NRI: FND:

Connected and Continuous Multi-Policy Decision Making

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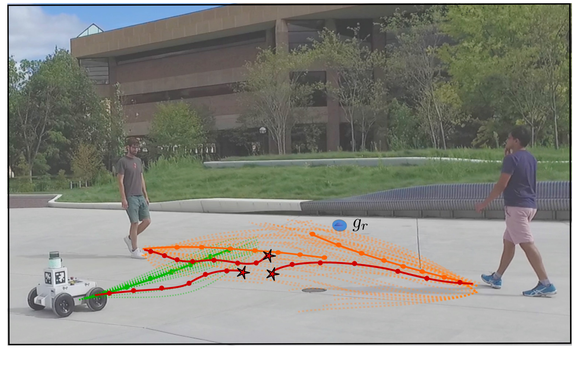
Background

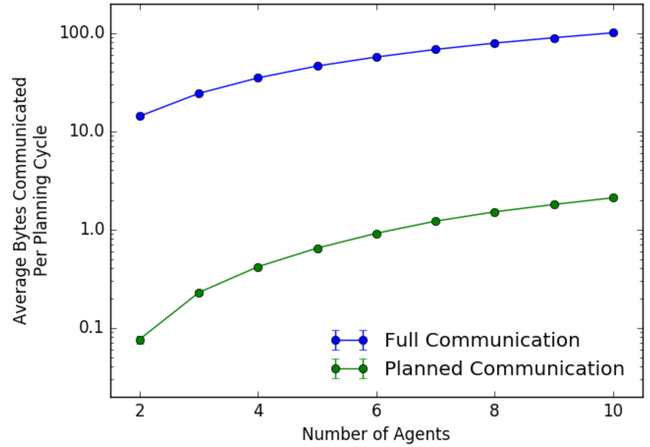
MPDM uses an online simulator to “elect” a policy for a robot by predicting likely outcomes under each of a set of candidate policies, then picking the best one.



Project Work

Connected MPDM - For teams of robots, robots can decide between sending (or not sending) pieces of information.

- *We show large reductions in bandwidth for equivalent levels of team performance.*



Continuous MPDM - We add continuous-valued parameters to each policy, making them more expressive.

- *We show large improvements in behavioral performance by making policies more flexible.*
- *We use DNN-like backprop to optimize parameters*