

Assessment Evaluation

For GMoDS Visualizer and Test Driver

Version 1.0

Submitted in partial fulfillment of the requirements of the degree of MSE

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1 Introduction

This document presents the results of testing the GMoDS Visualizer and Test Driver components.

1.1 References

1. “Test Plan 2.0” available at <http://people.cis.ksu.edu/~mfraka/FrakaMSE.html>.

2 Test Case Result Summary

Table 1 Test Case Result Summary

| Test Case ID | Test Case Title | Tested Features | Results |
|--------------|-------------------------------|---|---------|
| TC.GTD-1 | Load Event Script | TF.GTD-1.1 TF.GTD-1.2 TF.GTD-1.2.1 TF.GTD-1.2.2 TF.GTD-1.2.3 | Pass |
| TC.GTD-2 | Event Script Operation | TF.GTD-1.5 TF.GTD-1.6 TF.GTD-1.6.1 TF.GTD-1.6.2 TF.GTD-1.6.3 TF.GTD-1.6.4 TF.GV-3.1 TF.GV-3.2 TF.GV-3.3 | Pass |
| TC.GTD-3 | Random Event Script Operation | TF.GTD-2.1.2 TF.GTD-2.1.3 TF.GTD-2.1.4 TF.GTD-2.2 TF.GTD-2.3 TF.GV-3.1 TF.GV-3.2 TF.GV-3.3 | Pass |
| TC.GTD-4 | Save Event Script | TF.GTD-2.3 TF.GTD-3.1 TF.GTD-3.2 TF.GTD-3.2.1 TF.GTD-3.2.2 | Pass |

| Test Case ID | Test Case Title | Tested Features | Results |
|--------------|---|---|---------|
| TC.GV-1 | Display Specification Tree | TF.GV-1.1 TF.GV-1.2 TF.GV-1.3 TF.GV-1.4 TF.GV-1.5 TF.GV-1.6 TF.GV-1.7 TF.GV-1.8 TF.GV-1.9 TF.GV-1.10 TF.GV-1.11 TF.GV-1.12 TF.GV-1.13 | Pass |
| TC.GV-2 | Display Instance Tree | TF.GV-2.1 TF.GV-2.2 TF.GV-2.3 TF.GV-2.4 TF.GV-2.5 TF.GV-2.6 TF.GV-2.7 TF.GV-2.8 | Pass |
| TC.GV-3 | Zooming | TF.GV-1.14 TF.GV-2.9 | Pass |
| TC.GV-4 | Show/Hide Instance Goals of Specific Types | TF.GV-2.10 | Pass |
| TC.GV-5 | Show/Hide All Specification Goal Parameters | TF.GV-4.1 | Pass |
| TC.GV-6 | Show/Hide All Instance Goal Parameters | TF.GV-5.1 | Pass |
| TC.GV-7 | Show/Hide Specific Instance Goal Parameters | TF.GV-6.1 | Pass |
| TC.GV-8 | Collapse/Expand Instance Goal Sub-tree | TF.GV-7.1 TF.GV-7.2 TF.GV-7.3 | Pass |
| TC.GV-9 | Change Instance Goal State Colors | TF.GV-3.3 | Pass |

3 Test Case Result Details

Table 2 Test Case Result Details

| Date | Test Case | Manual or Simulation | Input Set | Status | Reasons For Failure | Action to Resolve |
|----------|-----------|----------------------|-----------|--------|---------------------|-------------------|
| 3/9/2011 | TC.GTD-1 | M | 1 | PASS | | |
| | TC.GTD-1 | M | 2 | PASS | | |
| | TC.GTD-1 | M | 3 | PASS | | |
| | TC.GTD-1 | M | 4 | PASS | | |
| | TC.GTD-1 | M | 5 | PASS | | |
| | TC.GTD-1 | M | 6 | PASS | | |
| | TC.GTD-1 | M | 7 | PASS | | |
| | TC.GTD-2 | M | 1 | PASS | | |

| Date | Test Case | Manual or Simulation | Input Set | Status | Reasons For Failure | Action to Resolve |
|-----------|-----------|----------------------|-----------|--------|---|---|
| | TC.GTD-2 | M | 2 | FAIL | Uncaught IllegalGoalEventException during play | Deferred Exceptions/Add Throw and Catches |
| | TC.GTD-2 | M | 2 | PASS | | |
| | TC.GTD-2 | M | 3 | PASS | | |
| | TC.GTD-2 | M | 4 | PASS | | |
| | TC.GTD-3 | M | 0 | PASS | | |
| | TC.GTD-4 | M | 1 | PASS | | |
| | TC.GTD-4 | M | 2 | PASS | | |
| | TC.GTD-4 | M | 3 | PASS | | |
| | TC.GTD-4 | M | 4 | PASS | | |
| | TC.GTD-4 | M | 5 | PASS | | |
| | TC.GTD-4 | M | 6 | PASS | | |
| 3/10/2011 | TC.GV-1 | M | 1 | FAIL | Rightmost specification goal cutoff in drawing | Add margins to the image on the right and bottom. |
| | TC.GV-1 | M | 1 | PASS | | |
| | TC.GV-1 | M | 2 | PASS | | |
| | TC.GV-1 | M | 3 | PASS | | |
| | TC.GV-2 | M | 1 | PASS | | |
| | TC.GV-2 | M | 2 | PASS | | |
| | TC.GV-2 | M | 3 | PASS | | |
| | TC.GV-3 | M | 1 | FAIL | Specification tree right/bottom cutoff when zoomed in | Set preferred size and revalidate after zoom. |
| | TC.GV-3 | M | 1 | PASS | | |
| | TC.GV-4 | M | 1 | PASS | | |
| | TC.GV-5 | M | 1 | FAIL | Specification tree relation parameters not hidden | Add flag to prevent drawing parameters. |
| | TC.GV-6 | M | 1 | PASS | | |
| | TC.GV-7 | M | 1 | PASS | | |
| | TC.GV-8 | M | 1 | PASS | | |
| | TC.GV-9 | M | 1 | PASS | | |
| 3/11/2011 | TC.GV-1 | S | 0 | PASS | | |
| | TC.GV-2 | S | 0 | PASS | | |
| | TC.GV-5 | S | 0 | FAIL | Specification tree relation parameters not hidden | Add flag to prevent drawing parameters. |
| | TC.GV-5 | M | 1 | PASS | | |
| | TC.GV-4 | S | 0 | PASS | | |
| | TC.GV-8 | S | 0 | PASS | | |

| Date | Test Case | Manual or Simulation | Input Set | Status | Reasons For Failure | Action to Resolve |
|-----------|-----------|----------------------|-----------|--------|--|---|
| | TC.GV-3 | S | 0 | FAIL | Specification tree right cutoff when zoomed in | Set preferred size and revalidate after zoom. |
| | TC.GV-9 | S | 0 | PASS | | |
| 3/15/2011 | TC.GV-6 | S | 0 | PASS | | |
| | TC.GV-7 | S | 0 | PASS | | |

4 Problems Encountered

Table 3 Problems Encountered

| Test Case | Failure | Action to Resolve |
|---|--|---|
| TC.GTD-2 – Event Script Operation | Failed to catch an IllegalGoalEventException thrown when an invalid GoalEvent is encountered during event script play. | Deferred and accumulated IllegalGoalEventExceptions while it is unsafe to throw them. Added try/catch surrounding applicable code in the play, pause, and hasNext methods. Added throw of the cumulative IllegalGoalEventException when it becomes safe to do so. |
| TC.GV-1 – Display Specification Tree | Rightmost specification goal cutoff in drawing. | Add margins to the image on the right and bottom. |
| TC.GV-3 – Zooming | Specification tree right/bottom cutoff when zoomed in. | The content of the JScrollPane, the AbstractCanvas, resets its preferred size and then calls the method “revalidate” after a zoom. |
| TC.GV-5 - Show/Hide All Specification Goal Parameters | Specification tree trigger parameters not hidden. | Added a flag to AbstractTriggerUI to prevent drawing parameters when hidden. |

5 Summary

All manual and simulation test cases were performed as planned and passed. Therefore, the GMoDS Test Driver and Visualizer are ready for production use.