Visual Soar Development Edition

File   Search   View   Help

my-tank
    _firstload
    all
    common
    elaborations
    find-path
        elaborations
        init
        move-east
        move-north
        move-south
        move-west
    map
    wander
        elaborations
        move
        turn
        turn-around

wander

wander
    attr-radar
    io
    name:[wander]
    operator
    operator
    operator
    superstate
    top-state
    type:[state]

wander\turn

File   Edit   Search   Soar

```
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

Visual Soar

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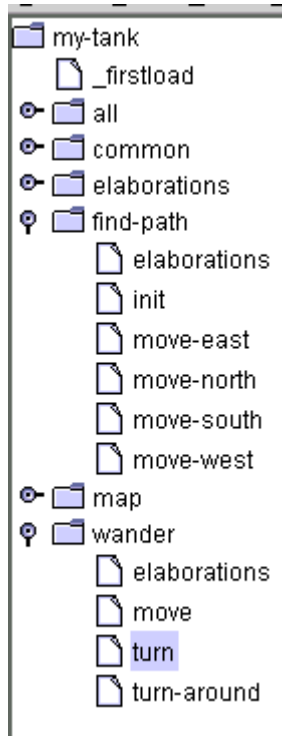
Motivation

- 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.

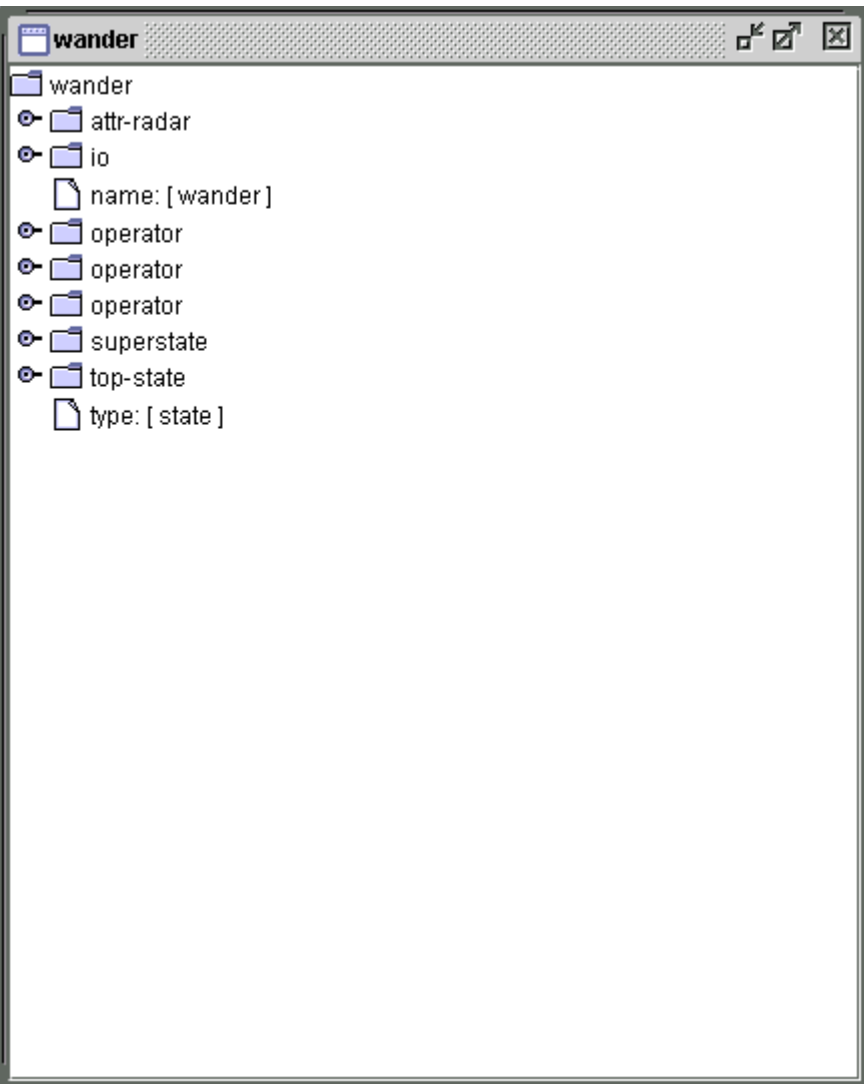 – Creating operator hierarchies is cumbersome

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
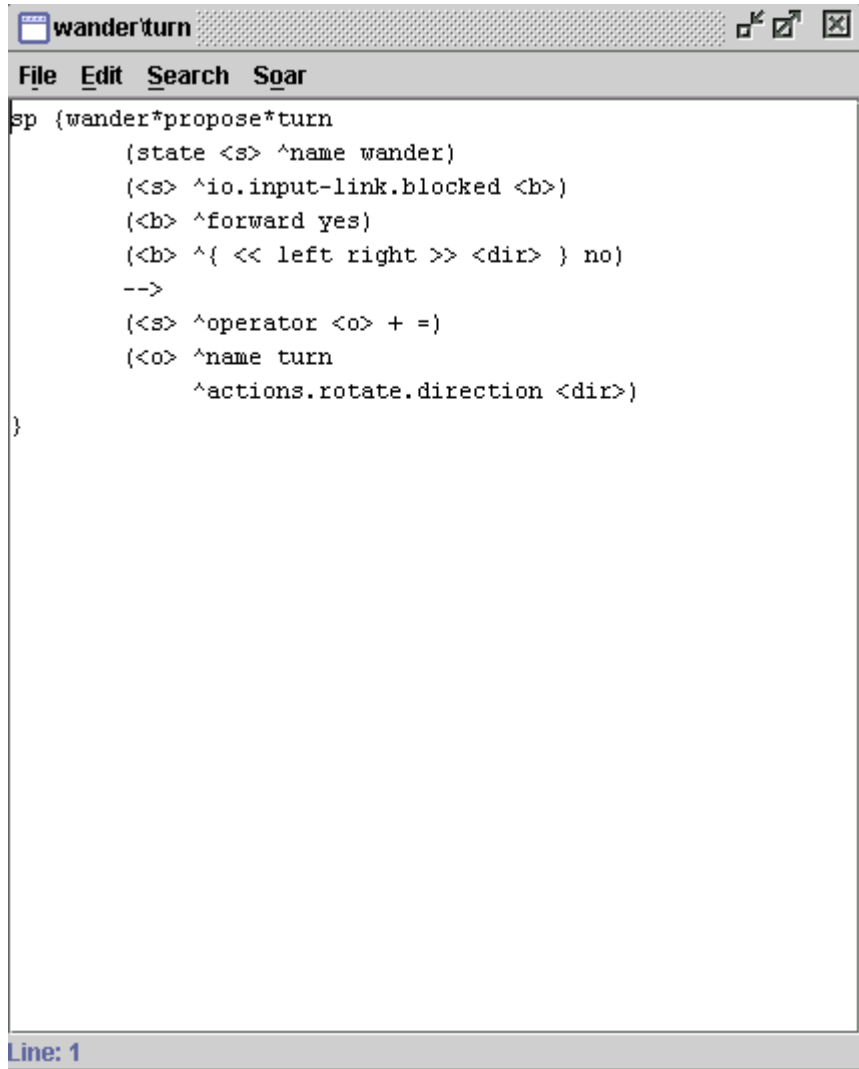   - Text Editing Facilities

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

```
wander*turn

File  Edit  Search  Soar

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
- Tab-Completion like facility
- Syntax highlighting

New Features Since Last Year

- Added a Tab-Completion like facility

- Added Syntax Highlighting

- Moved to J.R.E. 1.3 (it gives much better performance)

- Copying and Pasting multiple selections in the DataMap

Visual Soar: Future Plans (this year)

- More powerful text-editing facilities (more emacs or vim like or calling third-party editors to do editing see John Hawkins)
- A way of building sophisticated types out of simpler ones

Visual Soar: Future Plans (last year)

- More Comprehensive Static Analysis of Rules (being worked on actively by Sergej)

- Tab-completion like facility (added)

- 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 (hasn't been worked on but some support is expected)

- More Flexible Operator Layout (transition from tree to directed graph) (not as useful as initially thought)

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
  - DataMap entry can be a clumsy process (I think the type building facility could help a lot)
  - Putting old agents into Visual Soar can be cumbersome (there doesn't seem to be around this)