

## DESCRIPTION OF PHYSICAL MODEL

This is representation for the finite state machine of a pond ecosystem.

The genre I have chosen is modern architecture. Wood, steel and glass come together in a tectonic way, to create the building/structure. This structure can be viewed at two different scales. Viewed at a smaller scale it is a hanging mobile sculpture - to be seen upside down, with the base stuck to the ceiling. Viewed at a much larger scale it is an art gallery. The buildings (states) are where the artwork will be exhibited. The passages (transitions) lead from one exhibition area to the next. Directionality is represented by the inertia in the change of material from wood to glass when a transition leaves a state. When a transition arrives at a state it melts into the material of the state directly after it reaches it. The only input to this system is to the start state - the entrance porch.

The mapping is given here briefly. My structure does not have all these elements in it. They have been provided for ease in adaption to build an architectural representation of any finite state machine. The instance created by using this mapping will not be unique and does not have to satisfy any particular function. All that is promised is that the created instance will be aesthetic and easy to interpret as a representation of a finite state machine.

### MAPPING:

- |                       |   |
|-----------------------|---|
| <b>State</b>          | - planes parallel to the axes<br>(predominantly opaque materials - buildings)   |
| <b>Transition</b>     | - planes not parallel to the axes<br>(transparent materials - passages)<br>they change material and orientation gradually from the "from" state to the "to" state.                                |
| <b>Self loops</b>     | - planes spiralling from one part of the state to some other part of the state  |
| <b>Directionality</b> | - change in materials   |
| <b>Inputs</b>         | - obviously smaller planes<br>similar to the ones signifying the buildings but without the heavy structure <b>leading into</b> the building/passage<br>(opaque materials - small porches etc.)    |
| <b>Outputs</b>        | - obviously smaller planes<br>similar to the ones signifying the buildings but without the heavy structure <b>spilling out of</b> the building/passage<br>(opaque materials - small porches etc.) |

**MATERIALS:**

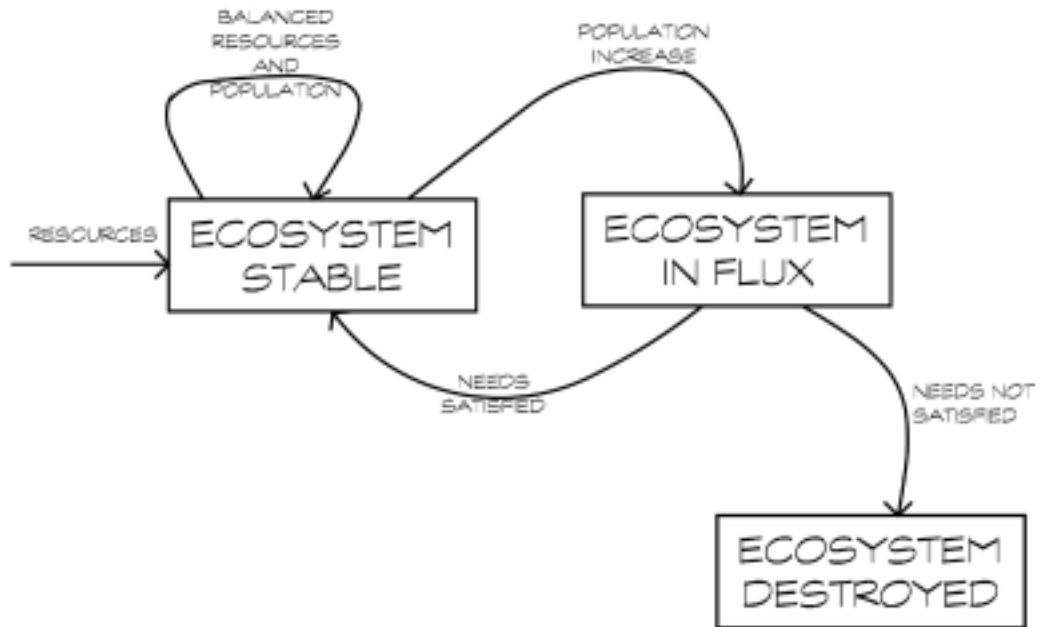
The materials that I have used are:

Chipboard

Balsa/Bass wood

Plexiglas

Aluminium wire



POND ECOSYSTEM  
FINITE STATE MACHINE