

## “Are UAV’s Safe in the National Airspace”

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The recent proliferation of commercially available unmanned aerial vehicles for recreational purposes is generating serious safety concerns at the Federal Aviation Administration. Small quadcopters, operating without proper airworthiness certification, and operated by unlicensed private individuals, are deployed in operations ranging from streaming video from a college sports event to capturing still photographs at a private celebrity wedding. These quadcopters present significant hazards when control is lost, either from a vehicle malfunction, or from operator error.

This presentation reviews, from a layman’s perspective, the various considerations involved in determining the airworthiness of an aircraft and how these considerations may be applied to unmanned aerial vehicles. The presentation begins with an overview of government regulations that provide oversight for the airworthiness and proper operation of a vehicle in the national airspace. The discussion then highlights the transition from government regulation to engineering analysis. And finally, the conversation will explore a few of the design issues associated with unmanned aerial vehicles from an airworthiness and safety perspective

### Biography

W.D. “Walter” Rawle, PhD has been a member of the IEEE for 30 years as an active member of the IEEE Aerospace and Electronics Systems and Antennas and Propagation technical societies. Dr. Rawle is also active with the American Helicopter Society Avionics and Systems technical committee and will serve as the session chairman for the AHS avionics and systems technical session at their annual conference this year, Forum 71, in Virginia Beach. He received his PhD from the University of Manitoba Canada with a focus on computational electromagnetics. His career has spanned positions with General Electric, United Technologies, and currently, Ultra Electronics. Dr. Rawle resides on a farm in the Oxford Hills of Maine.