UAS Workshop

UAS Support by OICT/OSD

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Agenda

- OICT/OSD – Mission Field Technology Support
- UNOE: Class I Micro UAS
- UNOE: Class I Mini UAS
- MINUSCA special case: LOA Class I Small UAS
OICT/OSD – UNGSC - Mission FTS Support

- Office of information and Communications Technology / Operations Support Division supports Peace Operations in acquisition and operation of Technology (UN Owned Equipment – UNOE)

- UNGSC - Team Valencia supports Missions with advise on UAS

- Mission Field Technology Section / Innovation and Technology unit supports in a coordinating role
OICT/OSD supports missions with Class I UNOE

<table>
<thead>
<tr>
<th>Class</th>
<th>Category</th>
<th>Recommended employment</th>
<th>Normal approximate operating altitude AGL</th>
<th>Range</th>
<th>Recommended C2 level</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class III</td>
<td>HALE</td>
<td>Strategic/national</td>
<td>&lt;65,000 ft</td>
<td>Unlimited (BLOS)</td>
<td>AOR/mission</td>
<td>Global hawk</td>
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<tr>
<td></td>
<td>MALE</td>
<td>Operational/theatre</td>
<td>&lt;45,000 ft</td>
<td>Unlimited (BLOS)</td>
<td>AOR/mission</td>
<td>Heron 1/ Hermes 900</td>
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<tr>
<td>Class II</td>
<td>Tactical</td>
<td>Tactical formation</td>
<td>&lt;18,000 ft</td>
<td>&lt;200 km (LOS)</td>
<td>Brigade</td>
<td>Hermes 450/ Falco Sperwer</td>
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<tr>
<td>Class I</td>
<td>Small</td>
<td>Tactical unit</td>
<td>&lt;1,000 ft</td>
<td>&lt;50 Km (LOS)</td>
<td>Battalion/ regiment, sector</td>
<td>Scaneagle/ Shadow 200/ Luna</td>
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<td></td>
<td>Mini</td>
<td>Tactical sub-unit (manual or hand launch)</td>
<td>&lt;1,000 ft</td>
<td>&lt;25 Km (LOS)</td>
<td>Company, platoon, squad</td>
<td>Raven/Aladin/ Puma/ Skylark Heidrun V1</td>
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<tr>
<td></td>
<td>Micro</td>
<td>Tactical sub-unit (manual or hand Launch, tethered)</td>
<td>&lt;400 ft</td>
<td>&lt;5km (LOS)</td>
<td>Platoon, squad, team</td>
<td>WASPIII/MIKADO/ DJI Phantom 4, DJI Mavic Pro Hovermast-100</td>
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</tbody>
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Multiple Micro UAS Use Cases

Case Study # 1: Crowd Assessment
Case Study # 2: Camp Change Deduction
Case Study # 3: Camp Lighting Assessment
Case Study # 4: Assist in Protection of Civilian during Crisis
Case Study # 5: UAV for IDP Monitoring
Case Study # 6: Camp water stagnation areas
Case Study # 7: Site Mapping Survey
Case Study # 8: Terrain Visualizing
Case Study # 9: Convoy Clearance Assessment
Case Study # 10: Post Conflict Impact Assessment
Case Study # 11: 360° Line of sight visual Survey
Case Study # 12: UAV for observers (MILOB & UNPOL)
Case Study # 13: VIP visit monitoring
Case Study # 14: Planning Rescue/Evacuation operations
Case Study # 16: Camp Perimeter Surveillance
Case Study # 16: Camp 3D VRML Model
Micro UAS – Standard Kit

- Mission Procurement support
- Systems contract in preparation
- Training support: UN FT Academy (day 3 presentation)
UNOE: Mini UAS for Camp Defense

- 2020: OICT/PD established three Systems Contracts

- Enable Missions to procure Camp Defense Technology and Services
Camp Security Systems Contracts - Concept

1. **Defence Zone/camp:**
   - Highly secured area
   - Difficult to break-in
   - Direct and Indirect fire readiness
   - Full coordination
   - Flat clear area without any Dead Zones (for first 200m)
   - Restricted area without civilians movement (for first 200m)

2. **Covering Force Area/High Alert Zone:**
   - 1km out of Defence Zone
   - 100% territory control

3. **Area of Interest**
   - Significance presence of forces.
   - Frequent operational activities and patrols
   - The goal – to get deterrence (the enemy should be afraid to act)
Camp Security Suite – Core Technologies

1. Radars: Ground Surveillance / Indirect Fire Warning
2. Access Control System Elements
3. Medium/long range day/night cameras on aerostat or mast
4. Perimeter Surveillance System Radar / CCTV
5. Operations Centre Fusion Software
6. PA Sys
7. Mini UAS
UNOE: Mini UAS for Camp Security

- Operated by Contractor
- Multisensory UAS
- Near real time live video stream (FMV)
- Autonomous waypoint navigation
- 2 flights per day possible, alert starts < 30min
- Range > 35 km
Exceptional Support: MINUSCA LOA

- Fully Managed Systems
- Analysis support
- Flexible Deployment in Mission Area
- Closing Gap on operational Requirements
Summary

- OICT/OSD and Mission FTS support with UAS as UNOE
- Micro UAS have many use cases in PK
- UNOE/COE Procurement and Training support via UNFTA
- Mini UAS for Camp Defense through Systems Contracts
- Exceptional Mini/Small UAS Solution until Aviation Solution is operational
Questions?