

Thoughts on Examples

Skiz, Jan, and Norm

A stylized, dark teal silhouette of a mountain range is positioned in the bottom right corner of the slide, extending from the right edge towards the center.

Sample Sentences

0:00 Commander: Jr, I want you to search the room you are in first and when you go to leave head for the North end of the building, continue around East and we will meet up at the end of a long hallway.

Also, don't forget to notify me the minute you see a bomb.

0:32 Jr: 10-4

3:13 Jr: I have cleared the first room and am proceeding North down a hallway.

3:20 Commander: Mark that room as clear and make certain to check all the rooms in the hall.

3:45 Jr: Room is marked. Proceeding to the next room.

3:56 Commander: Wait. Shouldn't you be going into the hallway? I told you to go there.

4:02 Jr: No, I went directly into the next room. You only told me to check the rooms.


4:10 Commander: Jr, go back to the first room and wait for me there, I think there is something hidden that you missed.

4:11 Jr: So do you want me to stop searching the other rooms?

PAR side of things

- ◆ Note that we are both trying to:
 - Help process Jr's actions
 - Provide data to inform Jr's responses (i.e. utterances)

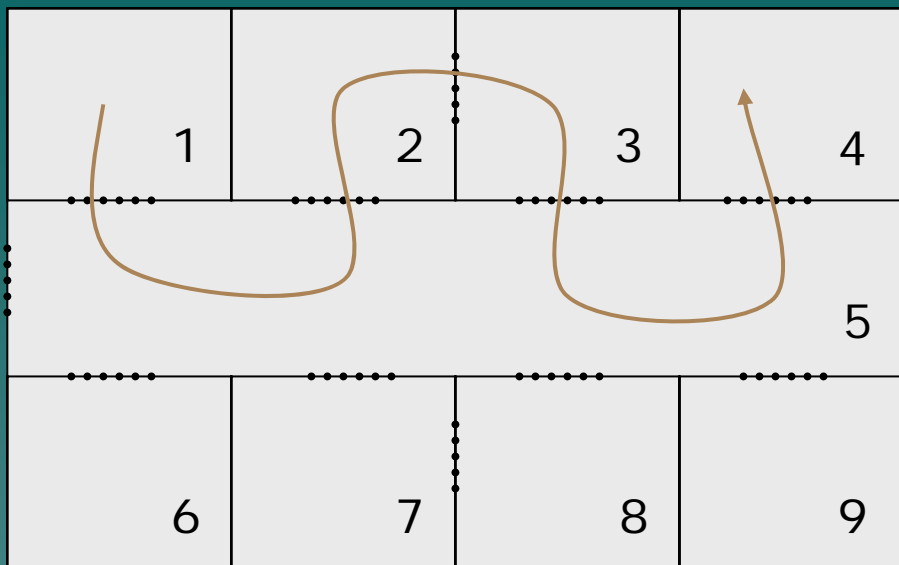
Overview of Issues Raised

- ◆ Prior knowledge of environment
 - ◆ Jr's memory
 - What is sensed?
 - What is stored?
 - How often is it stored?
 - ◆ Environmental disambiguation
 - ◆ Standing orders
 - ◆ Modification of actions
 - ◆ Conflict resolution
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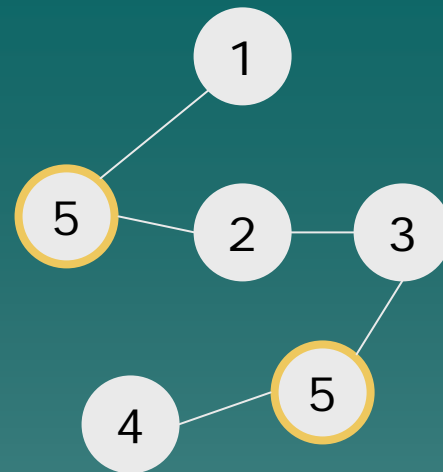
Knowledge of Environment

- ◆ For this year we plan to assume knowledge of the environment, but in the future this is probably not the case.
- ◆ “Check all the rooms in the hall”
 - Can we be sure that we get them all?
 - Can we distinguish rooms from the hall and do we need to?
- ◆ We can build a model of the environment as Jr discovers it.

Map:



Memory model:



- We don't know that the 5's are the same space.
- We don't know that the 5's are a hallway.
- Data in room states:
 - Position
 - Contents
 - Connections (possibly incomplete)
 - Time entered and time exited
 - Properties as prompted by commander

Jr.'s Memory Resolution

- ◆ Updated and stored
 - At every frame?
 - After events (i.e. actions)?
 - All properties and contents or just the focus of current actions?

Environmental Disambiguation

- ◆ “North end of the building”
- ◆ “continue around east”
- ◆ “end of a long hallway”

- ◆ Don't know the environment a priori.
- ◆ PAR is designed to represent definitive info. Here we will need to pass through data not associated with a definitive object?

Standing Orders

- ◆ “Also, don't forget to notify me the minute you see a bomb.”
- ◆ We will need to re-implement a rule manager.
- ◆ These are processed a bit differently from other PARs, but essentially the same as reactive actions.

Modification of Actions

- ◆ “Make certain to check all of the rooms in the hall.”
- ◆ Change all actions?
 - On queue?
 - Being executed?
 - Completed?
- ◆ Change all objects? (bombs, weapons)
- ◆ Limiting versus expanding

Conflict Resolution

- ◆ Searching for bombs then “Jr, go back to the first room and wait for me there.”
- ◆ This is in direct conflict with a currently executing PAR.
- ◆ We could implement a resource utility that detects the conflict hence prompting the question from Jr or it might come out of LTL.

Miscellaneous

- ◆ In the first command it isn't clear that Jr is suppose to search any room other than the first.
- ◆ Jr's responses are:
 - Responses to the commander
 - Reactions to action conflicts
 - During transitions to new actions

PAR Team Efforts (Year 1)

- ◆ Make sure PAR system is working.
- ◆ Set up sample environment.
- ◆ Populate Actionary.
- ◆ Set up memory model.
- ◆ Re-implement rule manager.
- ◆ Focus on facilitating WoZ interface.
 - Toward gathering a corpus.
 - To further expose and explore PAR and overall architecture issues.

Wizard of Oz

