

# PROJET FOSYMA - DEDALE

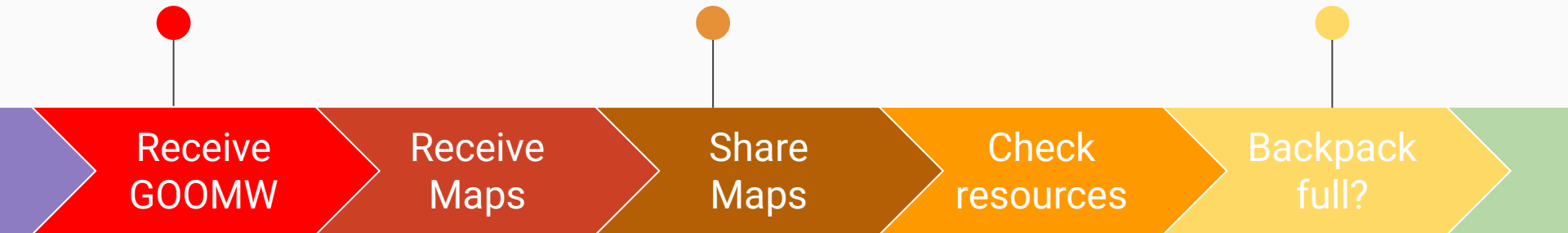
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11/05/2025

# SearchBehaviour Algorithm

If received GOOMW,  
move away, if can't  
move away, send  
GOOMW back

Send updated maps to  
nearby agents

If backpack is full, look for a  
tanker, if a tanker is known,  
move towards it, if not, keep  
searching



If received maps,  
merge them into  
current knowledge.  
Update maps with  
observations

If there is a resource in current node,  
attempt to pick it, if can't pick lock, mark  
node inside "i can't open" list. If can pick  
all, mark resource node as closed, if  
there's still left, leave resource node open.

If exploration is done,  
go to tanker even if  
backpack isn't full to  
empty it a final time

If exploration is fully done,  
and no resources are left in  
backpack to empty, check  
expert list

If exploration is done, all  
resources deposited, backpack  
empty, everyone experts, go into  
dormant state

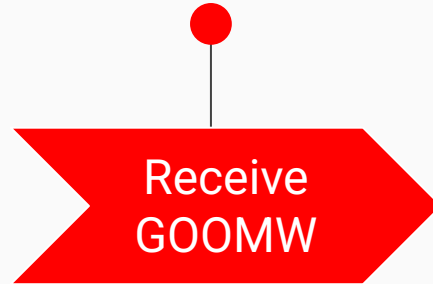


If backpack is not full,  
and there is a known  
resource left, go pick it  
up, if not, keep searching  
for resources

If not every other agent has access to the  
full exploreMap yet, move around  
randomly trying to get into contact with  
them and make everyone experts.

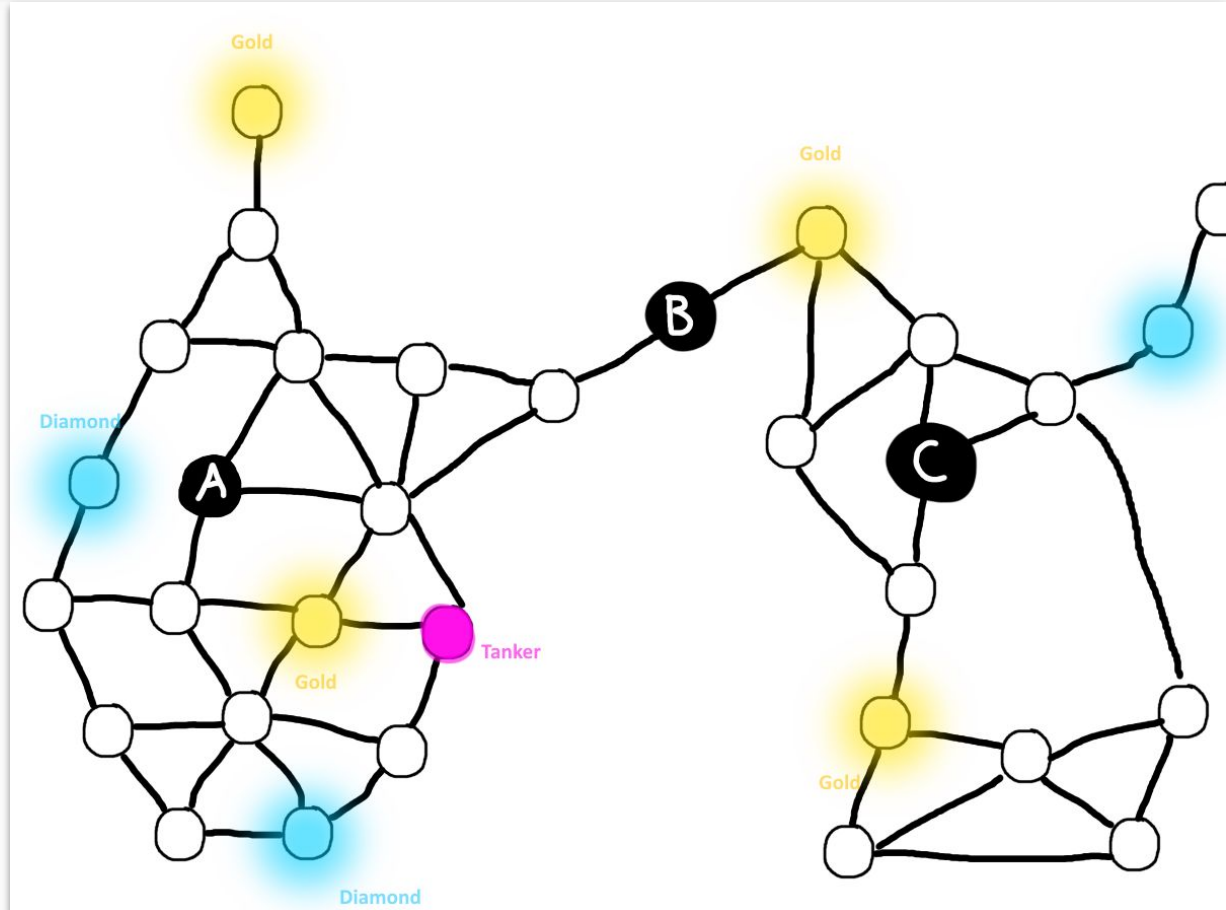
# StayOutOfWayBehaviour Algorithm

If received GOOMW,  
move away, if can't  
move away, send  
GOOMW back



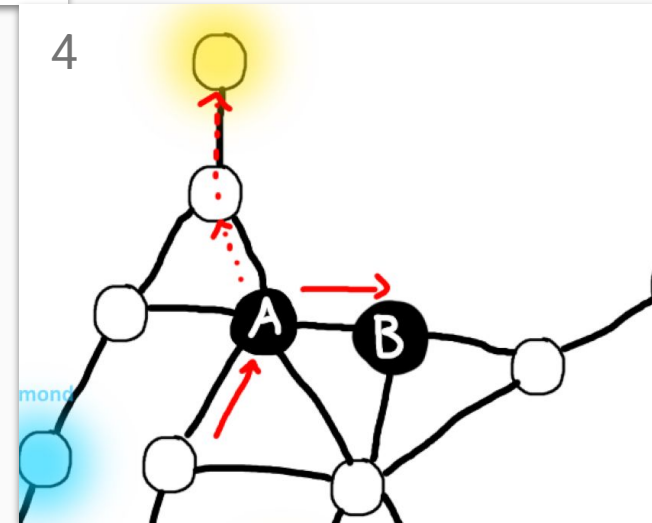
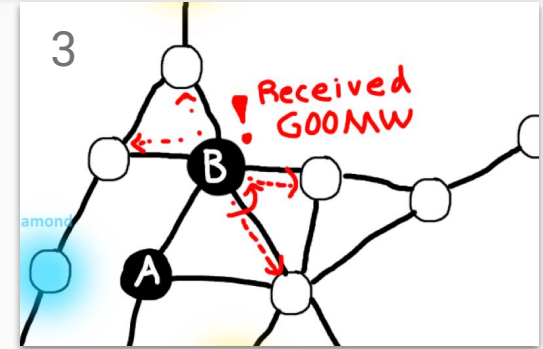
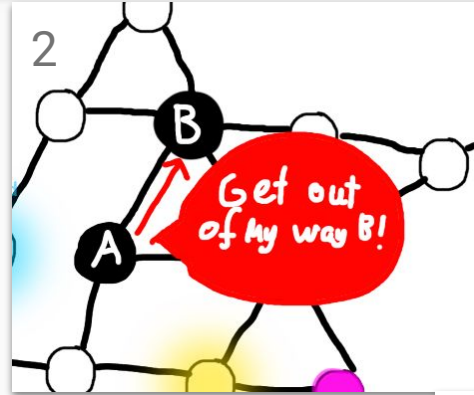
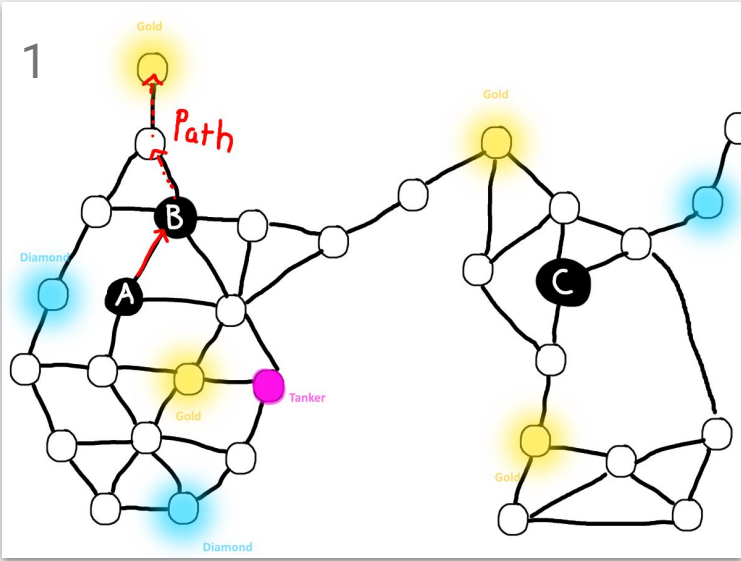
# GOOMW Treatment Scenarios

# Demonstration



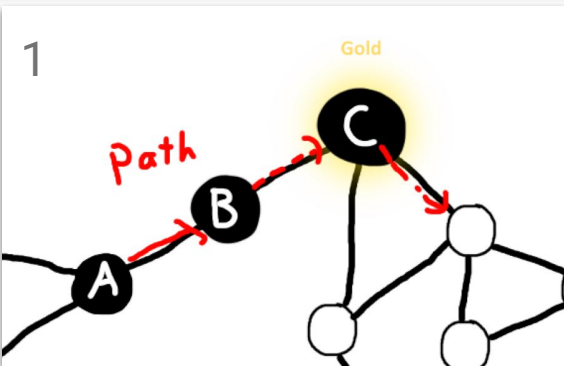


# Standard GOOMW Case

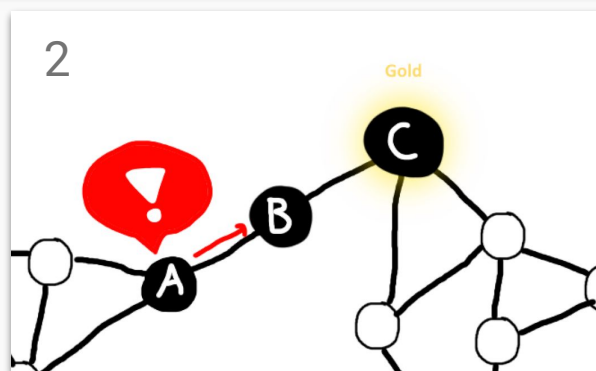


## Edge Case (Train situation)

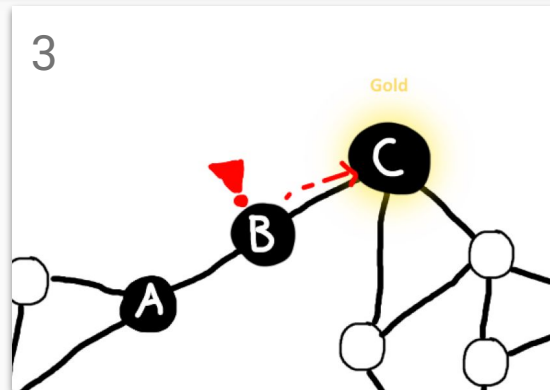
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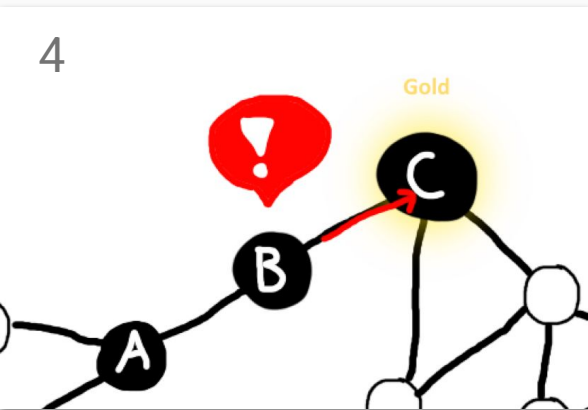
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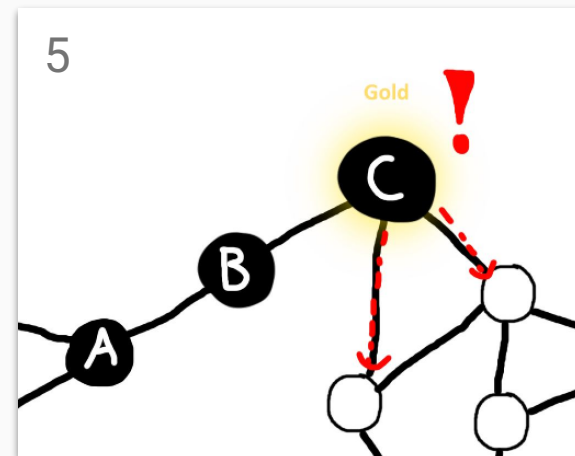
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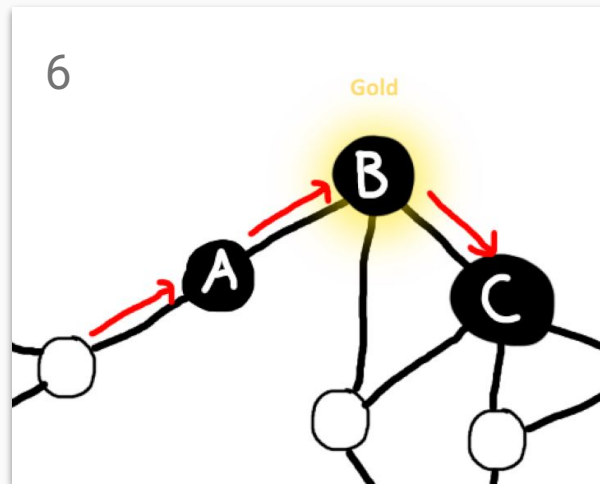
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5



6

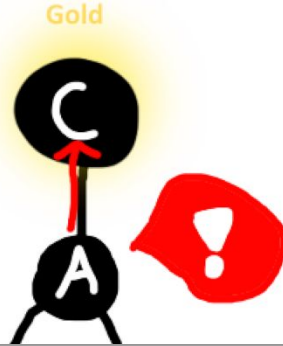


## Edge Case (Dead end situation)

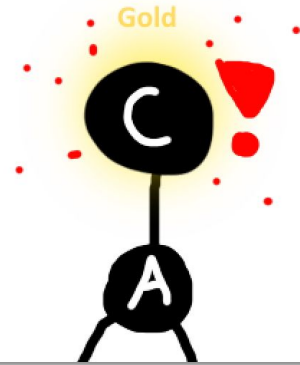
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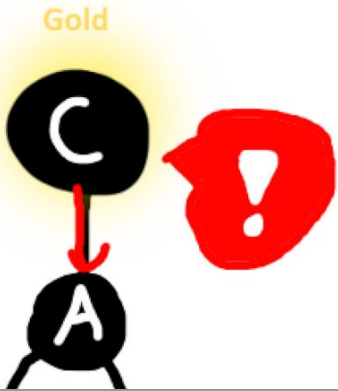
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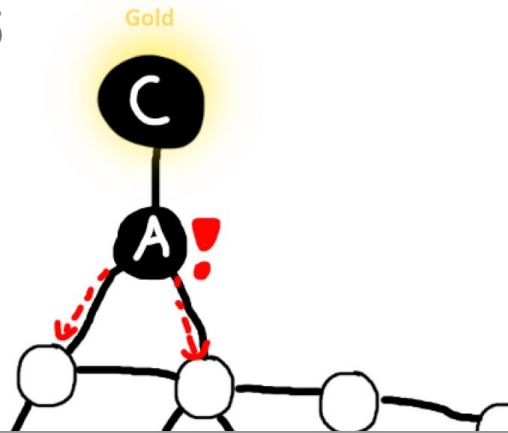
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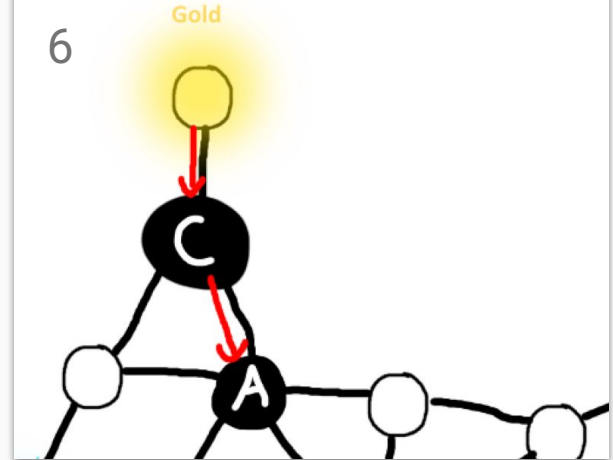
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# Conclusion

## Key Features

- Collision avoidance with GOOMW
- Expert verification
- Spontaneous + autonomous decision making

# Problems

- Bug where turn speed goes up during collision avoidance?
- Isn't great against wumpuses
- Too many messages
- Some reliance on luck, some edge cases for blocking still happen