

Visual Soar

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[Feedback](#)

There are no perceivable errors in C:\utempt\soar\TankSoar25\agents\my-tank\wander\turn.soar

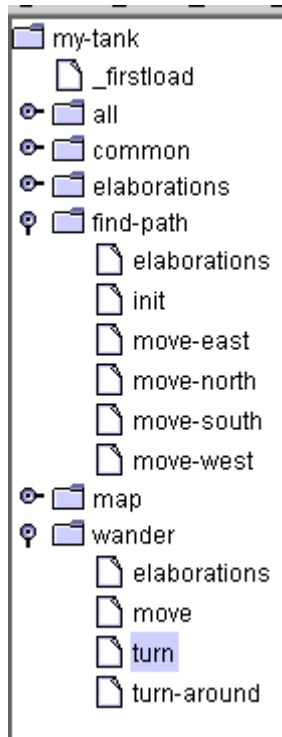
Motivation

- It is too easy to make mistakes writing Soar programs.
 - Spelling errors on attributes and values
 - Attributes on wrong objects
- It is too slow to write Soar programs.
 - Creating operator hierarchies is cumbersome

Basic Design

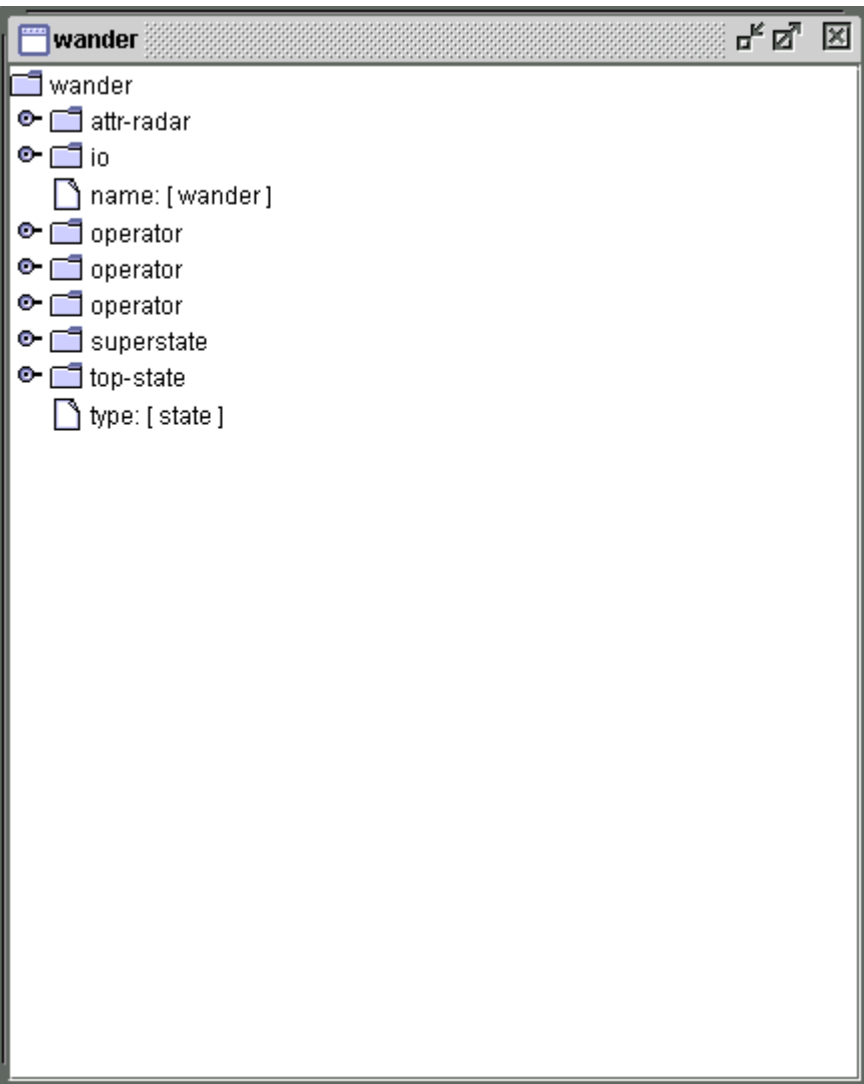
- Editor inspired by Visual C++, TAQL, ViSoar
- Three editor windows
 - Operator Window
 - Direct support for task decomposition
 - DataMap
 - Add static type checking during development
 - RuleEditor
 - Text Editing Facilities

Operator Window



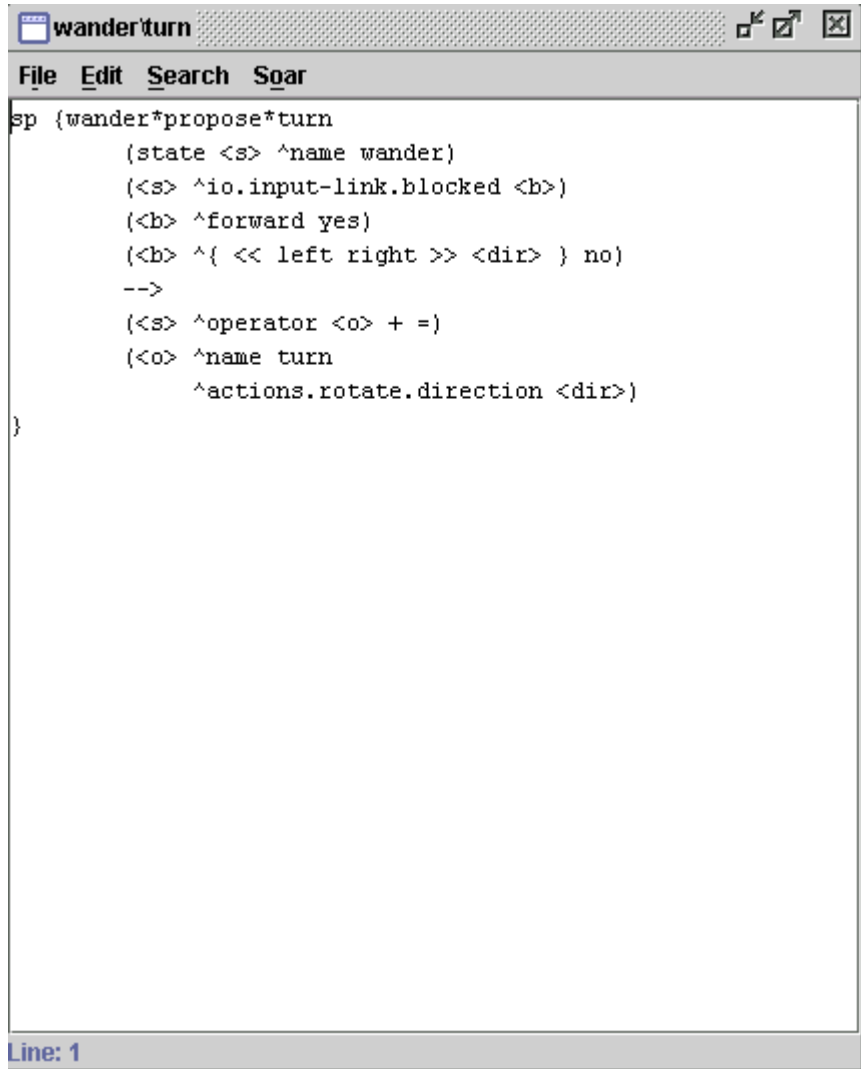
- Displays hierarchical structure of operators
 - Automatically creates underlying folders and files
- Actions to operators:
 - Add, Remove, Rename
 - Open Corresponding Rules
 - Open Corresponding DataMap

DataMap



- Displays intended structure of the current state
 - Provides access to superstate and top-state
 - Supports static type checking
- Actions in DataMap
 - Add, Remove, Link
 - Set value type and range

Rule Editor



```
sp {wander*propose*turn
  (state <s> ^name wander)
  (<s> ^io.input-link.blocked <b>)
  (<b> ^forward yes)
  (<b> ^{ << left right >> <dir> } no)
  -->
  (<s> ^operator <o> + =)
  (<o> ^name turn
    ^actions.rotate.direction <dir>)
}
```

Line: 1

- Displays operator rules
- Full text editing
- Partially filled in templates using operator information
- Syntax and semantic checks

Visual Soar: Future Plans

- More Comprehensive Static Analysis of Rules
- Tab-completion like facility
- Some Integration with the TSI, source rules from Visual Soar directly, DataMap vs. Working Memory Comparisons, Sending commands to Visual Soar through the TSI to open rule editors
- More Flexible Operator Layout (transition from tree to directed graph)

Nuggets And Coal

- Nuggets
 - Static-type checking catches many errors beforehand
 - Frees users from many banal tasks
 - Cuts down on a lot of task switching overhead
- Coal
 - Visual Soar is not a silver bullet to Soar Development
 - DataMap entry can be a clumsy process
 - Putting old agents into Visual Soar can be cumbersome