

Military use of commercial UAV

Can a toy save your life? Or can a toy *take* your life?

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I. INTRODUCTION

This presentation explains why commercial drones have the potential to change the military landscape.

II. SCOPE: COTS DRONES, SPECIFICALLY MULTICOPTERS;

III. BASICS

- a. History: from gyroscopes to PIC microcontrollers to PixHawk*
- b. Degrees of freedom (DOF)*
- c. Flight modes: stabilize, alt-hold, loiter, follow, autonomous, ...*
- d. Hardware: airframe components and control systems*
- e. Platforms: air/surface/underwater*

IV. MISSIONS & CAPABILITIES

- a. Defensive*
- b. Offensive*
- c. Support*

V. WEAKNESSES & COUNTERMEASURES

- a. Expendable, fearless & deniable*
- b. Built-in stealth & encryption*
- c. Vulnerability & fault-tolerance*
- d. Immunity to direct fire*
- e. Limited range?*

VI. Q&A