Visual Soar

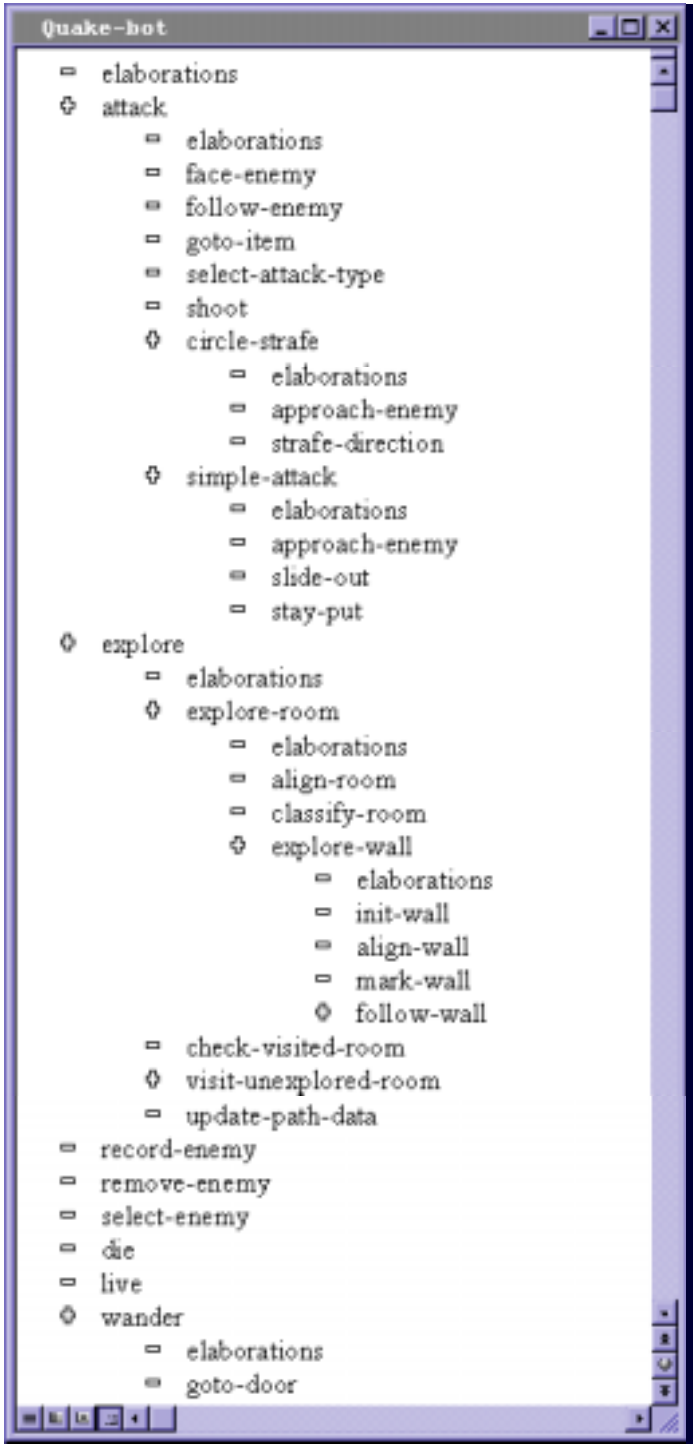
John E. Laird
University of Michigan

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
- Need improved runtime debugging support
  - Put off for second version

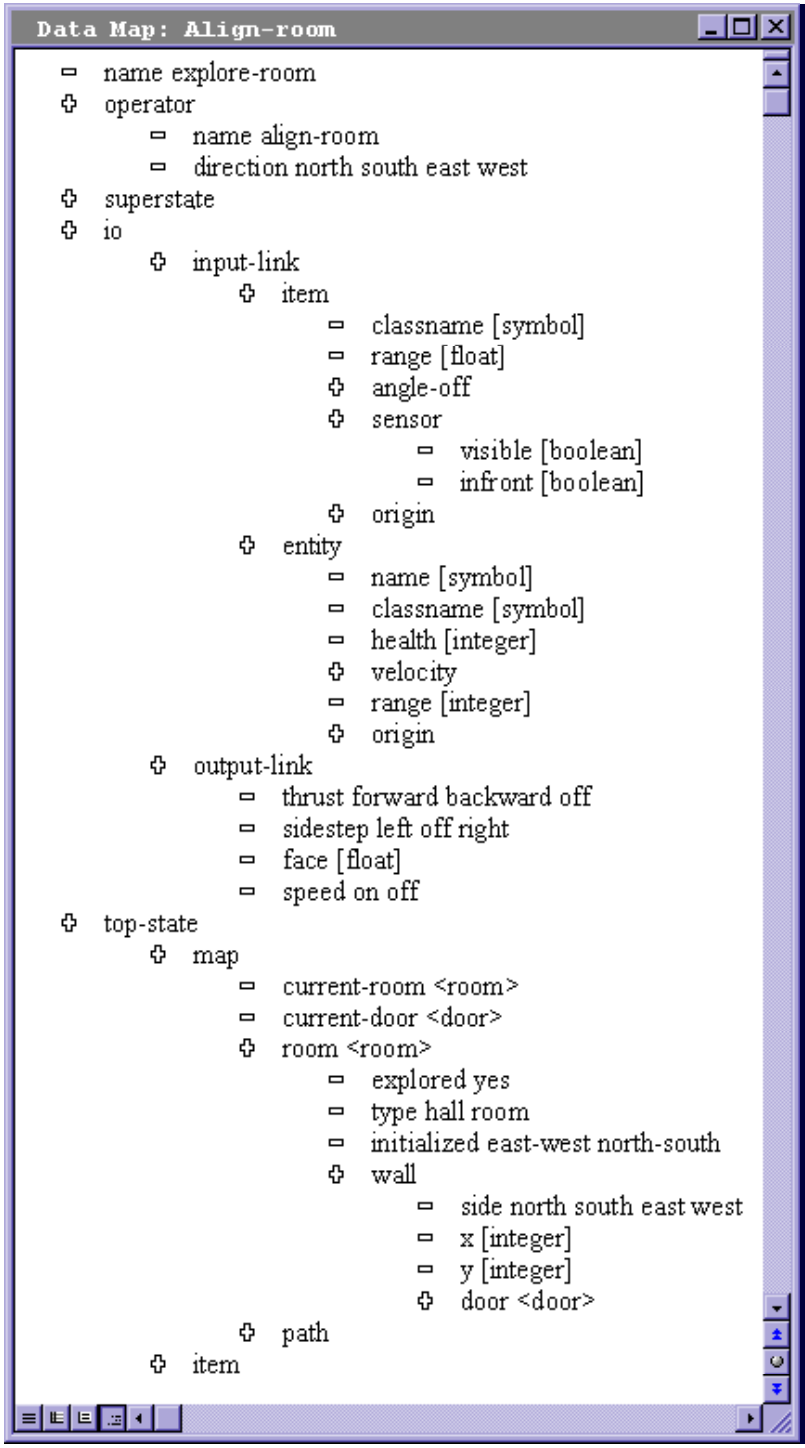
Basic Design

- Editor inspired by Visual C++, TAQL, ViSoar
- Three editor windows
  - Operator Hierarchy Editor
    - Directly support task decomposition
  - State Map Editor [multiple]
    - Add “strong” typing during development
  - Rule Editor [multiple]
    - Semi-structured



Operator Map

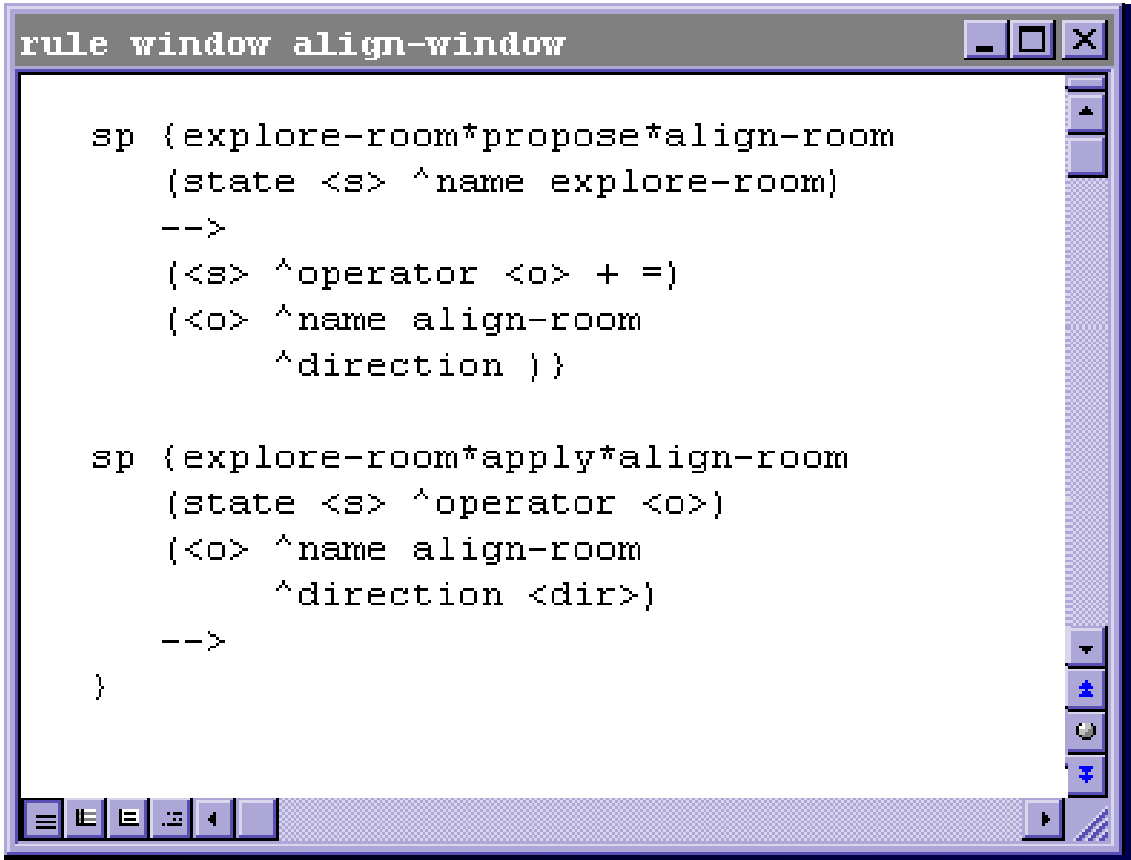
- Displays hierarchical structure of operators
  - Automatically creates underlying folders & files
- Actions to operators:
  - Add, Move, Remove, Change Name
  - Create Alias
  - Select
    - Changes view in state and rule windows



State Map

- Displays structure of current state
  - Provides access to superstate and top-state
  - Supports semantic error checking
  - Supports fast rule creation.
- Actions to states:
  - Add, Move, Remove, Change
  - Set value type and range
  - Create pointer to existing structure

Rule Map



- Displays operator rules
- Full text editing
- Partially filled in templates using operator information
- Real-time syntax and semantic checks
- Point-and-click addition of state structure

Plans

- Develop prototype editor this summer using Java
  - Use JFC for many of the components
  - Jon Bauman, Brad Jones