INFOH414 – Swarm Intelligence

Collective Decision Making with Homogeneous Agents

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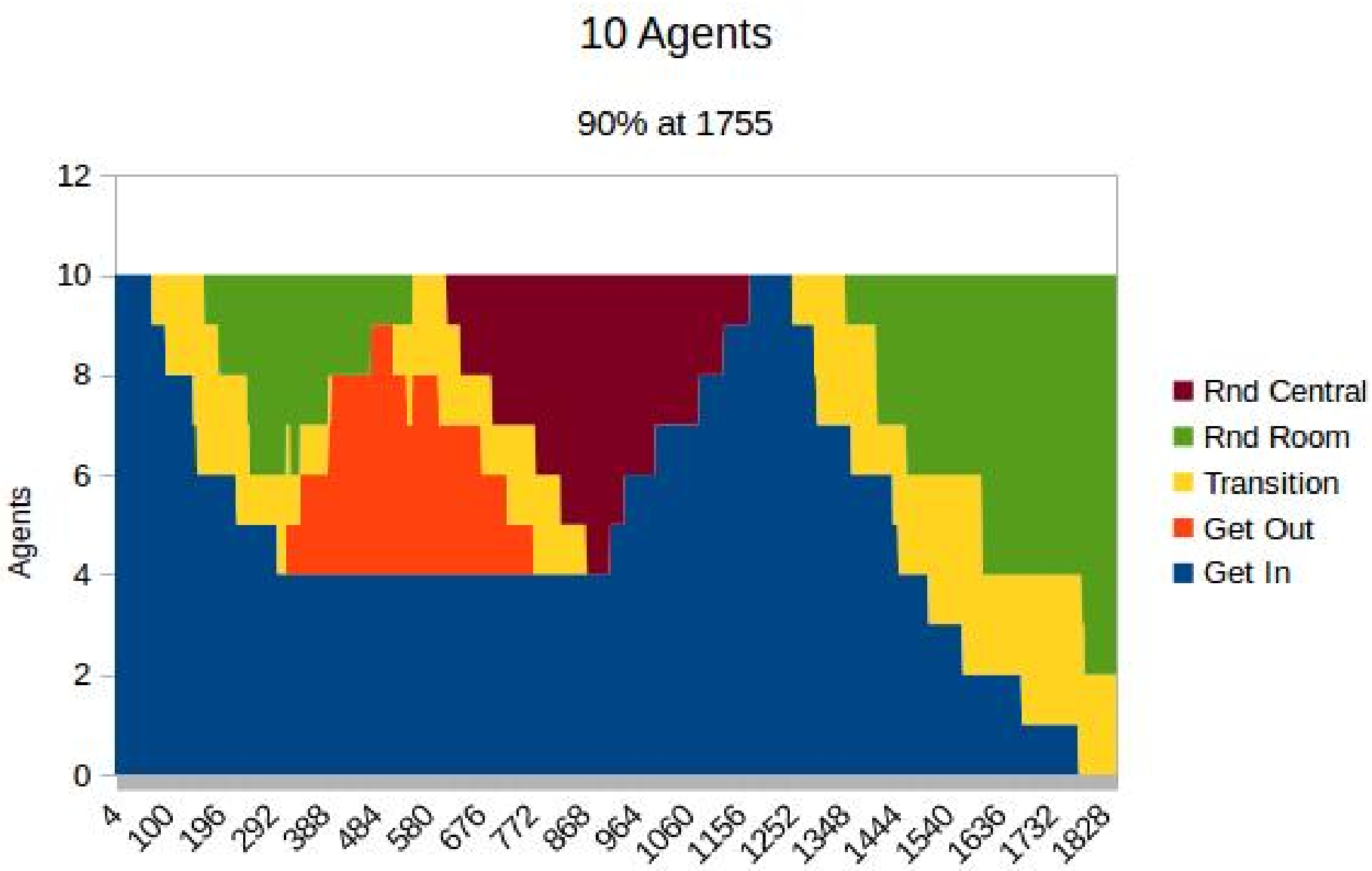
Introduction

- Use LEDs to encode room quality
- Remember only the last room
- Best room sensed overwrites the last room quality
- Random movement based on collision avoidance

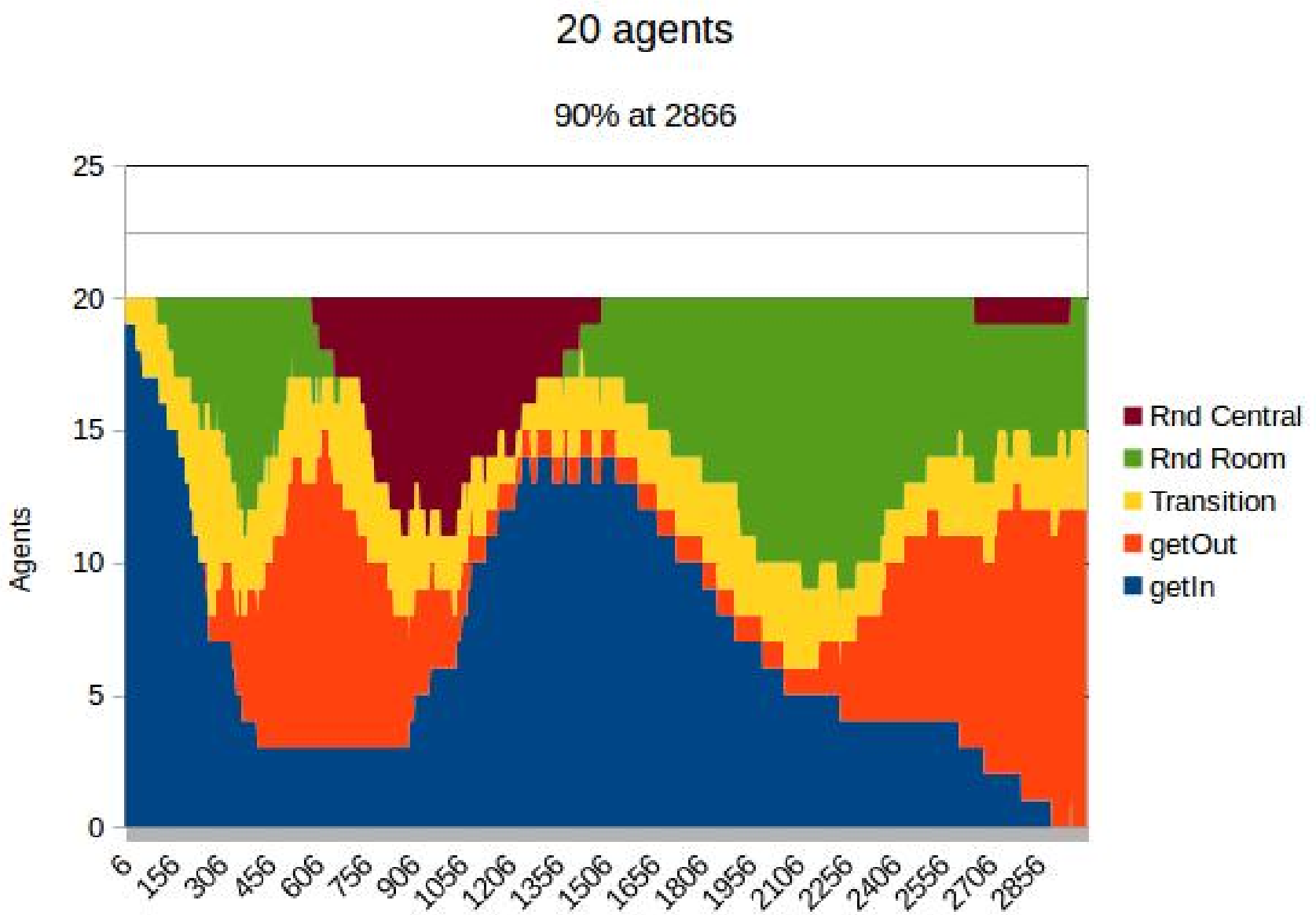
Idea

- Go to closest room
- Get quality
- Go back to central room
- Broadcast last room quality and sense other's
- Move toward best room sensed

Repartition



Repartition



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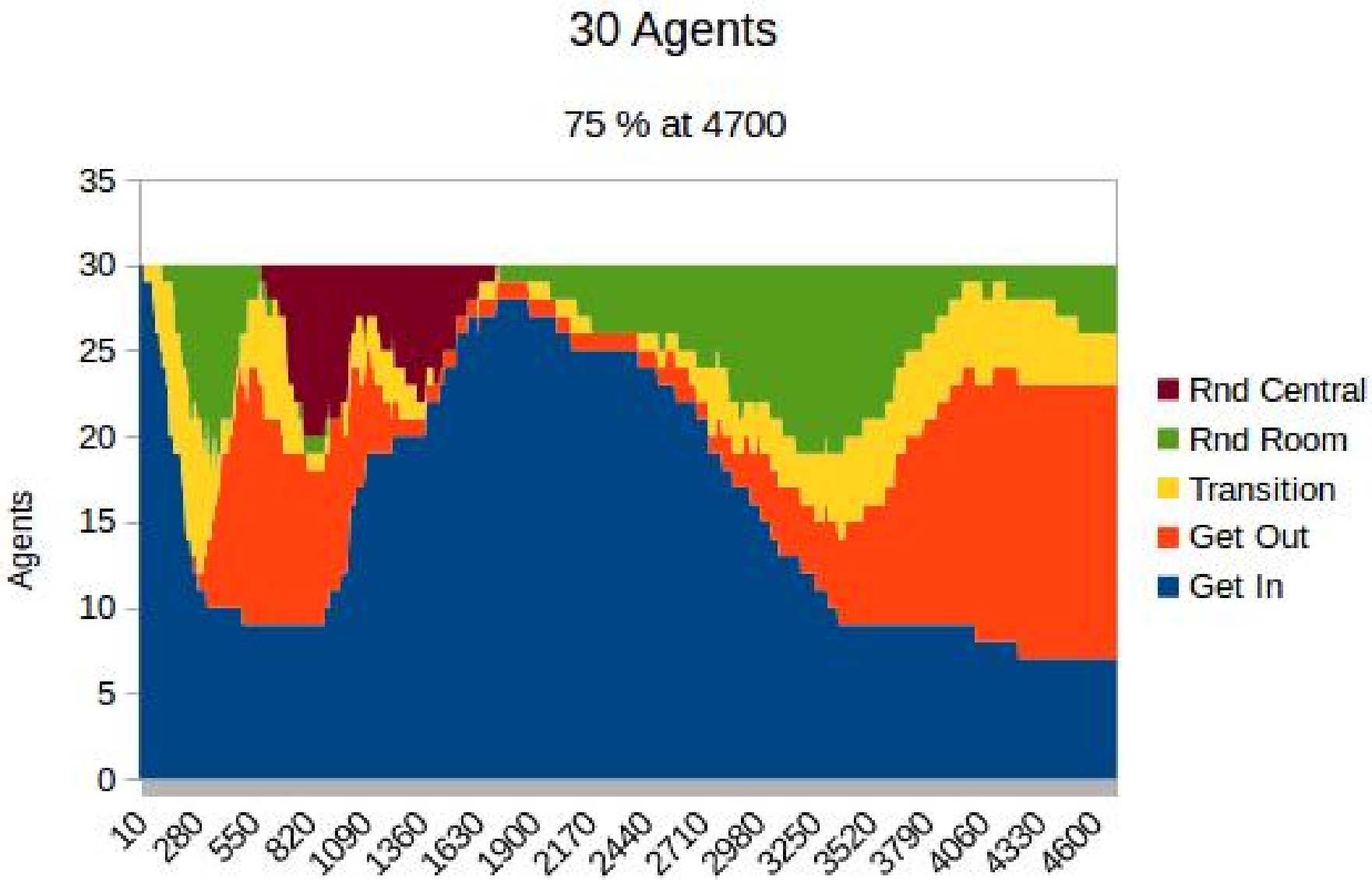

Conclusion

- More robots means more congestion
- Consider DoL: specialize explorators and quality propagators
- Need for interference reduction
- Need to stay longer in highest quality room, don't leave if the entrance is saturated