PhD

Collaborative Deep Reinforcement Learning for Multi-Object Tracking_eccv18

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- Uses two different networks – one for tracking each target as a separate agent and one for consolidating information from all the agents to make decisions
- 4 actions – update, ignore, block and delete based on whether the object is visible or invisible and detection reliability
- each action has a 2 part reward comprising the agent's own state as well as the combined state of its neighborhood which seems to include all other agents
- Reward and ground truth generation process seems to riddled with IOU as well as many related heuristics
- three images are used as input to the decision network – one each from the predicted patch of the agent, detection (probably the nearest one) and the neighborhood, though the definition of the last one is not clear
- training process is not quite clear
- Matlab code not publicly available
- performance in MOT 15 and 16 seems to be comparable to the state of the art though not better in any metric