EGLIN HACKATHON

ACCELERATING UNCREWED TECHNOLOGY

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WHAT IS IT?

A hackathon is a 1-2 week event. Teams make new things. They "hack" together a solution, even when expertise is limited.

Dronecon 2024 hopes to achieve a physical, kinetic, and data hackathon. Innovators will gather to accelerate change, modifying civilian and military equipment, testing them in new ways.

FEATURES

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| Analytics | $\bullet \bullet \bullet \bullet \circ$ |
| Modeling | $\bullet \bullet \bullet \circ \circ$ |
| Robotics | $\bullet \bullet \bullet \bullet \circ$ |
| Aviation | •••• |
| Land | $\bullet \bullet \bullet \circ \circ$ |
| Sea | $\bullet \bullet \bullet \bullet \circ$ |
| Cyber | $\bullet \bullet \circ \circ \circ$ |
| Spectrum | $\bullet \bullet \bullet \circ \circ$ |
| Testing | •••• |

GOVERNMENT ACTIVITIES

- 1. Autonomy: Building and automating new paths, methods.
- 2. Swarming: Offensive and defensive tactics.
- 3. Cross-agency: Collaborative testing from across DoD and partner agencies.
- 4. Loitering: New first-person views in combat-like scenarios.
- 5. Air-ground coordination: Drone-augmented fire team vs. team.
- 6. Anti-aircraft: Ground-air shoot-down testing.
- 7. Blind ops: Testing zero-camera navigation through other sensors.
- 8. Artificial intelligence: Modeling the automation schools of thought, neural networks, machine learning, deep learning, testing one against the other. Modeling and testing how they might work together in teams.
- 9. Mapping: Translating data from drone to actionable data.
- 10. Electromagnetic signals: Weaponized, deployed from each team.
- 11. Network security: Network sniffing, offensive cyber-from-drone attacks.
- 12. Disaster coordination: First responders, package delivery, area monitoring.

ACADEMIA, INDUSTRY

- 1. Data analytics: Forecasting drone behavior, swarms. Accepting unclassified data from DoD end-users to find new insights and efficiencies.
- 2. Rapid prototyping: Creating new theoretical solutions to drone, battlefield problems in the modern era. Opportunity for unfettered creativity.
- 3. Theory-testing: "Hack" together drone solutions based on said prototypes.
- **4.** Education partnership: Crafting DIY drones using single-board computers, radios. Motorized folded paper planes. Scratch origami paper for participants to make folded paper creations while boosting their creativity.
- 5. Volunteer aircraft: Testing industry equipment in hazardous scenarios.
- 6. Psyops: Influence campaigns between teams, leaflet dropping, skywriting.
- 7. Social science: Innovation research, optimizing creativity, personality mixes. Participants opting-in to wearing wrist-bands to track attendee behavior (agent modeling), safety trends and risk acceptance tracking, crowd theory (individual decision-making), and rule-following (normalization of deviance).