Agent Communications

Agent Types

CPSC 662/CPSC 568
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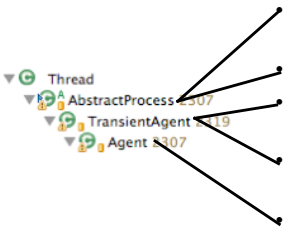
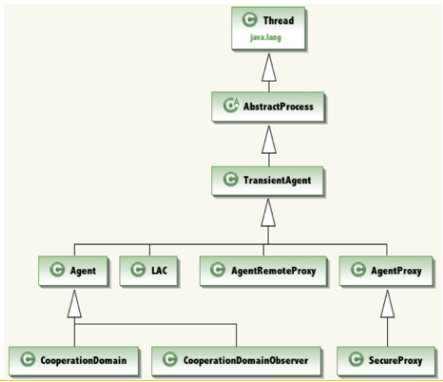
Agent Classes



- Basic Message sending and dequeueing from the event queue
- Event loop
- Semantic understanding of messages/conversations
- Processing events & social commitments
- Persistence

Top Agent Classes



AbstractProcess

- initializing the event queue, and the listener thread.
- running the eventLoopBody() method continually until signalled to exit.
- all communications functions through its sendMessage() method and related methods.

TransientAgent

- most basic “real” agent
- adds “semantics” - interrupts events using *policies*
- reads in ontology files
- reads initialization files
  - policies
  - conversation definitions
- reads in script files

Agent

- adds persistence to TransientAgent
  - note that you actually have to turn on persistence though
  - on startup, use “:persistent T” keyed parameter
  - at runtime, via “(agent.options :persistent T)” or options dialog

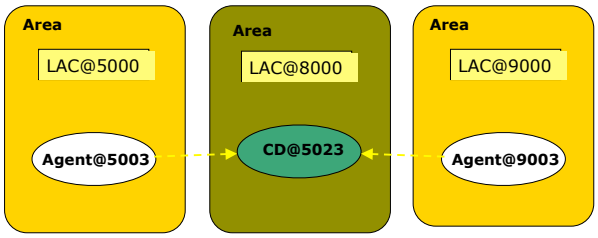
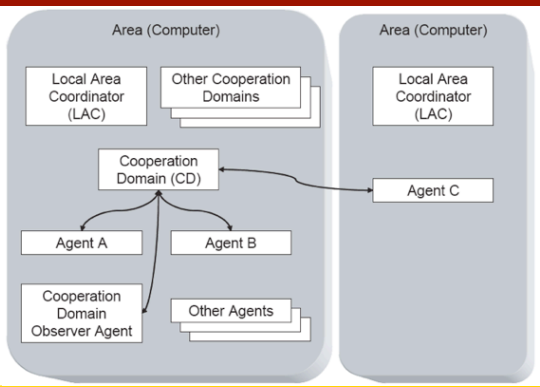
LAC

- Local Area Controller
- "boss" of an *area*
  - *area*: a computer, virtual partition of a computer, or a cluster
  - All agent are members of 0 or more areas
- Exactly **one** LAC in an area
- registers agents as part of their start-up process
- resolves agent URLs on behalf of other agents
- "wakes up" a local agent on behalf of a remote agent.

Cooperation Domain

- "CD"
- Like a "meeting room" for agents
- Member agents send messages indirectly through the CD to other members
  - Broadcast
  - Multicast
  - Point-to-point
- Members may store persistent data in the CD
- CD may store history of messages exchanged

Cooperation Domains



Summary