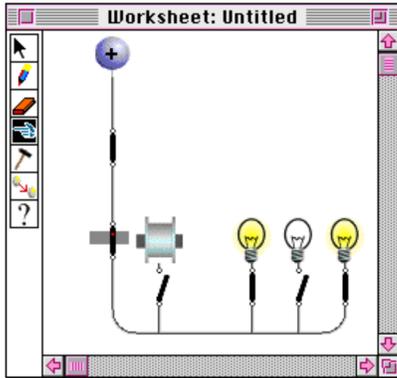


Agentsheets

Alexander Repenning (1993—)

Interacting agents are embedded and interact within cellular spaces called sheets. Agents are reactive to direct manipulation and have autonomous behavior.



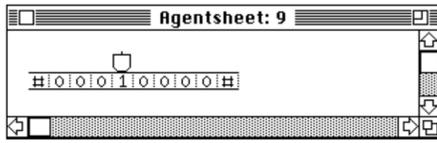
Circuit

Agent Sheets draws upon a similarly spirited broad field of paradigms: artificial life, visual programming, “programmable drawing tools,” “simulation environments”, games, cellular automata, and “spreadsheet extensions.” Repenning draws upon these shared characteristics: visual, spatial notation, dynamic, direct manipulation, and incremental agency.

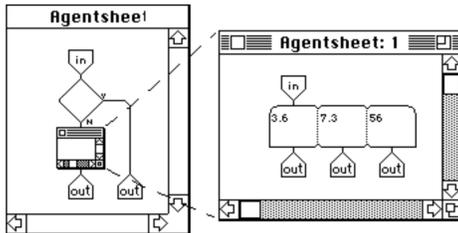
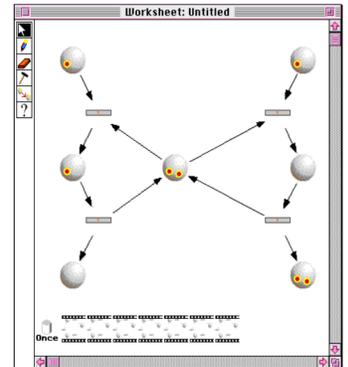
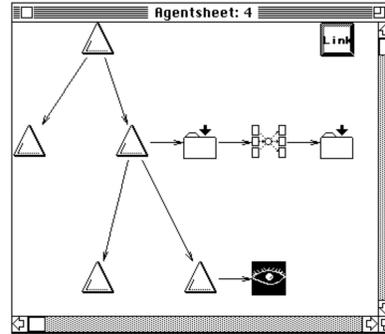
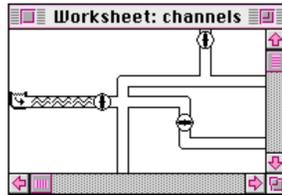
Water Flow

Flow

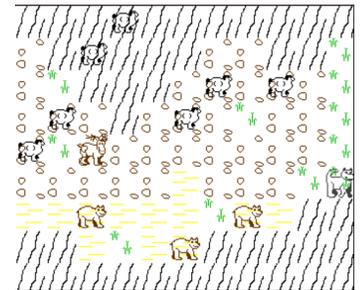
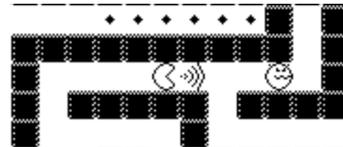
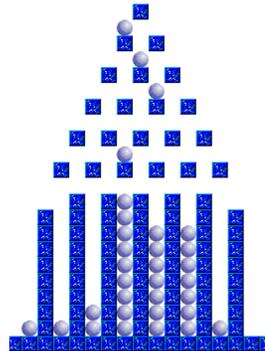
Neural net



Turing Machine

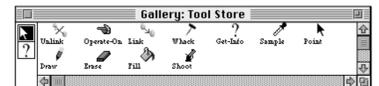


Flow-chart style programming



Highlights:

- Kits (“agencies”) describe specific domains. One effect of “layered” design is “roles”—end-users vs. scenario designers. Example domains in thesis: Turing machines, circuits, flow, traffic, programs.
- Sheet is a cellular 2d space, but agents can be stacked up in a cell.
- Incremental refinement of art, behavior, etc...
- A highly generalize idea of flow is used for things like neural nets, flow charts, water flow, circuits, system dynamic style models, and traffic.
- It also supports ecological style spatial simulations.
- User interaction and agent communication is in the same representation. i.e. Anything can do to one another everything the user can.



The basic tool palette is also a gallery, defined in simulation terms.