

Matthew Searle

The use of unmanned platforms to deploy non-lethal effectors in the Port Security Environment



Maritime Arresting Technologies

- A small product development company with 10 years experience developing non-lethal weapons for the maritime security market
- Based on the Gulf coast in Tarpon Springs Florida
- 6,000 sq /ft prototyping shop
- Access to water for testing year round
- Large community of local specialist machine shops
- In house vessels for testing:
 - 60' trawler
 - 14' Boston whaler
 - Personal watercraft
 - Kayaks and canoes

Collaborate with Navy warfare centres and Industrial partners on a daily basis.

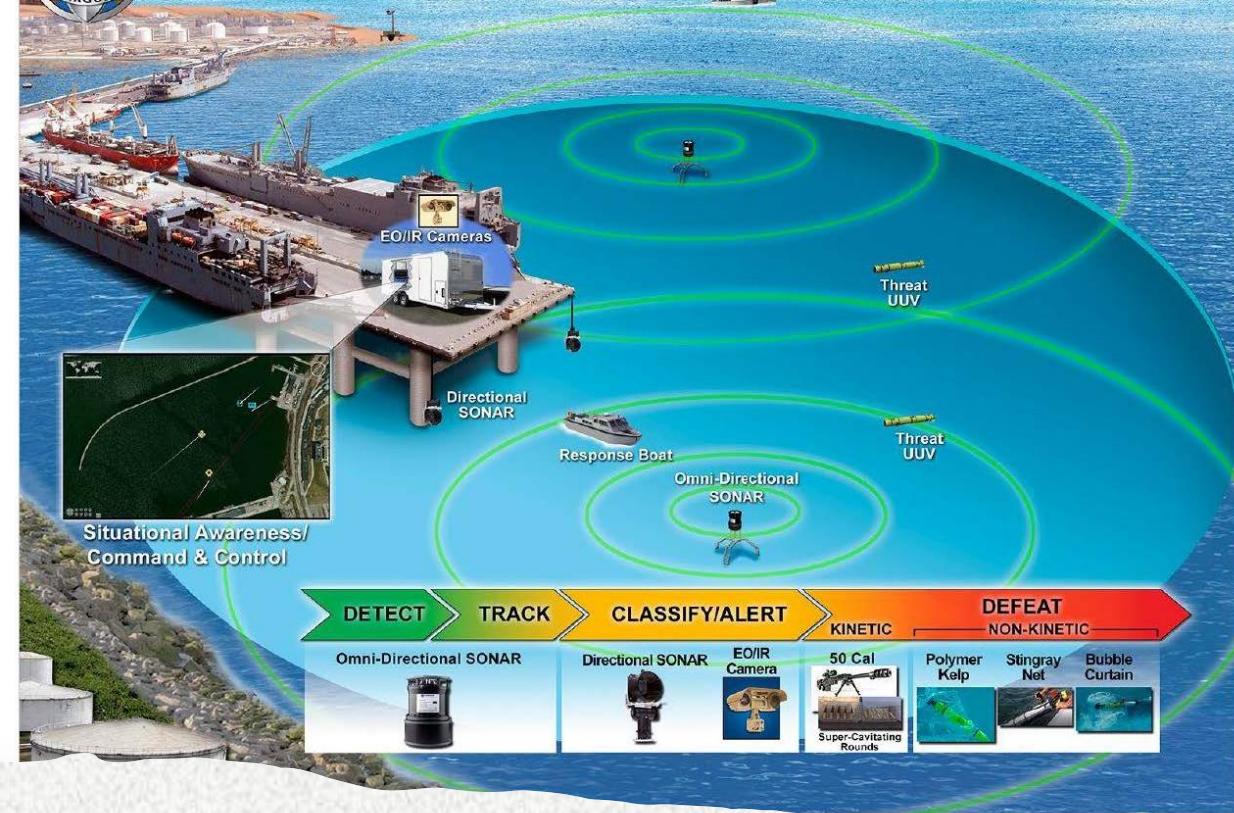




Maritime Arresting Technologies 2021 experience :

- Royal Navy / ONR AMAPS, providing systems fitted to 13m USV
- ANTX NICE : 50mph, 60" ASV with drogue line launcher intercepting and slowing a high-speed surface vessel

Coastal Trident 21: UAV interception of high-speed surface vessel and capture of UUV from "unmanned" platform



Maritime Arresting Technologies are current provider of non-kinetic effector for NUWC Newport Argus project

Work with Industry partners on parallel commercial, system of systems including sonar, radar, C2 and countermeasures to offer a complete port security package



Choice of unmanned platforms

- Aerial, fixed wing or rotary
- Sub-surface
- Surface

UXVs

Choices of non-lethal effector

- Non-lethal / non-kinetic / intermediate force capabilities

- Directed Energy

- Jamming
 - Dazzling lasers
 - 95Ghz microwaves
 - Pulsed energy
 - Plasma balls

- Physical barriers

- Drogue lines
 - Nets
 - Cavitation devices
 - MVSOT occlusion technologies





Politics & Ethics

- Any use of lethal force or kinetic effectors in foreign or domestic ports will have political consequences and is likely to cause collateral damage
- Use against misidentified innocent victims will cause significant moral and ethical issues
- The worst consequence of engaging a potential threat with a non-lethal effector is minor inconvenience.



Arming UXVs with
non-kinetic
effectors allows
instant response

- Electric power allows instant launch
- No need for crew to scramble
- Small size and low cost allows multiple units to be fielded
- Use of non-lethal / non-kinetic effectors allows low level launch authorization

Non-lethal weapons add capability to the kill chain

- Non-kinetic effectors act like a spider's web
- Buys time for manned units to arrive
- Captured target allows more time for kinetic response if needed



Any questions ?

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