Preface


The authors have expanded their purview beyond UAS / CUAS / UUV systems we have written extensively about in our previous four books. Our new title shows our concern for the emergence of Disruptive Technologies and how they apply to the Airline, Marine and Defense industries.

There is a difference between emerging technology trends and disruptive ones. Emerging technologies are technologies whose development, practical applications, or both are still largely unrealized, such that they are figuratively emerging into prominence from a background of nonexistence or obscurity. (Wiki, 2021) Some sources say that emerging technologies are taking over the world by a storm and if misused, it could turn out to be our worst enemy. (Rose, 2019) Toward Data Science magazine lists Drone Swarms as number one in their list. The topic covered in detail in (Nichols R. , et al., 2020). Smart home devices that spy, ex. IoT or AI / IoT is number two, followed by facial recognition, spy dust and autonomous robots. (Rose, 2019)

A Disruptive technology is one that displaces an established
technology and shakes up the industry or a ground-breaking product that creates a completely new industry. (Rouse, 2021)

That is what our book is about. We think we have found technology trends that will replace the status quo or disrupt the conventional technology paradigms.

We have written some explosive chapters in Book 5. Dr. Hans Mumm has written about the advances in Automation & Human Machine Interface. Wayne Lonstein, JD has given the reader a solid look at Social Media as a Battleground in Information Warfare (IW). CEO Bart Shields has delivered a viable, less risky, more robust cyber-security alternative / replacement for the popular Blockchain Algorithm and a clean solution for Ransomware. Professor Randall Nichols has written about the advanced sensor technologies that are used by UUVs for munitions characterization, assessment, and classification. He reports on their counter hostile use of UUVs against US capital assets in the South China Seas. In a second chapter, Professor Nichols has challenged the status quo and debunked the climate change fraud with verifiable facts. In his third chapter, he explodes our minds with nightmare technologies that if they come to fruition may do more harm than good. Some of them might reach Black Swan event status. [1]

Dr. Mark Jackson has written authoritatively about Propulsion and Fuels: Disruptive Technologies for Submersible Craft Including UUVs. CEO Randall Mai has penned a chapter to challenge the ammunition industry by grassroots use of recycled metals and an alternative propellant – air. Captain John – Paul Hood writes about the changing landscape of UAS regulations and privacy. 2021 will prove to be challenging for owners and manufacturers of UAS. CEO & Dr. Suzanne Sincavage and Professor Candice Carter have teamed up to scare the pants off of us – especially during the COVID-19 pandemic – by detailing Bioterrorism Risks, Biodefense, Biological Threat Agents, and the need for advanced sensors to detect these attacks.
Over two years of solid research by a team of nine SMEs is incorporated into our book. We trust you will enjoy reading it as much as we have in its writing.

Best
Randall K Nichols, DTM
Professor of Practice
Director, Unmanned Aircraft Systems – Cybersecurity Certificate Program
Managing Editor / Co-Author
Kansas State University Polytechnic Campus &
Professor Emeritus – Cybersecurity, Utica College

LinkedIn Profile:
www.linkedin.com/in/randall-nichols-2222a691

Illi nunquam cedunt.
“We Never Yield”

References
Nichols, R. K., Ryan, J., Mumm, H., Lonstein, W., Carter, C., Hood,


A Black Swan is an unpredictable event that is beyond what is normally expected of a situation and has potentially severe consequences. Black swan events are characterized by their extreme rarity, severe impact, and the widespread insistence they were obvious in hindsight. (Scott, 2021)