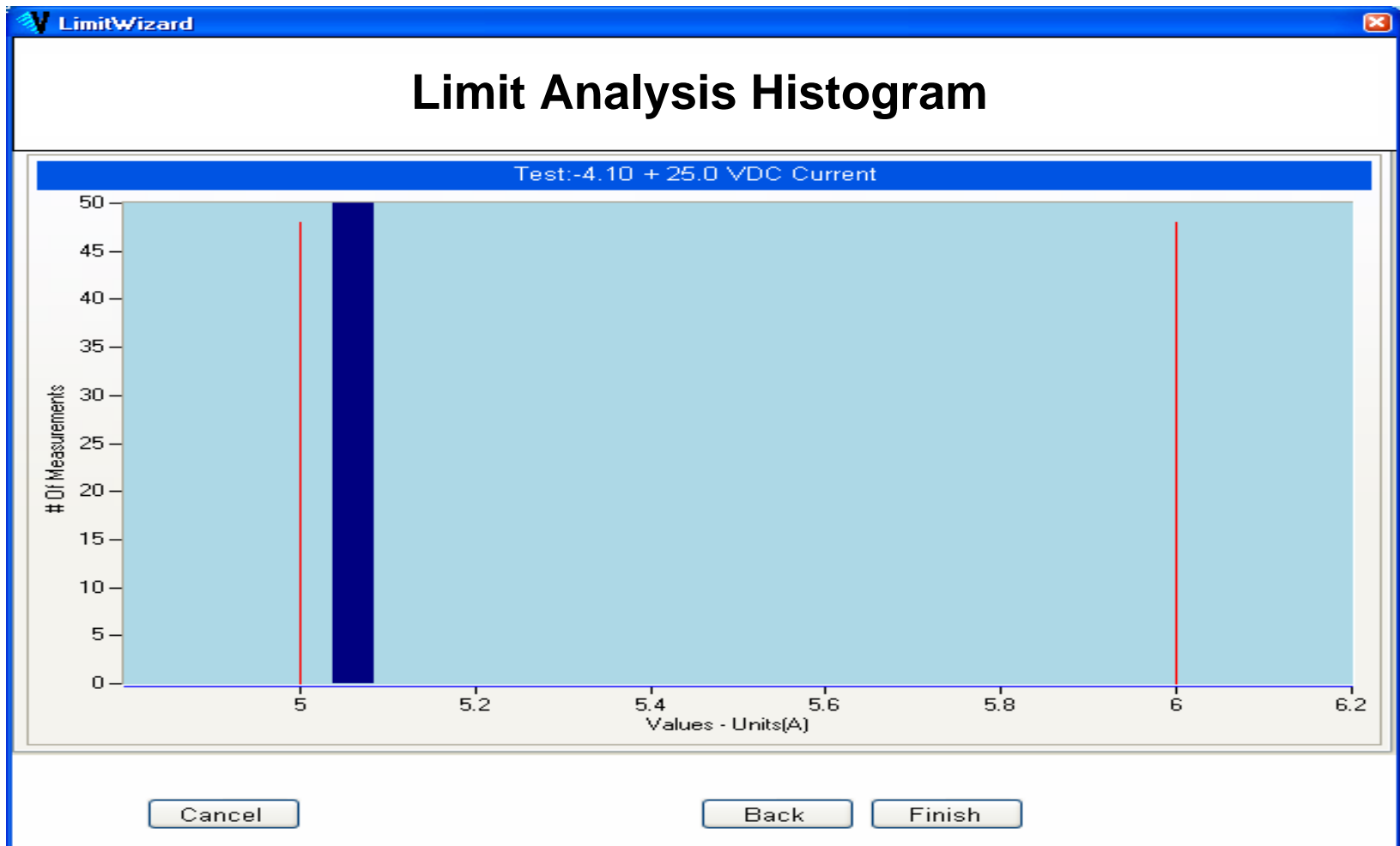
## Failures not due to limits





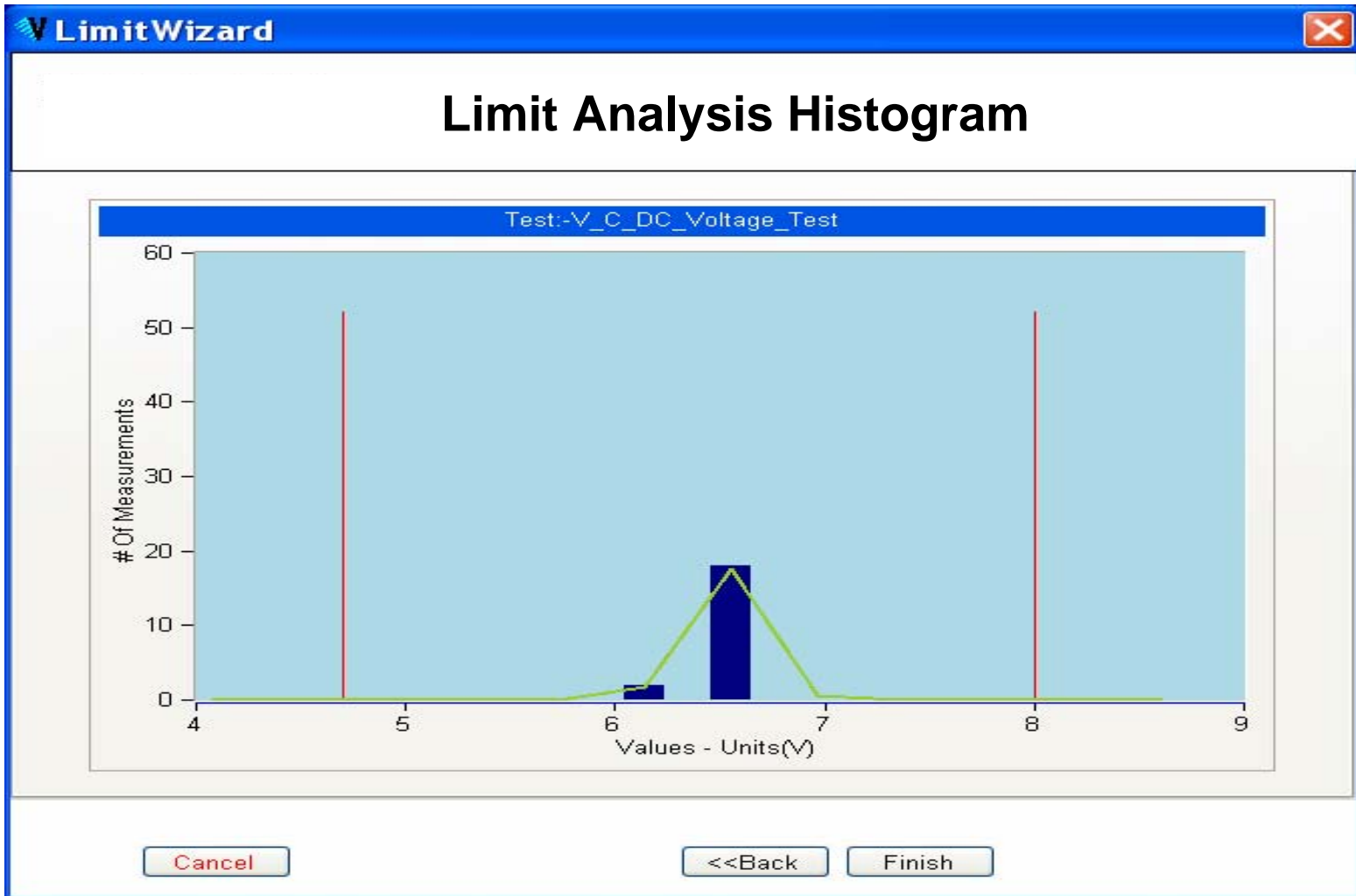
# Test Results Analysis

In this case, TPS limits might need another look





# Data shows normal distribution curve



Cancel

<<Back

Finish

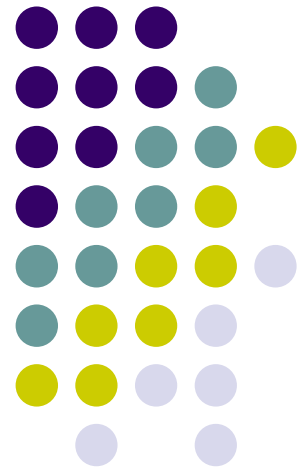


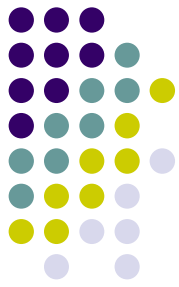
# ATML Instrument Description

Describe Test Instrument

Describe Instrument Capabilities

Component of ATML architecture





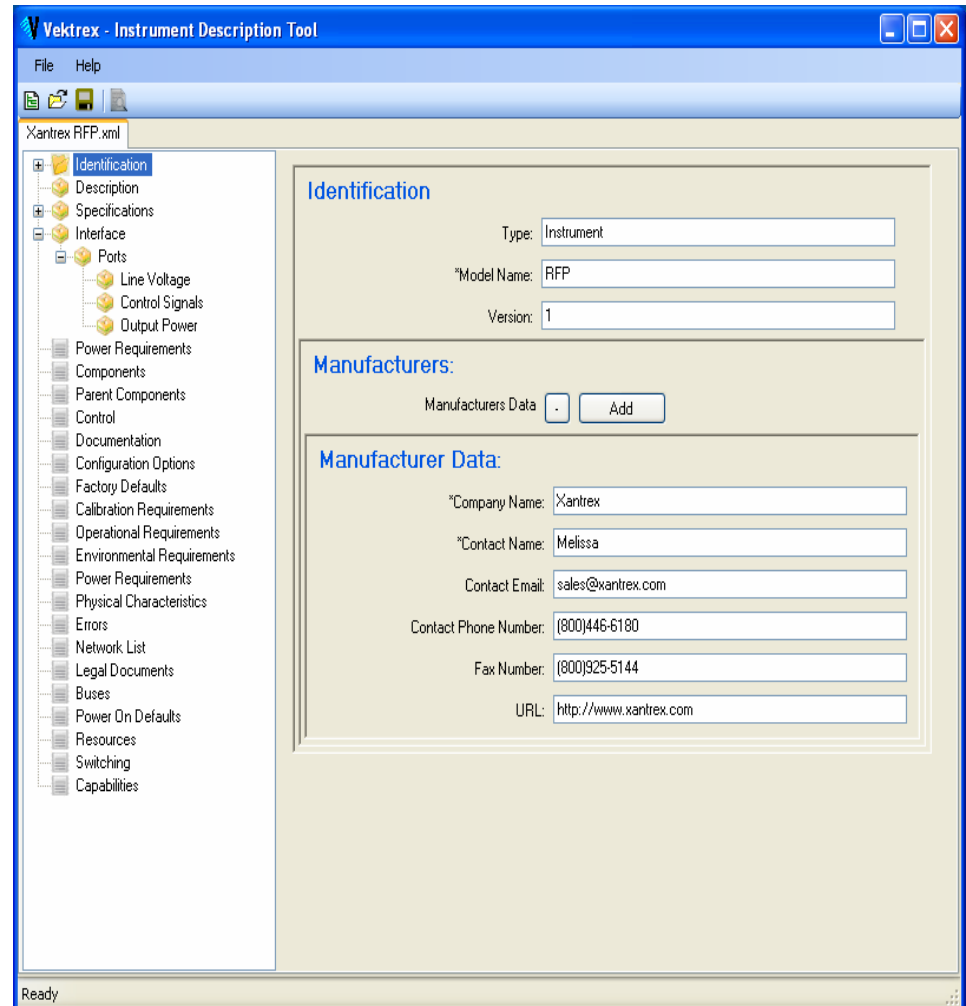
# Instrument Description Editor

Simple operator gui

Editor simplifies input to  
ATML format

Standardized format to  
describe and select  
instrumentation

Standardizes data sheets



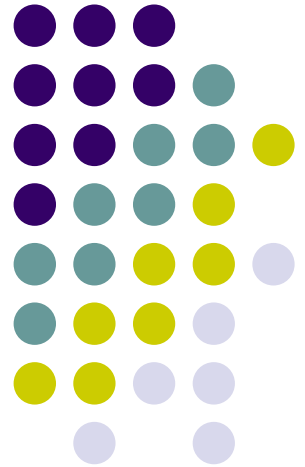
# ATML Test Description

Standard format for describing a test

Speeds TPS rehost

Support interoperability

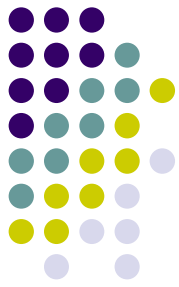
Diagnostics use





## ATML Test Description Editor

- Design test and test sequences
- Import and use signals libraries from other tools
- Maintain test data in one format supporting design through implementation
- Provides graphical view of test sequences
- Outputs ATML compliant format usable by sequencers



## Use Test Description Editor graphical view to simplify complicated TPS development

The screenshot displays the Vektrex - TestDescription Tool interface. The window title is "Vektrex - TestDescription Tool". The menu bar includes "File", "Tools", and "Help". The toolbar contains icons for file operations. The main window shows a tree view on the left with the following structure:

- UUT
- TSF Libraries
- SignalRequirements
- Documentation
  - Theory of Operation
  - Operating Instructions
  - Test Strategy Report
  - UUT Failure Modes Effect
- UUT Configuration Inform
- Installation Drawings
- Assembly Drawings
- Module Sub-assembly Sc
- Module Specification Co
- Wiring Diagrams
- Logic Diagrams
- Block Diagrams
- Parts Lists
- Family Tree
- Requirements
- Other Documents

- Performance Characteristics
- DetailedTestInfo
- Tests
- Test Sequences
- seq1
- seq2

The main area displays a "Test Sequence" diagram. The sequence starts with an "Entry Point1" (circle) leading to "step1" (rounded rectangle). From "step1", the flow branches to a failure node (circle with an 'X') and "step2". "step2" branches to another failure node and "step3". "step3" branches to a failure node and "step4". "step4" branches to a failure node and "step5". "step5" branches to a failure node and "step6". "step6" branches to three parallel paths: "step7", "step8", and "step9". "step7" leads to two failure nodes. "step8" leads to three failure nodes. "step9" leads to two failure nodes. The diagram is titled "Test Sequence" and has a scroll bar on the right.

Right click on a Step to add Step or Result

# Editors, tools and software components to speed ATML implementation

Vektrex [www.vektrex.com](http://www.vektrex.com)

[melissa@vektrex.com](mailto:melissa@vektrex.com)

Cell (619)804-0457

