



Human-Agent Collaboration for Multi-UAV Coordination

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Scenario

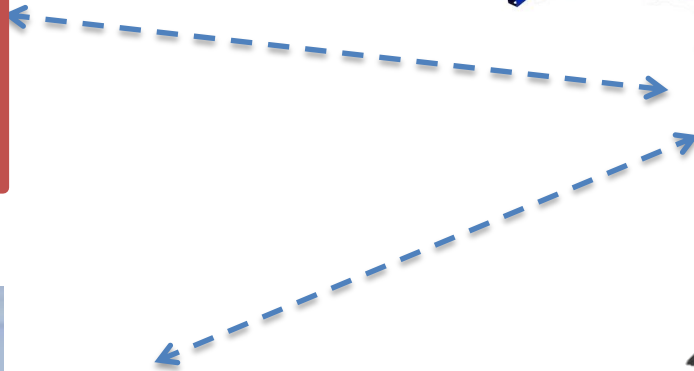
Silver Command



Max-Sum

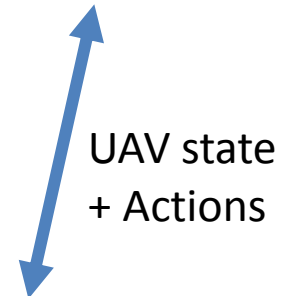


Bronze Operators

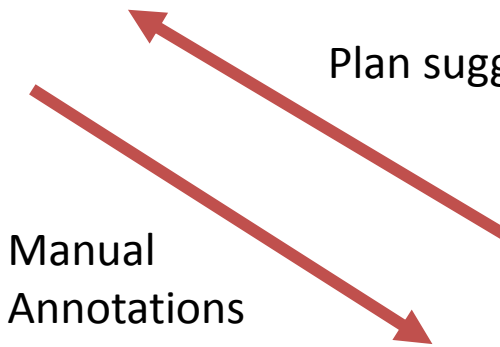


ARCHITECTURE

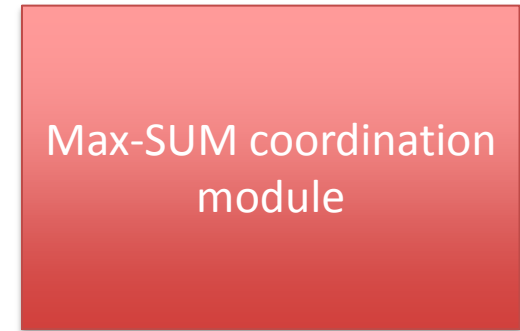
Silver command Interface



Plan suggestions



Manual Annotations



4 Scenarios + 2 training:

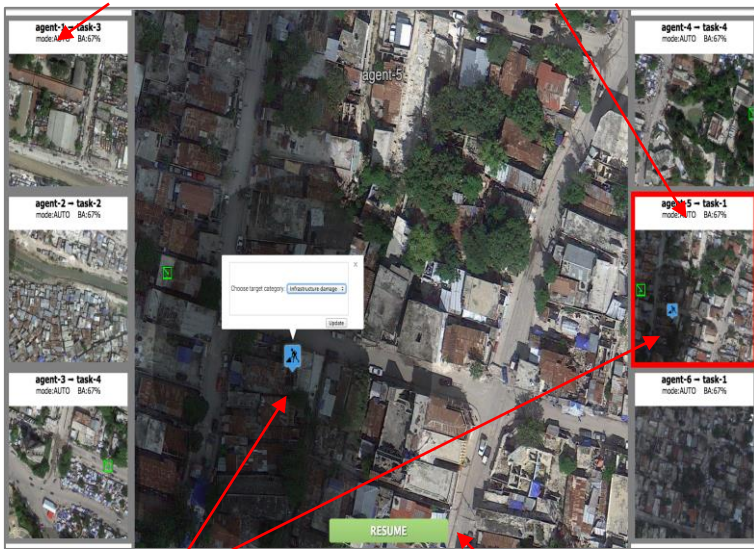
“There are a number of targets to the east of the base”
“There are some targets south of the map”

Silver Command View

Camera View

UAV Status

Selected UAV Video Feed



Unidentified Target

Resume/Stop

Planner View

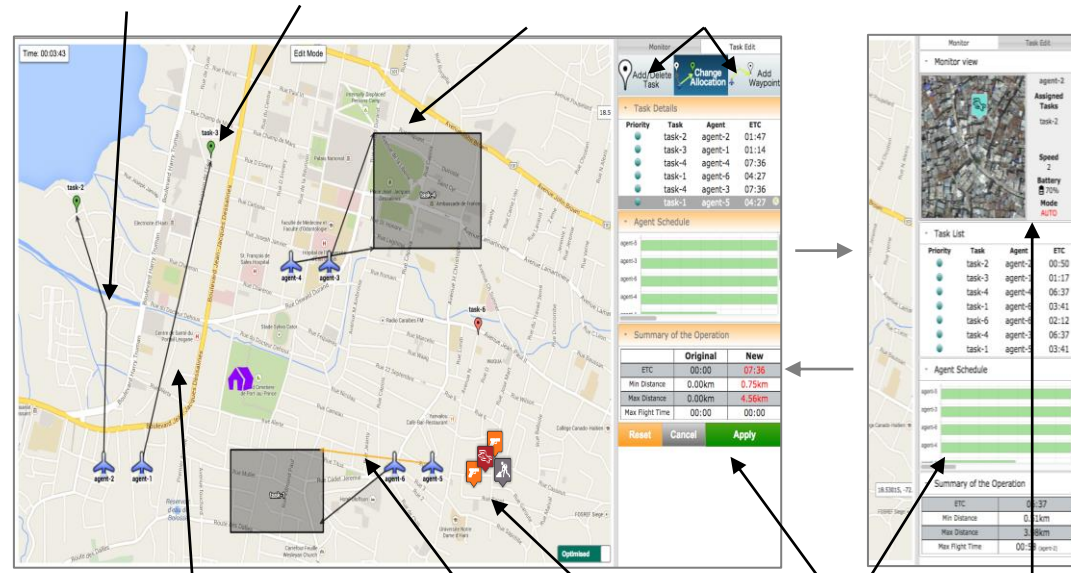
Waypoint

Point task

Region task

Edit Modes

Monitor Mode



Max-sum Allocation
(black line)

Manual Allocation
(orange line)

Cluster of
Detected
Targets

Plan status

UAV
status

Summary of the Operation

	Original	New
ETC	00:00	07:36
Min Distance	0.00m	0.79km
Max Distance	0.00m	4.56km
Max Flight Time	00:00	00:00

Buttons: [Reset] [Cancel] [Apply]

Task List

Priority	Task	Agent	ETC
●	task-2	agent-2	01:47
●	task-3	agent-1	01:14
●	task-4	agent-4	07:36
●	task-1	agent-6	04:27
●	task-4	agent-3	07:36
●	task-1	agent-5	04:27

Agent Schedule

Agent	Task	ETC
agent-1	task-3	01:17
agent-2	task-2	06:37
agent-3	task-1	03:41
agent-4	task-6	02:12
agent-5	task-4	06:37
agent-6	task-1	03:41

Summary of the Operation

ETC	Min Distance	Max Distance	Max Flight Time
00:37	0.1km	3.85km	00:00 (agent-2)



Research Questions

Supporting human decision making

Multi-Human Multi-UAV systems

Multi-UAV coordination challenges