WEBSTER VISUALIZE

Rochester Institute of Technology

2008 Senior Project

Sponsor Representative
Carlyle Davis

RIT Faculty Coach
Daniel Pedersen

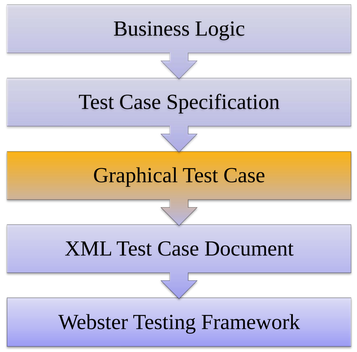
Team Visual Scrumware
Joseph Andrusyszyn, Mark Bryant,
Brian Hannan, Robert Songer

Motivation

Before Webster Visualize

Business Analysts at Webster provide developers with test case specifications that must be converted into XML test case documents. This is done using Notepad.

Webster Visualize will provide a graphical interface similar to Microsoft Visio for Business Analysts to create the test cases themselves. This will improve the accuracy of test cases, lower the development costs of test suites, and enhance maintenance of the existing software test system.



System Specifications

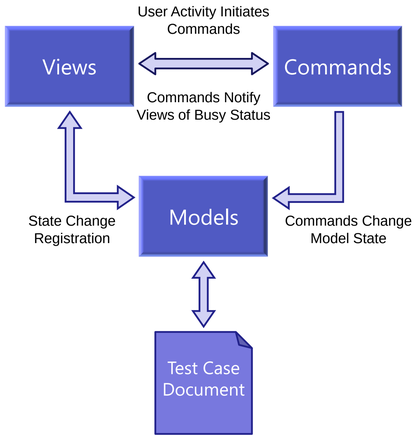
Visual Test Cases
- Drag-n-Drop
- Property Modification
- Document Validation
- Sequence Visualization
- Commenting
- Image Exporting

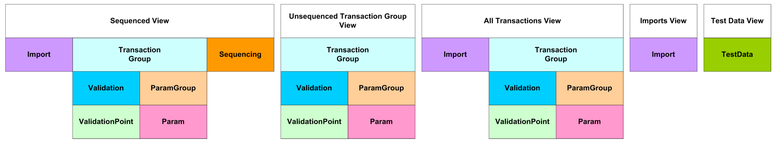
Test Data Editing
- XML Text Editor
- Automatic Document Validation

Auto-Saving
- Crash-Recovery

Command Undo/Redo
- Configurable Queue

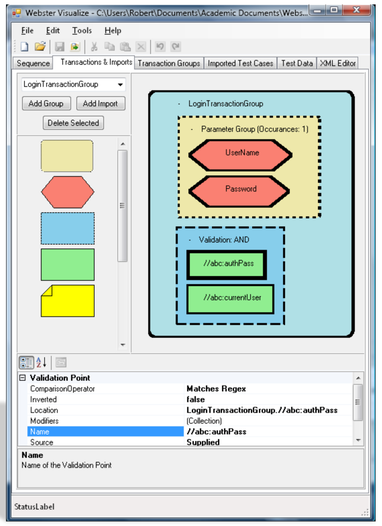
Miscellaneous
- Document Management
- Test Case Flow Readout





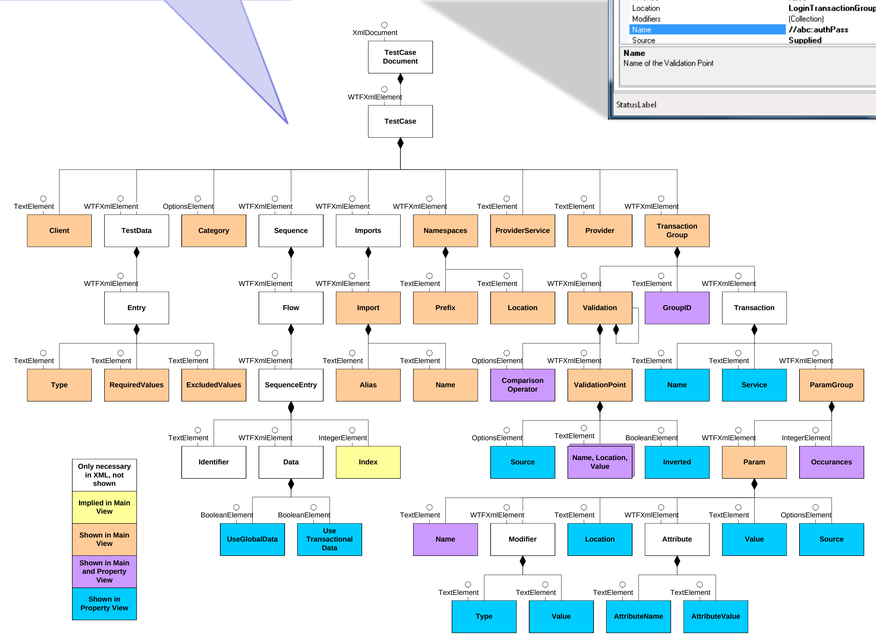
Interface

```
    <wtf:sequenceEntry>
      <wtf:index>5</wtf:index>
      <wtf:identifier>LogoutTransactionGroup</wtf:identifier
      <wtf:data>
        <wtf:useGlobalData>true</wtf:useGlobalData>
      </wtf:data>
    </wtf:sequenceEntry>
  </wtf:flow>
</wtf:sequence>
<wtf:transactionGroup>
  <wtf:transaction>
    <wtf:name>Login Transaction</wtf:name>
    <wtf:service>UserAuthService</wtf:service>
    <wtf:paramGroup>
      <wtf:param>
        <wtf:name>User Name</wtf:name>
        <wtf:location>//abc:userName</wtf:location>
        <wtf:source>Supplied</wtf:source>
        <wtf:value>student</wtf:value>
      </wtf:param>
      <wtf:param>
        <wtf:name>Password</wtf:name>
        <wtf:location>//abc:password</wtf:location>
        <wtf:source>Supplied</wtf:source>
        <wtf:value>@cc3ssIT</wtf:value>
      </wtf:param>
      <wtf:occurences>1</wtf:occurences>
    </wtf:paramGroup>
  </wtf:transaction>
  <wtf:groupID>LoginTransactionGroup</wtf:groupID>
  <wtf:validation>
    <wtf:validationPoint>
      <wtf:name>//abc:authPass</wtf:name>
      <wtf:location>LoginTransactionGroup.//abc:authPass</wtf:location>
```



XML Schema Definition

A tree structure diagram of the schema used to validate all test case documents handled by Webster Visualize. Not every element is displayed to the user in the graphical test case



Technology

From the Sponsor:
- XML
- XML Schema Definition

Implementation:
- C# Programming Language
- Microsoft .NET 2.0 Framework
- GDI+

Support:
- Bugzilla
- Nunit
- TortoiseCVS

Future Work

Test Suite Editor

Similar test cases need to be grouped into test suites so they can be run simultaneously. The Test Suite Editor will provide a graphical interface for this purpose.

Database Interaction

Webster Visualize will interface directly with the Sponsor's databases for storing and retrieving test case documents.

Direct Integration with Webster Testing Framework

Any valid test case or test suite will be run through the Webster Testing Framework directly from the Webster Visualize application.

Graphical Debugging

With help from the Webster Testing Framework XML Parser, a user will be able to step through a test case and watch it run through the sequence view.

Anticipated Schema Changes

Webster Visualize is implemented in such a way that any future changes to the XML Schema Definition can easily be introduced to the application.