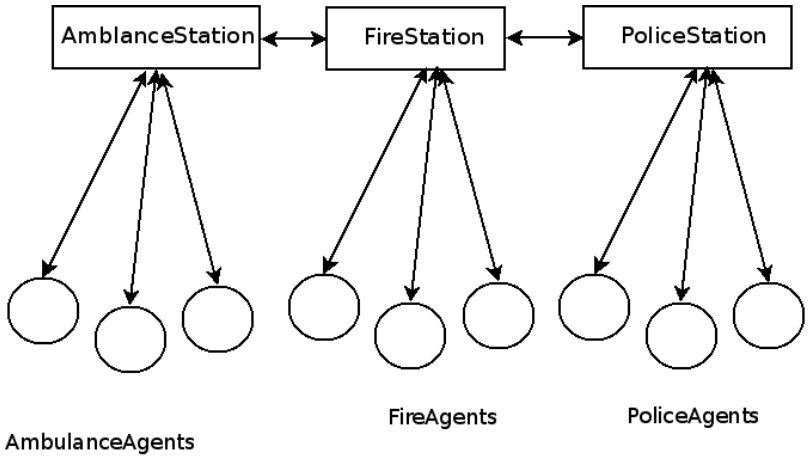
Rescue Sim Communication

- All Communication goes through kernel
- Comm is limited
  - Agents 4 messages/cycle (256 bytes)
  - Stations 2 x <Nr. Agents>/cycle (256 bytes)



Rescue Comm Channels

- Center-/PlatoonAgents can „tell()“ messages to a channel (use 1+, not 0)
- Select channels to listen to „channel()“
- Agents have to decide to listen to a message „willListenHear()“
- Agents then „hear()“ a message
- This is new in 0.50.0 ... you will need protocol patches (see website) …

Blackboard system

- Currently (and after 2.1) you have multiple single agent systems
- Each agent visits each target
- Clearly inefficient
- Use blackboard to coordinate exploration
- Goal: If an agent knows all targets explored: Stop
- Cycles until all explored should be small

Simple Implementation

- With communication: Agents send visited target id to center (the blackboard)
- Center sends newly received target ids to agents
- Agents only choose from targets, that have not been explored (update the explorationTargets from com!)
- Should be almost no double explorations

Implementation Suggestion

- Agents send expl. id to center on chan 1
- Center sends id list on chan 2
- Choose simple encoding for byte[]
- tell() command
- Center listens on chan 1
- Agents listen on chan 2
- Channel(), hear(), willListenHear()
- willListenHear() should discard all messages from agents/center for center/agents

Implementation Details (2)

- Agent‘s world model in Memory class
- You can lookup() objects by id!
- Updated automatically
- Only includes „sense“ data
- You are responsible for additional information
- E.g. explorationTargets updates