

CPS - Small: Control of Distributed CPS under Partial Information and Limited Communication

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Theoretical Approach:

- *Safety and Liveness* specifications considered
- Coupling of *Discrete-Event* (DE) solver with *Hybrid* solver
- Lift *informational* issues at DE level
- *Optimize* at Hybrid level
- Linking concepts: *Observers, Information State, Automata*

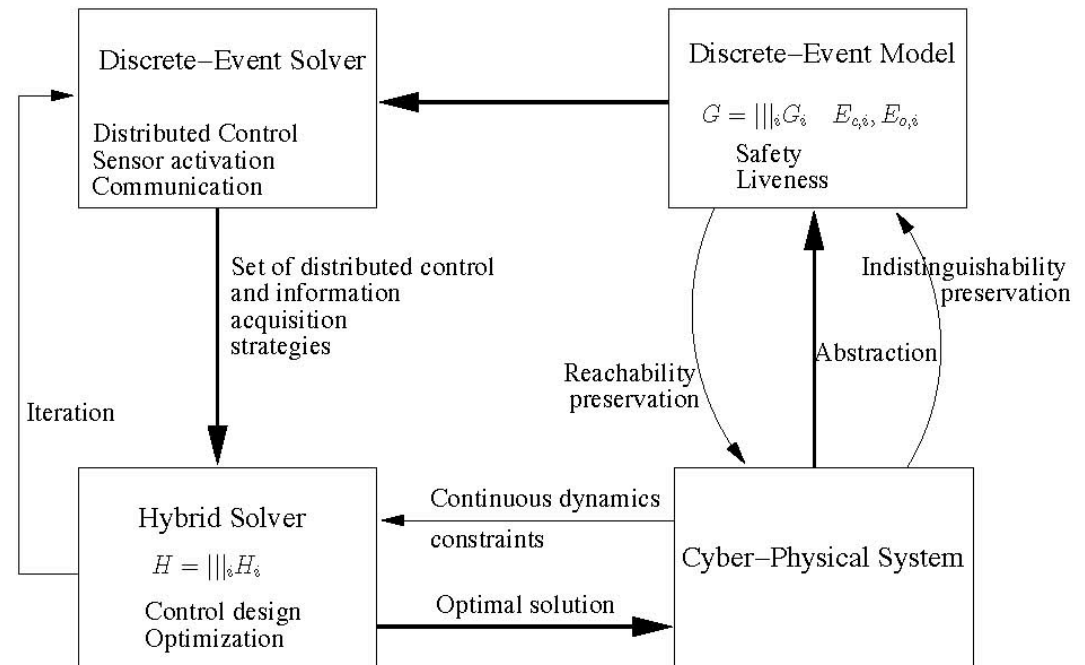
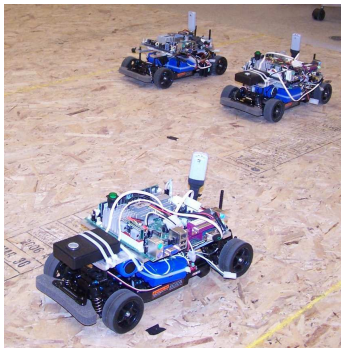


Figure 1: Integrated Hybrid/Discrete Solution Procedure



Cooperative Active Safety in ITS:

- Experimental test-bed (Del Vecchio's Lab at MIT)
- Collision avoidance scenarios (e.g., roundabout): capture set
- Limited sensing and communication; semi-autonomous