

Autonomous Drones the Solution to U.S. Navy Budget Cuts?

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Alexander Bon (NLDA)

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Prime U.S. reasons for drones I

- Budget cuts and higher costs for newly built ships may force the U.S. Navy to buy fewer new weapons systems.
- Enemy states may thus use their weapons – more accurate, more powerful and having a bigger range – to inflict ever bigger damage on the U.S. Navy. (A2/AD)
- That is why the U.S. Navy has been experimenting with maritime drones, both for in the air, as on and under water.

Prime U.S. Reasons II

- Preliminary U.S. Navy plans foresee the use of drones for:
- Clearing mines
- Reconnaissance
- Intelligence gathering
- Ocean patrol
- Attacking enemy targets
- Some autonomous/some human-guided

Types of U.S. Maritime drones I

- X-47B drone: GPS/ 30 hours/ refuelling
- MQ-4/9C = 18.400 km range / 20 kms height / camera 3.700 km radius / Broad Area Maritime Surveillance Program
- Navy wants 68 MQ drones. India and Australia also
- MQ is target finder for ASW plane poseidon P-8A

Types of U.S. Maritime drones II

- Scout MQ08B helicopter = clone from OH-58 Kiowa. Test flight May 2014.
- Navy wants 28
- Sea Robin = submarine tube-launched small reconnaissance airplane. Test 2013.

Types of U.S. Maritime drones III

- Common Unmanned Surface Vessel (CUSV) = 1900 km / satellite/human –guided vessel for mine clearing, reconnaissance, ASW and attack of surface ships
- Rear Admiral Matthew Klunder: “The excitement about this technology is, it is autonomous. We basically have one sailor overseeing the event.”

Types of U.S. Maritime drones IV

- Unmanned Underwater Vehicle 1 and 2 = counter mines and mapping in shallow water
- Knifefish = counter mines / 16 hours under water. 2017: 8 / 2034: 30
- Sea hunter = follows diesel subs. Test ship Fall 2015
- Ghost Swimmer = shallow water recon. Testing since 2014

Legal and ethical issues

- New developments in accordance with Geneva Conventions?
- Friendly fire issues
- February 2015 Symposium at U.S. NDU on autonomous systems: “much of the symposium’s discussion focused on the current state of unmanned systems and what progress might be seen in the DoD by 2025. It is important to note that it was of universal agreement by both the panel experts and the audience that implementation of autonomous lethality (or “weaponized autonomy”) in the DoD was unlikely for the foreseeable future due to the significant cultural, ethical, and policy concerns surrounding its use. Similarly, there was also mutual agreement across the symposium’s attendance that unmanned platforms will always augment manned platforms, with the former unlikely to completely replace the latter in DoD use.”

Debate on use of maritime drones

- Debate centers on the X-47B and the MQ-4/9C
- They are seen as precursors to the Unmanned Carrier Launched Surveillance and Strike (UCLASS) program.
- Navy criticized for hasty development
- New timetable & plans: now planned for 2023 introduction

UCLASS

- Planned: orbit 600 n.m. = multiple drones in a 24 hour scheme.
- Protectors of carriers armed with 1360 kg bombs and missiles. Complementary to manned systems
- Also land attack role? 1200 n.m. 1/3 weapons against ground targets?
- 2016: final decision on model, now being built by Northrop, Boeing, Genral Atomics and Lockheed

UCLASS

- Debate: UCLASS as protector or as attacker as well?
- John McCain: make UCLASS a heavier bomber and attacker + air refuelling
- McCain: make new plans and look at China. UCLASS too much a recon plane
- Christopher Harmer (Institute for the Study of War): Pull toward Pacific turns U.S. Navy into a coastal navy. From blue to brown

Conclusion

- Given European recent maritime ops around Africa, I believe Harmer is closer to the truth. Naval ships are no longer just weapon platforms, but have more diplomatic and trade, aid and other roles too.