

711 HPW/RHCI UAV Supervisory Control Operator Interface Research



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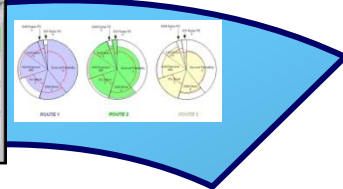
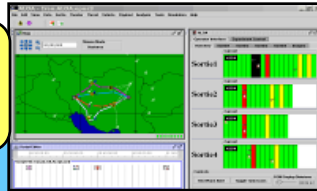


711HPW/RHCI UAS Operator Interfaces

Multi-UAS Control Research: Basic to Applied

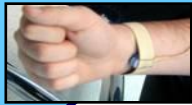
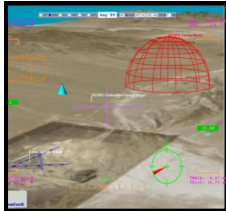


Human-automation interaction
(methods, visibility, attention, allocation)



Integrated crew stations:
increased span of control

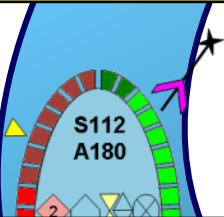
Multi-modal & 3D interfaces
for supervisory control



Interfaces tailored for future
capabilities & missions



Multi-UAV management
(glyphs, task switching, timeline)



Sensor inspection aids



Multi-platform control station
hardware/software framework

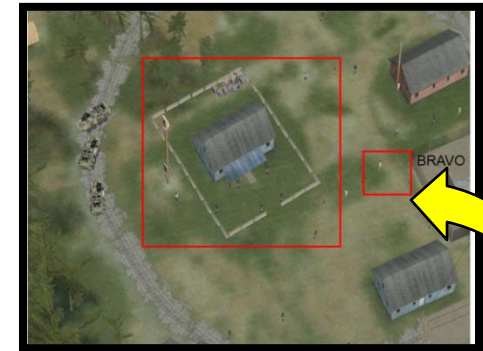
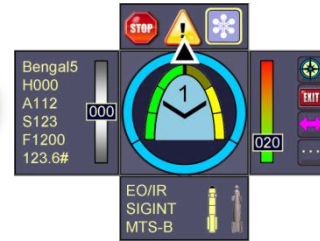




Multi-UAV Supervisory Control Interface Technology (MUSCIT)



- 6.3 Critical Experiment: **Human Factors** led effort to formally evaluate & expand multi-UAV control capability
- Spiral iteration & flight trials
- Evaluate multi-modal comm, synthetic vision, automation management, cooperative control, decision aids, attention management tools, etc.



IMPACT

- Quantifying/characterizing human performance & mission effectiveness
- UAS interface design guidelines
- Tri-service HF working group, NATO visibility





UAS Supervisory Control Issues

Learn from the Super Heroes!



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UAS operators do not have Spidey-sense!

Need intuitive, rapid attention-directing cues and alerts

A utility belt often comes in handy!

Need flexible automation and decision support aids



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The wonders of an invisible plane!

Need transparent interfaces to allow focus on the mission, not the automation or control/display interface