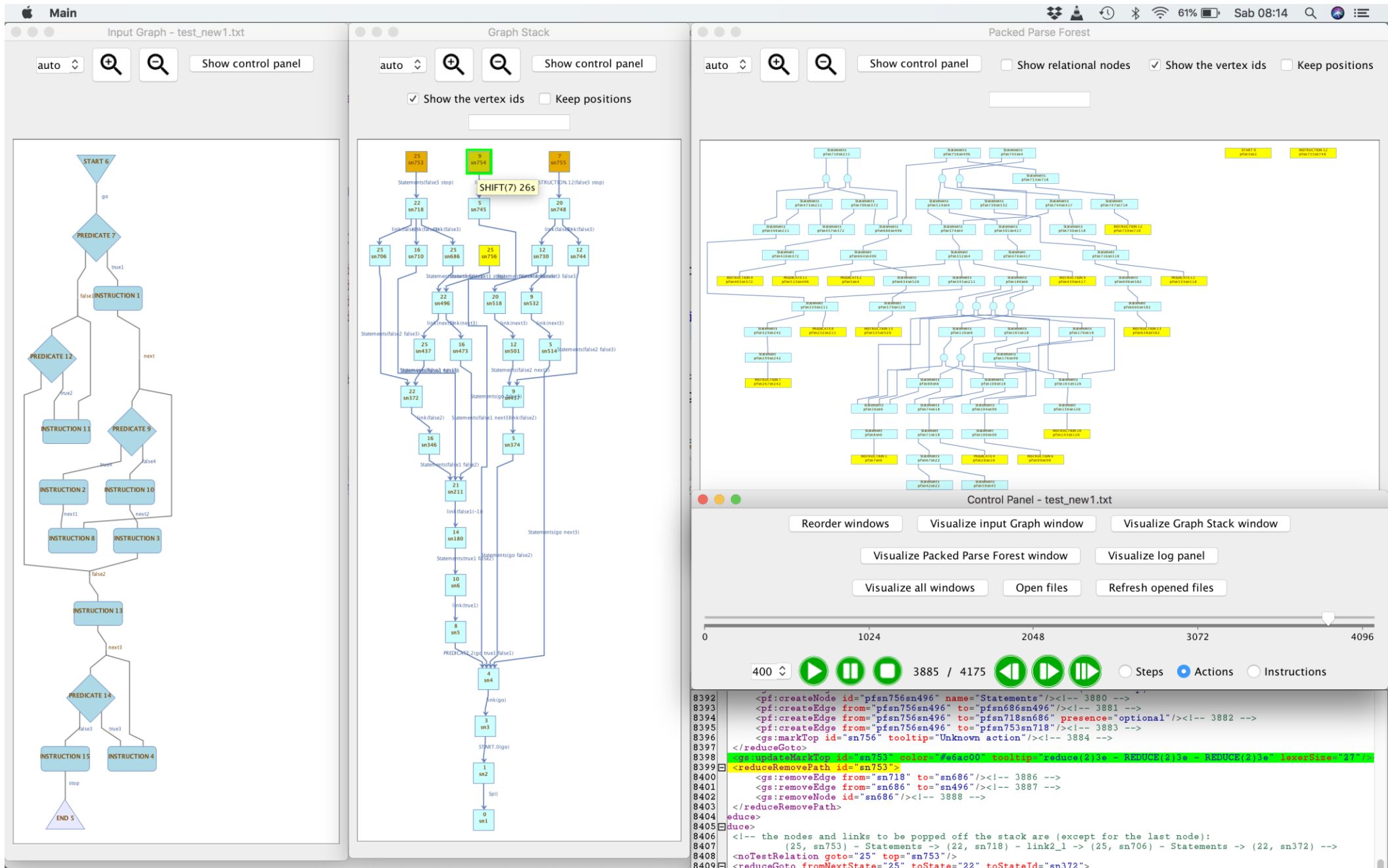


A prototypical Parser
Visualizer instance

General View



Clicking on a GSS node (highlighted elements are in green)

The image displays three panels illustrating the execution of a program, likely a compiler or interpreter, showing the state of the input graph, the graph stack, and the packed parse forest.

Main Panel (Input Graph - test_new1.txt): Shows a control flow graph (CFG) with nodes labeled START 6, PREDICATE 7, INSTRUCTION 1, PREDICATE 10, INSTRUCTION 11, PREDICATE 9, INSTRUCTION 2, INSTRUCTION 10, INSTRUCTION 8, INSTRUCTION 3, INSTRUCTION 13, PREDICATE 14, INSTRUCTION 15, INSTRUCTION 4, and END 5. The graph is rendered with green highlights on certain nodes and edges.

Graph Stack Panel: Shows a stack of graph nodes and edges, including nodes like sn753, sn754, sn755, sn756, sn757, sn758, sn759, sn760, sn761, sn762, sn763, sn764, sn765, sn766, sn767, sn768, sn769, sn770, sn771, sn772, sn773, sn774, sn775, sn776, sn777, sn778, sn779, sn780, sn781, sn782, sn783, sn784, sn785, sn786, sn787, sn788, sn789, sn790, sn791, sn792, sn793, sn794, sn795, sn796, sn797, sn798, sn799, sn800, sn801, sn802, sn803, sn804, sn805, sn806, sn807, sn808, sn809, sn810, sn811, sn812, sn813, sn814, sn815, sn816, sn817, sn818, sn819, sn820, sn821, sn822, sn823, sn824, sn825, sn826, sn827, sn828, sn829, sn830, sn831, sn832, sn833, sn834, sn835, sn836, sn837, sn838, sn839, sn840, sn841, sn842, sn843, sn844, sn845, sn846, sn847, sn848, sn849, sn850, sn851, sn852, sn853, sn854, sn855, sn856, sn857, sn858, sn859, sn860, sn861, sn862, sn863, sn864, sn865, sn866, sn867, sn868, sn869, sn870, sn871, sn872, sn873, sn874, sn875, sn876, sn877, sn878, sn879, sn880, sn881, sn882, sn883, sn884, sn885, sn886, sn887, sn888, sn889, sn890, sn891, sn892, sn893, sn894, sn895, sn896, sn897, sn898, sn899, sn900, sn901, sn902, sn903, sn904, sn905, sn906, sn907, sn908, sn909, sn910, sn911, sn912, sn913, sn914, sn915, sn916, sn917, sn918, sn919, sn920, sn921, sn922, sn923, sn924, sn925, sn926, sn927, sn928, sn929, sn930, sn931, sn932, sn933, sn934, sn935, sn936, sn937, sn938, sn939, sn940, sn941, sn942, sn943, sn944, sn945, sn946, sn947, sn948, sn949, sn950, sn951, sn952, sn953, sn954, sn955, sn956, sn957, sn958, sn959, sn960, sn961, sn962, sn963, sn964, sn965, sn966, sn967, sn968, sn969, sn970, sn971, sn972, sn973, sn974, sn975, sn976, sn977, sn978, sn979, sn980, sn981, sn982, sn983, sn984, sn985, sn986, sn987, sn988, sn989, sn990, sn991, sn992, sn993, sn994, sn995, sn996, sn997, sn998, sn999, sn1000. The stack is rendered with green highlights on certain nodes and edges.

Packed Parse Forest Panel: Shows a complex tree structure representing the parse forest, with nodes labeled with IDs like pfsn753, pfsn754, pfsn755, pfsn756, pfsn757, pfsn758, pfsn759, pfsn760, pfsn761, pfsn762, pfsn763, pfsn764, pfsn765, pfsn766, pfsn767, pfsn768, pfsn769, pfsn770, pfsn771, pfsn772, pfsn773, pfsn774, pfsn775, pfsn776, pfsn777, pfsn778, pfsn779, pfsn780, pfsn781, pfsn782, pfsn783, pfsn784, pfsn785, pfsn786, pfsn787, pfsn788, pfsn789, pfsn790, pfsn791, pfsn792, pfsn793, pfsn794, pfsn795, pfsn796, pfsn797, pfsn798, pfsn799, pfsn800, pfsn801, pfsn802, pfsn803, pfsn804, pfsn805, pfsn806, pfsn807, pfsn808, pfsn809, pfsn810, pfsn811, pfsn812, pfsn813, pfsn814, pfsn815, pfsn816, pfsn817, pfsn818, pfsn819, pfsn820, pfsn821, pfsn822, pfsn823, pfsn824, pfsn825, pfsn826, pfsn827, pfsn828, pfsn829, pfsn830, pfsn831, pfsn832, pfsn833, pfsn834, pfsn835, pfsn836, pfsn837, pfsn838, pfsn839, pfsn840, pfsn841, pfsn842, pfsn843, pfsn844, pfsn845, pfsn846, pfsn847, pfsn848, pfsn849, pfsn850, pfsn851, pfsn852, pfsn853, pfsn854, pfsn855, pfsn856, pfsn857, pfsn858, pfsn859, pfsn860, pfsn861, pfsn862, pfsn863, pfsn864, pfsn865, pfsn866, pfsn867, pfsn868, pfsn869, pfsn870, pfsn871, pfsn872, pfsn873, pfsn874, pfsn875, pfsn876, pfsn877, pfsn878, pfsn879, pfsn880, pfsn881, pfsn882, pfsn883, pfsn884, pfsn885, pfsn886, pfsn887, pfsn888, pfsn889, pfsn890, pfsn891, pfsn892, pfsn893, pfsn894, pfsn895, pfsn896, pfsn897, pfsn898, pfsn899, pfsn900, pfsn901, pfsn902, pfsn903, pfsn904, pfsn905, pfsn906, pfsn907, pfsn908, pfsn909, pfsn910, pfsn911, pfsn912, pfsn913, pfsn914, pfsn915, pfsn916, pfsn917, pfsn918, pfsn919, pfsn920, pfsn921, pfsn922, pfsn923, pfsn924, pfsn925, pfsn926, pfsn927, pfsn928, pfsn929, pfsn930, pfsn931, pfsn932, pfsn933, pfsn934, pfsn935, pfsn936, pfsn937, pfsn938, pfsn939, pfsn940, pfsn941, pfsn942, pfsn943, pfsn944, pfsn945, pfsn946, pfsn947, pfsn948, pfsn949, pfsn950, pfsn951, pfsn952, pfsn953, pfsn954, pfsn955, pfsn956, pfsn957, pfsn958, pfsn959, pfsn960, pfsn961, pfsn962, pfsn963, pfsn964, pfsn965, pfsn966, pfsn967, pfsn968, pfsn969, pfsn970, pfsn971, pfsn972, pfsn973, pfsn974, pfsn975, pfsn976, pfsn977, pfsn978, pfsn979, pfsn980, pfsn981, pfsn982, pfsn983, pfsn984, pfsn985, pfsn986, pfsn987, pfsn988, pfsn989, pfsn990, pfsn991, pfsn992, pfsn993, pfsn994, pfsn995, pfsn996, pfsn997, pfsn998, pfsn999, p1000. The forest is rendered with green highlights on certain nodes and edges.

Visualization and Controls: The bottom panel includes a timeline slider (0 to 4096) and a list of actions (Steps, Actions, Instructions) with corresponding play/pause buttons. The timeline shows the current execution state, with the current instruction being 3885 / 4175.

Code Snippets: The bottom right panel displays code snippets related to the execution, including instructions like `<pi:removePNode nodeId= pfsn510sn438 />`, `<gs:stackFailure>`, and `<reduce>` blocks, which are rendered with green highlights.

Clicking on a GSS edge

Input Graph - test_new1.txt

Graph Stack

Packed Parse Forest

Visualize all windows Open files Refresh opened files

0 1024 2048 3072 4096

400 3885 / 4175 Steps Actions Instructions

```
8380 <pi:removePNode nodeId= pfsn510sn438 /><!-- 3874 -->
8381 <pi:removePNode nodeId= pfsn510sn438 /><!-- 3875 -->
8382 <pi:removePNode nodeId= pfsn497sn438 /><!-- 3876 -->
8383 <gs:removeNode id="sn526"/><!-- 3877 -->
8384 </gs:stackFailure>
8385 <reduce>
8386 <!-- the nodes and links to be popped off the stack are (except for the last node):
8387 (25, sn753) - Statements -> (22, sn718) - link2_1 -> (25, sn686) - Statements -> (22, sn496
8388 <noTestRelation goto="25" top="sn753"/>
8389 <reduceGoto fromNextState="25" toState="22" toStateId="sn496">
8390 <gs:createNode id="sn756" name="25" currentToken="12" visitedTokens="0 1 2 3 4 5 6 7 8 9 10 11 1
8391 <gs:createEdge from="sn756" to="sn496" label="Statements(next3 stop)"/><!-- 3879 -->
8392 <pi:createNode id="pfsn756sn496" name="Statements"/><!-- 3880 -->
8393 <pi:createEdge from="pfsn756sn496" to="pfsn686sn496"/><!-- 3881 -->
8394 <pi:createEdge from="pfsn756sn496" to="pfsn718sn686" presence="optional"/><!-- 3882 -->
8395 <pi:createEdge from="pfsn756sn496" to="pfsn753sn718"/><!-- 3883 -->
8396 <gs:markTop id="sn756" tooltip="Unknown action"/><!-- 3884 -->
8397 </reduceGoto>
```

Clicking on a Parse Forest Node

Input Graph - test_new1.txt

auto Show control panel

Graph Stack

auto Show control panel

☒ Show the vertex ids ☐ Keep positions

Packed Parse Forest

auto Show control panel ☐ Show relational nodes ☒ Show the vertex ids ☐ Keep positions

Visualize all windows Open files Refresh opened files

0 1024 2048 3072 4096

400 3885 / 4175 ☐ Steps ☒ Actions ☐ Instructions

```
8392 <pf:createNode id="pfen756sn496" name="Statements"/><!-- 3880 -->
8393 <pf:createEdge from="pfen756sn496" to="pfen686sn496"/><!-- 3881 -->
8394 <pf:createEdge from="pfen756sn496" to="pfen718sn686" presence="optional"/><!-- 3882 -->
8395 <pf:createEdge from="pfen756sn496" to="pfen753sn718"/><!-- 3883 -->
8396 <gs:markTop id="sn756" tooltip="Unknown action"/><!-- 3884 -->
8397 </reduceGoto>
8398 <gs:updateMarkTop id="sn753" rules="pfen00" tooltip="reduce(210w - reduce(215w - reduce(223w - lower(23w - 21)
8399 <reduceRemovePath id="sn753">
8400 <gs:removeEdge from="sn718" to="sn686"/><!-- 3886 -->
8401 <gs:removeEdge from="sn686" to="sn496"/><!-- 3887 -->
8402 <gs:removeNode id="sn686"/><!-- 3888 -->
8403 </reduceRemovePath>
8404 <duce>
8405 <!-- the nodes and links to be popped off the stack are (except for the last node):
8406 (25, sn753) - Statements -> (22, sn718) - link2_1 -> (25, sn706) - Statements -> (22, sn372) -->
8407 <noTestRelation goto="25" top="sn753"/>
8408 <reduceGoto fromNextState="25" toStateId="sn372">
```