

Use Case: River Search and Rescue

Description: Multiple UAVs are dispatched to search for victim in river

Primary Actor: UAV, Drone Commander (DC)

Trigger: The Drone Commander initiates the search

Main Success Scenario:

1. The Drone Commander issues a command to start the mission
[rule PR-1: Preflight Data]
2. The UAVs finished their preflight checks and is ready for takeoff
[rule PR-2: Awaiting Takeoff]
3. The UAVs take off synchronously in a coordinated way
[rule PR-3: Multi-UAV Synchronized Takeoff]
4. The UAVs fly to their designated search area
[rule PR-4: Flying to Target Location]
5. The UAV starts searching the area for a victim
[rule PR-5: Searching for Victim]
6. When a potential victim is detected by a UAV, that UAV immediately switches to active tracking mode
[rule PR-6: Active Tracking]
7. When emergency responders arrive, the drone commander orders the UAVs to return to their launch location
[rule PR-7: Return to Base]