



Sector Solution Overview

STADIUMS AND ARENAS WITH SPORTING EVENTS, ENTERTAINMENT, AND OTHER MASS EVENTS

DRONES ENTER THE ARENA

In recent years, unauthorized drones have been sighted over stadiums, arenas and other locations hosting sporting and entertainment events around the world. These incidents have caused delays as games, races and events are halted due to the potential risk these drones represent.

Security planning for major events is a complex effort involving multiple security agencies and controls, such as federal agencies, local law enforcement, security companies, cybersecurity measures and more. For increased safety, and to mitigate the risk of drone strikes, many stadiums, arenas and sporting events may be designated as temporary or permanent “No Drone Zones”, but again this requires considerable resources to monitor and enforce.

Most ominously, unauthorized drones can carry potentially dangerous payloads. But there are other concerns surrounding the use of drones in an entertainment and sporting environment. In addition to delaying events, unauthorized drones may be used to illegally record and stream unauthorized videos of game play and music events, interfere with official broadcasts and circumvent pay-per-view. They have also reportedly been used to achieve an unfair advantage in gambling.

Commercial drones are readily available, inexpensive and can potentially cause mayhem at packed entertainment and sporting events. How can rogue UASs be detected and mitigated in this situation?

THE SHOW MUST GO ON - DO NOT JAM IT

Radars may have trouble differentiating between authorized and unauthorized drones, small drones, spectator thrown objects, kicked and flying sporting apparatus, aerial cameras, pyrotechnics and other flying objects. They can be relatively complicated to operate, and may generate false alarms. Acoustic solutions are also challenged as drones become increasingly quieter, especially in noisy environments.

Jamming-based solutions, or hybrid solutions featuring jammers for mitigation, emit substantial amounts of directed energy to block a drone’s controller signals and render it unable to function. Jamming affects communications, which could hamper the live broadcast and the security operation. In addition, some jammers look like guns, the use of which could cause fear and panic amongst spectators.





Many entertainment and sporting and concert venues utilize authorized drones to capture video footage of the event, but some jamming solutions may be unable to distinguish between authorized and unauthorized drones – jam one and you risk jamming them all! Also, jamming can be temporary, and the drone pilot may retake control if the jamming ceases. Finally, drones that get jammed can behave unpredictably, landing in unpredictable places, flying erratically into other structures or worse still, plummeting to the ground or into the crowd.

Kinetic counter-drone solutions, which involve physically shooting down the drone, are also too risky in crowded stadiums. What goes up must come down, and the projectile, the net, the falling drone, or the metal debris that is created from shooting a drone, could injure players, racers, musicians and spectators alike.

TAKEOVER IS A HOMERUN WITH RF CYBER DETECTION AND MITIGATION

D-Fend Solutions' EnforceAir counter-unmanned aerial system (C-UAS) solution automatically and passively detects, locates, and identifies rogue drones, as well as the location of the pilot, then neutralizes the rogue drone by taking full control of the drone and landing it safely in a user-defined preselected location. At the same time, all authorized drones are monitored but remain fully operational and unaffected.

Unlike conventional counter-drone technologies, EnforceAir empowers security personnel with full control to protect players, competitors, musicians, spectators, security personnel, venue staff, broadcasters and all others in or around the venue. The system employs non-jamming, non-kinetic technology, preventing any collateral damage, interference or disturbance, while maintaining critical safety and operational capability requirements. Continuity can be ensured, without interrupting the event or inadvertently frightening spectators and fans.

AGILE & INTUITIVE

Stadiums, arenas and other sporting locations face a wide variety of drone threats. EnforceAir provides the ultimate in operational agility and flexibility. Easily configured and offering an intuitive, user-friendly interface, EnforceAir combines high performance C-UAS capabilities with seamless operational flexibility.

For more information, please visit: www.d-fendsolutions.com or contact us at: info@d-fendsolutions.com

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