**Scenario name : State diagram creation**

Actors: User

Flow of events:

* User creates a start state.
* User adds additional states.
* User names states and assigns attributes and functions.
* User defines relationships between states.
* User creates end state.

Entry Conditions:

* Program has been launched

**Scenario name : State diagram editing**

Actors: User

Flow of events:

* User selects a state or relationship
* User changes state's information
* User changes state relationships
* User renames state
* User deletes a state
* User adds a state

Entry Conditions:

* A diagram exists in the editor

**Scenario name: State file creation/saving**

Actor: User

Flow of events:

* User enters path and file name.
* File is save to the specified path.

If file exists and was not the file loaded

* Ask if user wants to overwrite

If file is locked or permissions denied

* Notify user of problem
* Ask for another file name
* User returns to the workspace

Entry Conditions:

* A state diagram is open in the workspace
* User has clicked save

Exit Conditions:

* File has been saved or save is canceled

**Scenario name: Importing/loading a file**

Actor: User

Flow of events:

If editor is not empty and unsaved

* prompt to save or trash

If save

* Save state file
* User is prompted to select file to be opened.
* Current working diagram is replaced with the selected file.

Entry Conditions:

* User clicks import/load button.

Exit Conditions:

* Diagram has been imported or cancel has been clicked

**Scenario name: User saves serialized diagram.**

Actor: User

Flow of events:

* User is prompted to enter path and file name.

If file exists

* prompt to overwrite

If file is locked or permissions denied

* Notify user of problem
* prompt for different file name
* File is saved in the specified location
* User returns to workspace

Entry Condition:

* A serializable diagram is open in the editor.
* User has clicked serialize button.

Exit Condition:

* Serialized diagram has been saved or user clicks cancel

**Scenario name: User runs simulation in diagram**

Actor: User

Flow of events:

* System disables modification to the diagram.
* The diagram animates over its states.
* User can resume modification after simulation ends.

If user clicks 'terminate'

* simulation ends immediatly

Entry Condition:

* A simulatable diagram exists in the editor.
* User has clicked simulate.

Exit Condition:

* Simulation has completed
* Simulation is stuck
* Simulation has been terminated by user

**Scenario name: User runs simulation out of file**

Actor: User

Flow of events:

* System reads in file

If file is invalid, does not exist, or unreadable

* Report problem to user
* Return to editor
* System iterates through events
* System returns a list of states showing path

Entry Condition:

* Diagram exists in editor
* User has clicked simulate file

Exit Condition:

* State list has been returned
* Simulation is stuck
* User has terminated simulation