Vulnerability Test Suite Visualization

Project Update
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Project Overview

- **What:**
  - visualize the results of a VoIP vulnerability test suite
- **Why:**
  - VoIP is about to become a major player in North-American communications
  - Industry Canada needs reliable results before approving the technology for commercial use
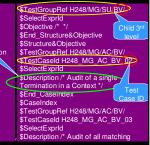
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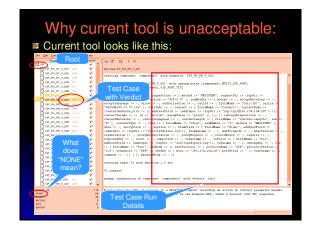# Project Overview

- **Why:**
  - Once it is adopted by long-distance telecommunication carriers, potential for fraud increases exponentially
  - Inferring test results with current visualization tool is a long, tedious, and error-prone process

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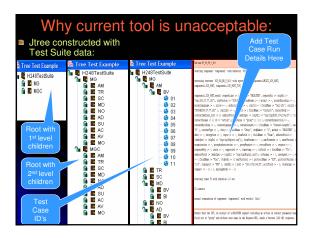

Why current tool is unacceptable:

- Data set looks like this:

Why current tool is unacceptable:

- Current tool looks like this:

Why current tool is unacceptable:

- Jtree constructed with Test Suite data:

Proposed Solution:

■ Use TreeMaps
■ Why:
- Take advantage of the *nested structure* of the groups
- Use color to differentiate between Pass/Fail/Inconclusive test results
- Employ *Direct Manipulation* to afford information content customizing

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Proposed Solution:

Root — 1st level Child — 1st level Child

2nd level Child — 3rd level Child

Test Case Info & Verdict pops up on mouse-over

Test Case

Proposed Solution:

Choice *Classic/Squarified*

Cushion and Vary its Parameters

Vary Border Size

What is harder than expected:

■ Code for treemaps comes from *sourceforge.net*
■ Source provided, *but need to build a tree structure out of one's data*
■ A node in the tree *must* look like this:

Updater	== a
Status	== b
Size	== c
Name	== d
getStatus()	
getName()	
…	
pointerToParent	
pointerToChildren	

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What is harder than expected:

Tree Structure

ttcn2 Input File

ttcn3 Input File

ttcn Parser

Input File

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Changes of Direction:

■ Promised:
- Vary container size based on number of failed test cases
■ Why would this not work?

12 test cases

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Where are we?

Promised milestones:

Where are we?

Delivered milestones:

What We Would Like To Add:
Skip the ttcn file writing step:

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Skip the ttcn file writing step: