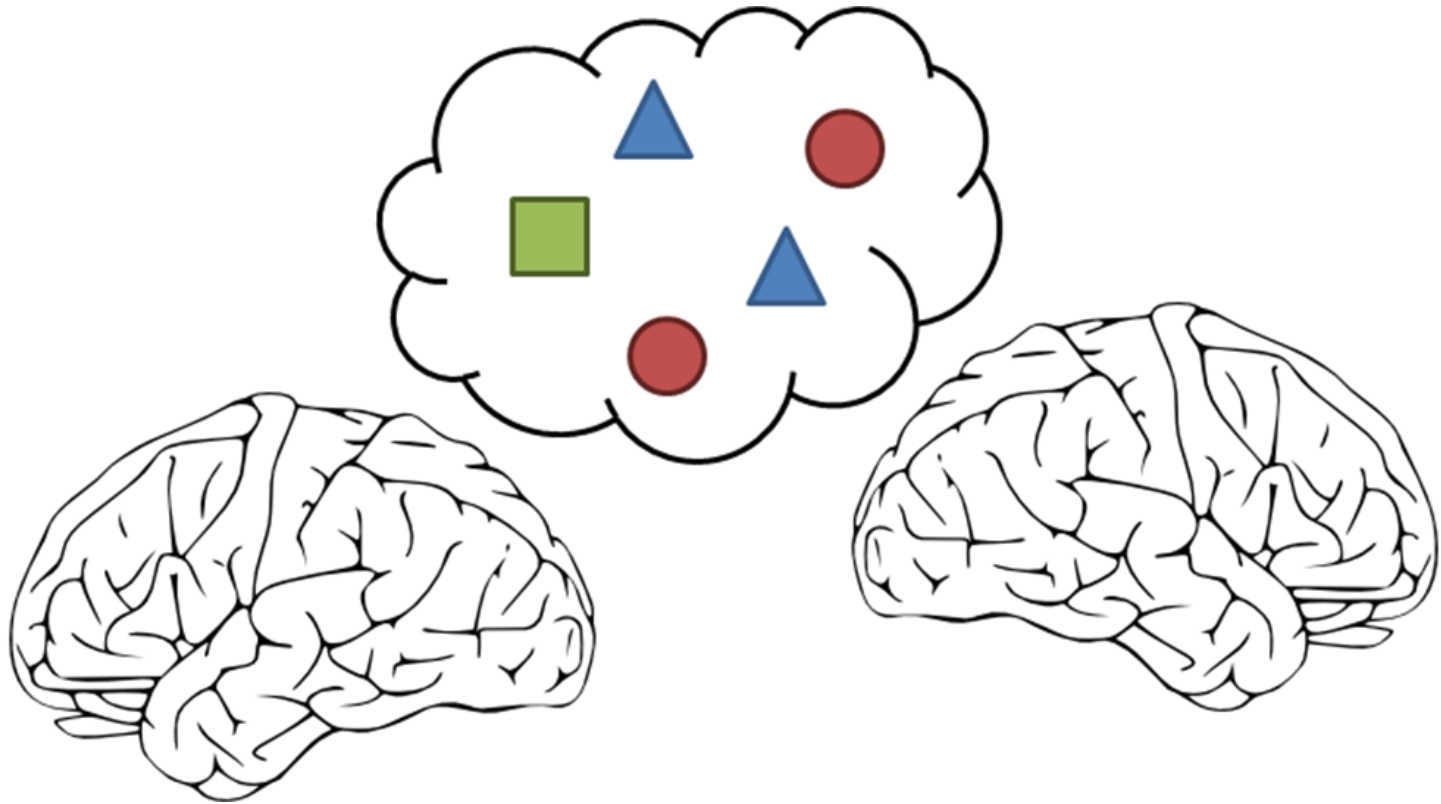


LIMBS



By Causal
Interaction

What is it? What does it do?

- LIMBS: **L**ocally **I**ntegrated **M**ulti-**B**rain **S**ystems Modeling Software
- It models people – the way they interact, make decisions, and react to information within their environment

Why?

- To provide a friendly interface for users to produce socio-cognitive models, without needing to know a programming language
- To make producing complex models easier

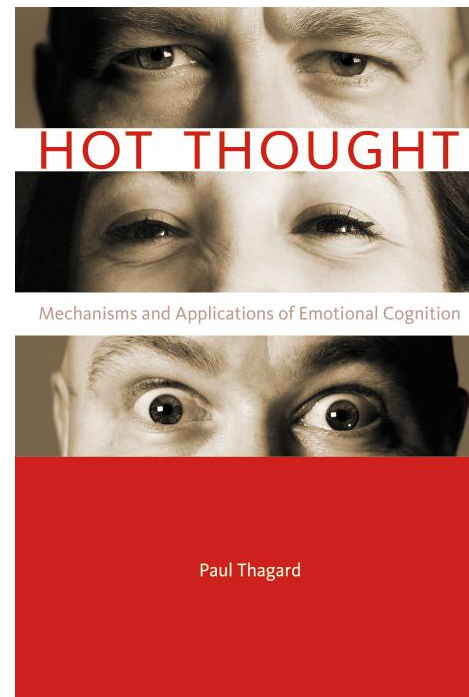
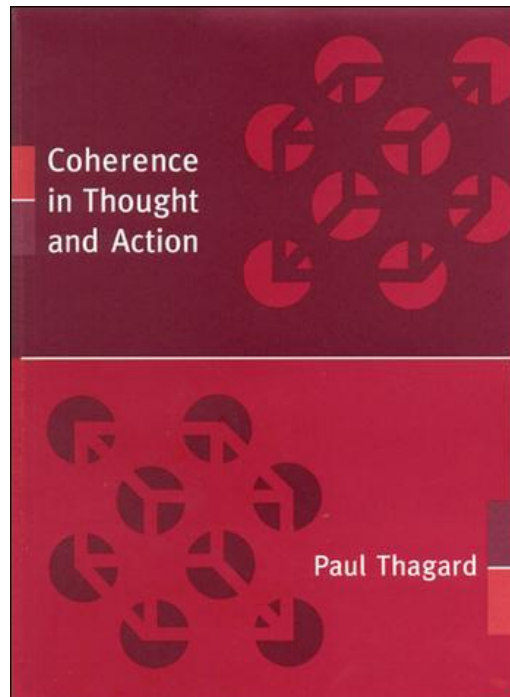


Model Structure

- Models consist of different types of components:
 - Agents
 - Propositions (Actions, Evidence, Goals)
 - Groups
 - Utilities (Event Scheduler, Poller, Logger)
- Agents communicate with other agents in their group about propositions in their group

Model Structure

- Agents based on “hot coherence” paradigm to model both cognitive and emotional decision making



Model Structure

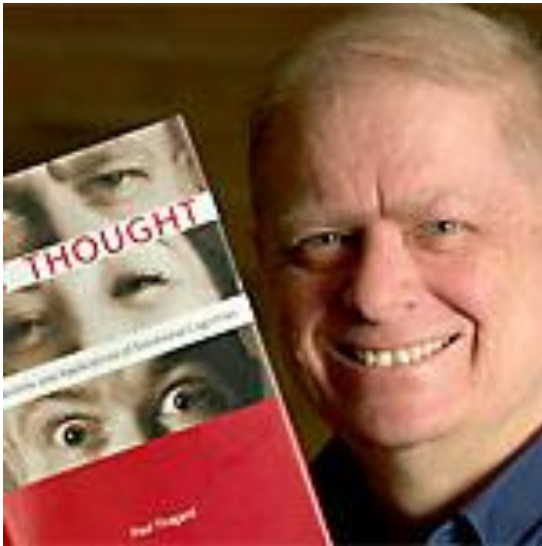
- Utilities monitor or affect the model at a specific time in the simulation
 - The Event Scheduler injects external events into the simulation
 - The Poller queries agents for their “thoughts” regarding a particular subject
 - The Logger records messages in the simulation

Technology



Design Challenges

- Accessibility to a wide range of users

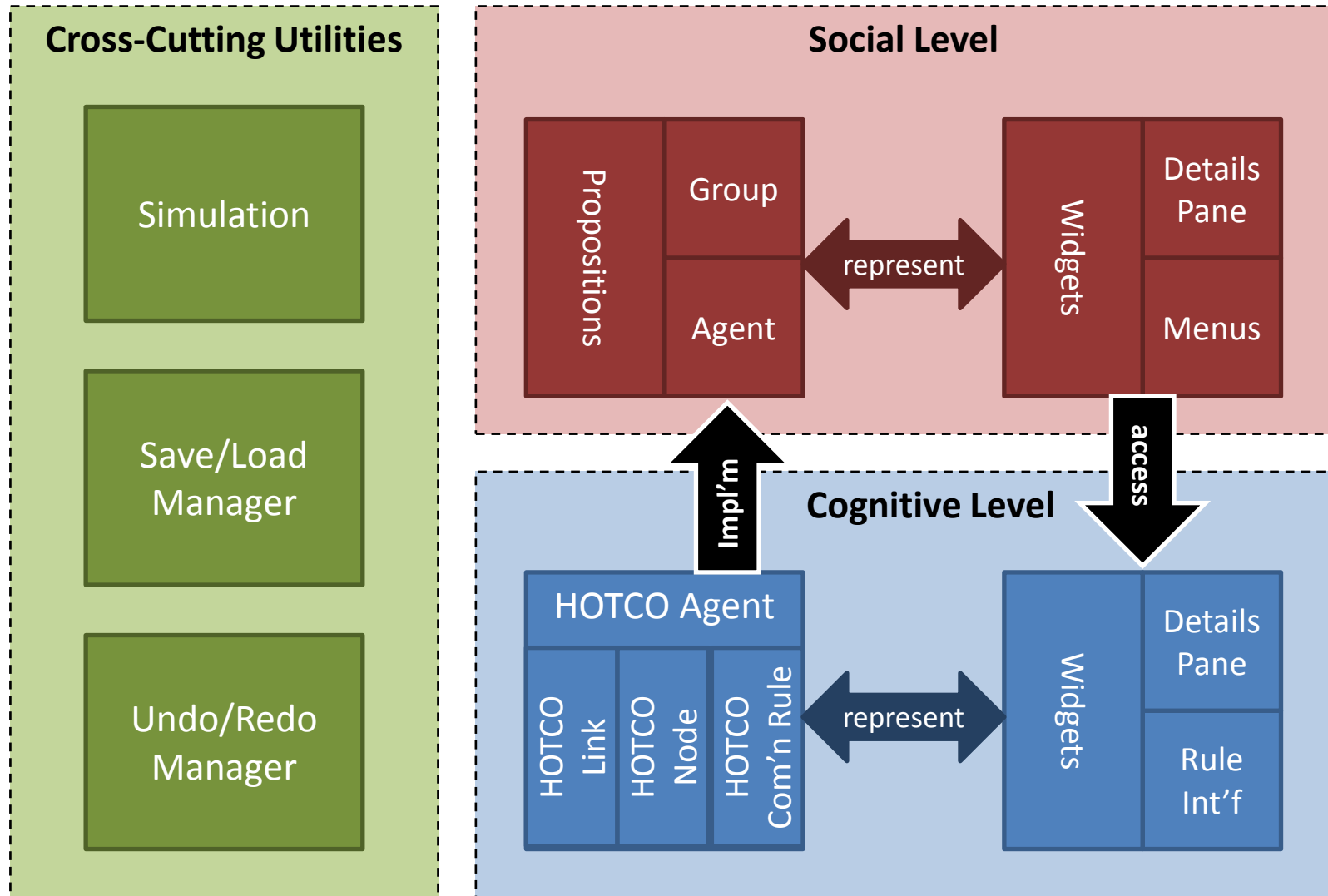


Design Challenges

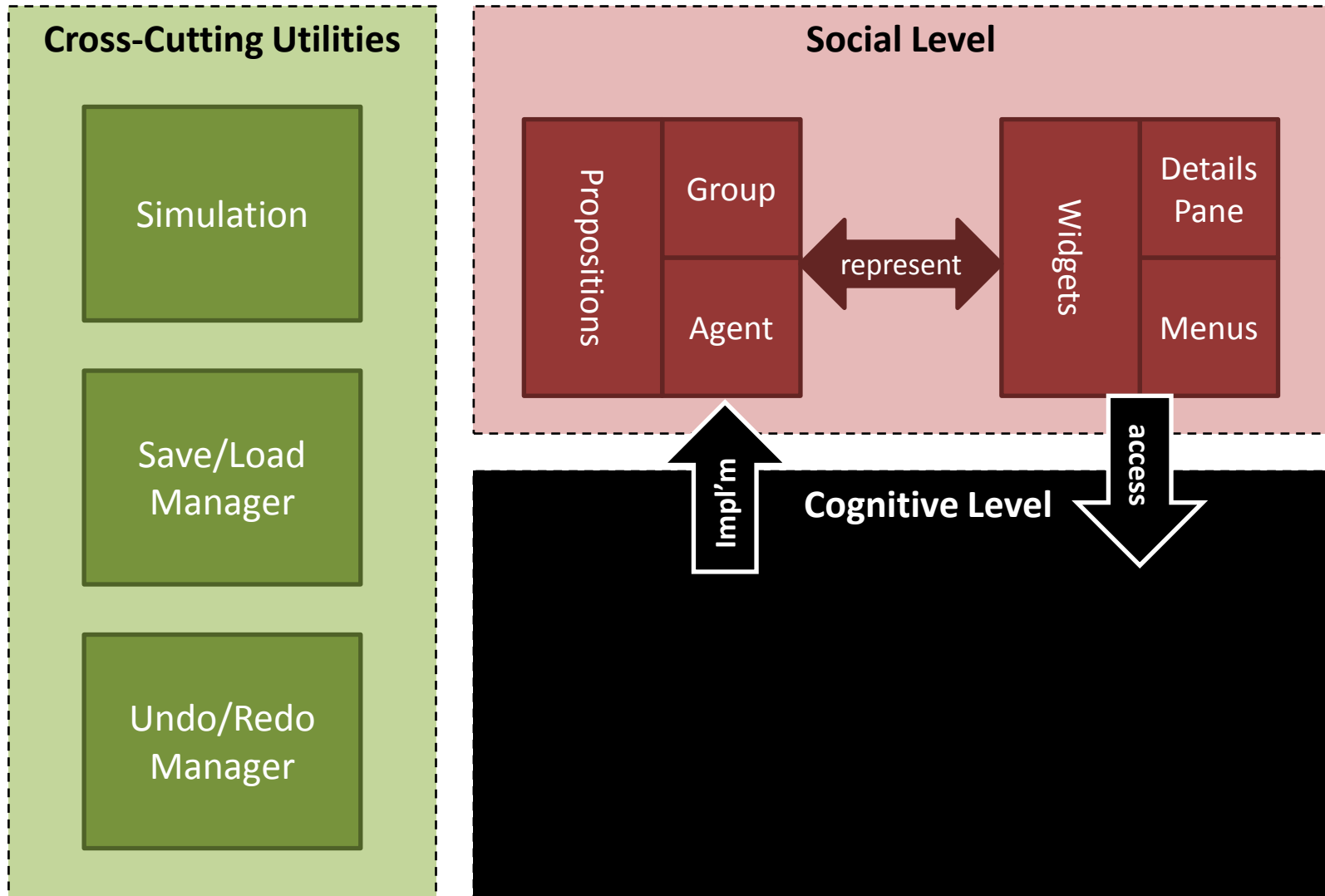
- Designing for extendibility
 - Ideally, we want future developers to be able to just plug-and-play with their components



System Structure



System Structure



Design Challenges

- Undo / redo
 - Don't know how the cognitive level handles social events
 - Swarm of commands used for easily extendibility
- Save / load
 - Interface not easily savable
 - Easily extendable structures for separation of data and interface
 - xpp3 used for saving models as XML files

More info...

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Summary

- LIMBS models people – the way they interact, make decisions, and react to information within their environment
- Stand alone Java application designed for immediate use and easy extendibility