Joint Air and Space Power Conference 2006

PANEL 1

"UAC in operations today."

MajGen Krueger - CAOC 4
- Introducing members of panel and additional remarks:
- ACCS should better enable UAV C2
- Limited airspace in Europe for UAV operations

Col Lewandowski - JAPCC
- Truisms in UAV operations - traditionally simplistically characterised - but market now complex and mature so should now characterised by missions - C4ISTAR, combat missions, combat.
  support missions - counter narcotics, border monitoring, combat re-supply (maybe at sea).
- No longer need to find niche missions - capability to undertake all missions.
- Training - not enough flight hours when real-world operations and commitments considered.
- High profile events - shoot-down - Congo - Hunter B - BE - AK47 a lucky hit. Lebanon – Iranian UAV- shot down by F-16 MM. Congo - failed UAV - engine failure - killed civilian.
- Unmanned Ops in NATO - lessons learned = 12 basic findings - to include Wx, Comms, Freq management, spare parts.
- Flight Plan - NATO not addressed counter UAV ops in NATO airspace - part of Air Policing mission? How do we deal with UAVs in combat environment- detection, interception etc?

LTC Eggers - 57th Operations Group
- Predator operations - 6 squadrons - MQ 1 and MQ 9 Reaper.
- 10 combat missions per day - 50/50 Iraq/AFG - mainly TacRecce and CAS.
- MQ 1 (120kts to 25,000 ft- 300 pounds payload).
- MQ 9 (double speed and higher operating level plus 10 times payload).
- Fibre optic link then to satellite link.
- Operate through centralised control.
- Capabilities - ISR in real time response to units in the field.
- SAR, Infra Red, electro-optical sensors.
- Standard Comms and same SOPs as manned aircraft- equipment includes radio, LINK 16, laser designator, laser target marker, NVG.
- Remotely Operated Video Receiver (ROVER) - link video to Cdr on the ground – looking around the corner and speeds process of coordinating fires.
- Predator great platform for Urban CAS, precise weapons with hellfire and small warheads.
- Lessons learned = range of UAVs with different capabilities offering different solutions.
- Airspace management integration - complex and done by voice.
- Operational workload versus continuation training.

BG (Res) Benkler - Benkler Consultancy
- New battlefield - the empty battlefield: amorphic, no front, no end, large and undefined in size, no real targets, and no definition of winning.
- Need to be able to constantly survey and timely react.
- Therefore UAVs will play a greater part in future.

- Great difference between operating UAVs in Gaza and in wartime.
- Must be able to change the disc, change the process.
- Operate in three layers of UAVs - each has its own set of missions but must integrate together – the right fusion.
- Need UAVs to carry greater payloads possibly up to 5 tons, more adaptable and flexible to reduce shooter to sensor time.
- UAVs must have same sensor capabilities as Recce systems.
- How do we bring all the data together and managing the UAVs to attack at the right time
- HOWEVER best equipment will not ensure to win the battle

Q&A

Q - Referring to the new battlefield and the armed UA V, WRT ROE the pilot must have eye on the target. How do we deal with ROE?

A - The digital image in the UAV is similar to night vision goggles in the A-10 for example. Artillery is similar. No difference between manned and unmanned.

Comment: No difference between eyeballs and digital image. The image can be provided to the Prime Minister if needed for higher level.

Q - Hunter UAV failure was due to operator failure and not engine failure. That is more of a clarification point than a question.

A. - We shouldn't be surprised because we've seen the same with manned aircraft.

Q - The best air force cannot win a war alone. Why couldn’t 't Israel stop Hezbollah from firing rockets?

A - Mind set in Israel has been police work for the past 10 years so armed forces were not responding as a warrior. They were not thinking that they were at war and should be responding as a warrior, not a police response. One has to realize that you're facing an empty battlefield, or a low signature battlefield, which is very difficult. Israeli people felt they were not in a war - MINDSET!!

Q - The importance of fusing data from multi-sensors? Using UAV for assassination? Alignment on coordinates?

A - Multi-sensors and sensor fusion is the way to go. It is been made clear already. Assassination could be a UAV mission but this is governed by politics. Automatic decision-making is possible but human in the loop for the foreseeable future.

Assassination may not be the right word - war-fighting decisions are the correct decision if made. If you take out the commander of the enemy, that's IAW ROE.

Q - What could we do to improve the flight plan?

A - This is a perfect venue to flush out issue that help the flight plan development. No specific critique.

Comment: Very surprised when he read it - very comprehensive and pleased to see it. It doesn't feel ready to respond now.

Q - How do we prioritize our sensors?

A - Let's say we need optical, SIGINT and SAR. We put them on one platform and we decide where to put the UAV to optimize one sensor then employ the other sensors at their optimum rangers. The fusion would be done immediately to develop the combined image.

Comment Eggers: Referring to concept of forensics.

Q -ACC putting through non-pilots through training- how did they do compared to pilots? How do they manage handling multiple UA Vs?

A - The UAV pilot still needs pilot skills and has the responsibility to fly within the capabilities of the aircraft. Pilot skills are critical.

Q - In order to operate the UA Vs, you must own the sky. How did you coordinate the operation with the combined air operation?

A - The niche for the UAV now is such that they are not survivable in a high threat environment. Therefore air superiority is important. Example of taking out the antenna of Iraqi Bob's antenna using a UAV in a manned pack of SEAD and other manned resources.

Comment: Using manned TTPs for UAVs employed in the similar fashion is a good start.

Moderator challenged the audience to provide feedback to JAPCC on the UAV flight plan. Of all the gaps that exist, where should we start first?