

Hexagonal Wumpus World

- ◆ similar to the grid wumpus world, but the underlying geometry is hexagonal
- ◆ mark the status of tiles
 - ◆ visited (V)
 - ◆ safe (OK)
 - ◆ possible pit (P?)
 - ◆ confirmed pit (PI)
 - ◆ possible wumpus (W?)
 - ◆ confirmed wumpus (WI)
 - ◆ percepts (SBGPC)
 - ◆ orientation of the agent
 - ◆ action (arrow or line)

Task Definition

- add information about the stench and breeze percepts in this map by coloring or shading the respective tiles
- ◆ use a clockwise search strategy
 - ◆ the agent turns clockwise until it finds a safe, unvisited place;
 - ◆ if there aren't any safe unvisited ones, it continues with unexplored areas, again with a clockwise turn strategy;
 - ◆ if only risky locations are left, it takes the first one clockwise
- ◆ keep track of the activities of your agent through the template below
 - ◆ create copies of it as needed (e.g. for each step)

Knowledge and Reasoning

- ◆ accumulate knowledge your agent has about the Wumpus world
 - ◆ current location and percept
 - ◆ new knowledge from observation (the percept)
 - ◆ new knowledge from reasoning
 - ◆ speculation (possible locations for pit, wumpus)
 - ◆ determine the next action

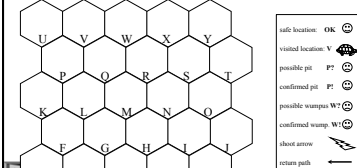
Alternative Mode: WW Game

- ◆ if you want to make this more realistic, you can do it as a game:
 - ◆ one person (A) sets up the environment with locations for the wumpus and pits
 - ◆ the other person (B), who should not know or see that setup, traverses the Wumpus World by asking A about properties of the current tile
 - ◆ A responds with the percept for that location
 - ◆ B updates its world model on the template, and decides what the next action will be

Hex WW Configuration F08

- add information about the stench and breeze percepts in this map by coloring or shading the respective tiles

Hex WW: Legend



Hex WW: Template

- Agent Position
e.g. A
- Percept
[S B G P C]
- New Knowledge
 - observation
percepts for
current square
 - reasoning
adjacent
squares ok?
 - speculative
possible
locations for pits,
wumpus
- Next Action
 - move
 - turn left (60
degrees)
 - turn right (60
degrees)
 - shoot
 - grab
 - exit.

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