TITLE: DRONES AND SECURITY IMPLICATIONS AT GATWICK AIRPORT
Date: Dec 20th, 2018

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Key Points of Discussion

- The drone appears to have the ability to hover, vertical take and landing. Common market drones similar to Gatwick images are the DJI Mavic or Phantom. Their flight times are approximately 20-30 minutes, and can operate at a distance of 500-2500 meters.
- The weather forecast for the next four days at Gatwick airport is light rain and partly cloudy which would impact the drone operations. .

Implications

- Currently drone flights are regulated. However, market access to drones is open and seemingly unregulated. Drones created public harm and privacy violations and therefore should be regulated licenced information such as a flight certificate course or similar regulatory requirement?
- Do we need to re-evaluate counter drone strategies; considering the ability of the drones at Gatwick to fly over the airspace?
- What happens when all counter measures fail; response teams should be prepared to eliminate the drone?
- What role do electronic countermeasures have in this space; how would the countermeasures be implemented?

Addendum

On Friday evening, Sussex Police arrested a man (age 47) and a woman (age 54) for "disruption of civil aviation services' to endanger or or likely safety of operations or persons."[1] Paul Gait and Elaine Kirk were taken into custody after the arrest at their home in Crawley less than 6

[1] Smith-Spark, L. (2018, December 22). Gatwick drone chaos: Man and woman arrested. Retrieved from https://edition.cnn.com/2018/12/22/uk/gatwick-airport-drone-arrests-gbr-intl/index.html

miles away from Gatwick Airport.[2] The couple have remained in custody as of 11 am (6 am, E.S.T) Saturday morning.[3] The British military deployed to assist the situation at Gatwick Airport has been reported to be using an anti-drone system made by the Israeli Defence Firm **RAFAEL ADVANCED DEFENCE SYSTEMS LTD.**[4] The anti-drone system can detect drones up from 3-5 km away using 360-degree detection technology; and by using its electro-optical sensors, it is able to jam the radio frequencies being used by the drone operator to bring the drone down in a 'soft kill.'[5] As of May 2018, these systems appear to be not available for the Canadian military to use. However, the threat of drones is recognized by the Government of Canada; therefore, anti-drone systems are still being considered.[6]

NOTE: On December 22, 2018 Robert Mendick of The Telegraph reported the police used "military grade" equipment to defeat and find those responsible. The system deployed is Metis Aerospace's Skyperion counter drone system. [7]

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[2] Christodoulou, H. (2018, December 22). Gatwick live updates: First pictures of man, 47, and woman, 54, arrested over drone chaos that ruined Christmas for 140,000 passengers. Retrieved from https://www.thesun.co.uk/news/8044497/pictures-gatwick-drone-man-woman-arrested/

[3] Ibid

[4] Toi, Miller, Z., Baldor, L., Lee, M, et al. The Times of Israel syndication department. (n.d.). UK army said to use Israeli-made system to end drone chaos at London airport. Retrieved from https://www.timesofisrael.com/uk-army-said-to-use-israeli-made-system-to-end-drone-chaos-at-london-airport/

[5] Ibid

[6] Armstrong, M. (2018, May 30). Defence minister says anti-drone system is in research mode amid growing threat. Retrieved from https://globalnews.ca/news/4243585/harjit-sajjan-commercialized-drone-threat/

[7] Mendick, R. (2018). Revealed: The military grade tech police used to defeat Gatwick drone culprits. The Telegraph. Retrieved from https://sg.news.yahoo.com/revealed-police-finally-defeated-gatwick-122317618.html

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