

Drone Technology: Awareness and Importance

Development is closely related with advancement of technology. Technology advancement has a lot of impact on the quality of life. With these fast paced technological advancements, we see that technology is present in all sectors virtually. For this reason, it became a necessity to integrate technology in all the sectors. As we know, that nations had invested a lot in technology advancement. The main reason behind this was that many anticipated another war and all countries were working towards preparedness in the event of war. This led to many technology research and innovations. One of them which is trending is Unmanned Aerial Vehicles (UAVs) or simply drones.

The remarkably clairvoyant inventor Nikola Tesla was the first to foresee the coming of militarized unmanned vehicles. It was one of several futuristic predictions that he made while speculating on the potential uses for a remote control system he was developing at the time. In the 1898 patent “Method of and Apparatus for Controlling Mechanism of Moving Vessels or Vehicles” (No. 613,809), Tesla described, in a seemingly prophetic tone, the wide range of possibilities for his new radio-control technology:

“The invention which I have described will prove useful in many ways. Vessels or vehicles of any suitable kind may be used, as life, despatch, or pilot boats or the like, or for carrying letters packages, provisions, instruments, objects... but the greatest value of my invention will result from its effect upon warfare and armaments, for by reason of its certain and unlimited destructiveness it will tend to bring about and maintain permanent peace among nations.”

About three months after filing the patent, he gave the world a glimpse of how such a technology might work. At the annual Electrical Exhibition held at Madison Square Garden, before a stunned audience of attendees, Tesla gave a demonstration in which a control box that transmitted radio signals was used to manoeuvre a toy boat along a pool of water. Outside of a handful of inventors who had already been experimenting with the technology, few people had even known about the existence of radio waves.

Drones are technically unmanned aircrafts or we can say simply a flying robot. The drones can be controlled by remote or can fly autonomously with the help of software which are programmed using techniques of embedded systems in conjunction with the onboard sensors and Global Positioning System (GPS).

Today there is a wide application of drones other than military purposes. Some of them are listed below:

1. Agricultural Drones: Precision agriculture (PA) or satellite farming or site specific crop management (SSCM) is a farming management concept based on

observing, measuring and responding to inter and intra-field variability in crops. Drones have a unique advantage in being able to provide live data from a range of sensors (including multispectral, NIR and lidar) to perform in-depth analysis of crop health and more.



2. Drones and Digital Mining: Drones are beginning to have a profound effect on mining. Hexagon Mining is shaping change by applying UAVs to solve challenges in the industry: better blast optimization, improved safety, faster surveying, and construction of the most comprehensive and continuous project datasets.

Foot traffic is not allowed or is ill-advised in many parts of a mine. Obtaining measurements with a surveying rod, total station or GNSS can be problematic. UAV aerial photography and remote sensing allow us to capture all that information without putting someone in harm's way.

Aerial photogrammetry has been around for as long as the airplane. For mining though, a manned aircraft was too expensive and too inconvenient for regular airborne photogrammetry. Unmanned aircraft systems (UAS) are a natural fit for mining and the advent of the lithium polymer battery has transformed development of airborne photogrammetry.

Data can now be captured in near real time from areas that would otherwise be inaccessible or unsafe for staff. Whether it's for blast fragmentation, stockpile volumes, or any other mine-related activity, data can be captured quickly and safely.



3. Drones in Warfare: We are living in the first age of drone warfare. While unmanned aerial vehicles can trace their origins back at least as far as 1918, it took the War on Terror and its accompanying technological advances to truly showcase the abilities of long-endurance, high-flying remotely piloted machines. Yet despite their prominence in modern battlefields, the greatest impact of drones will be felt in the future.



4. Surveying/Mapping/GIS: Geospatial professionals rely on our mdMapper packages to get the job done every day. From basic mapping to survey-grade results, Micro drones helps you work smarter.



5. Inspection: Save time and hassle while reducing risk and increasing on-the-job safety. Wind turbines, power lines, pipelines, railroads, buildings, towers and more should be inspected using a drone.



6. Science & Research: Take your observations to new heights. Literally, the Micro drones md4-1000 and md4-200 unmanned aerial systems are an easy way to collect data and images from above.



7. Aerial Video and Photography: Trust the stability, endurance and resistance to harsh environments of the Micro drones line up to procure the footage you need.



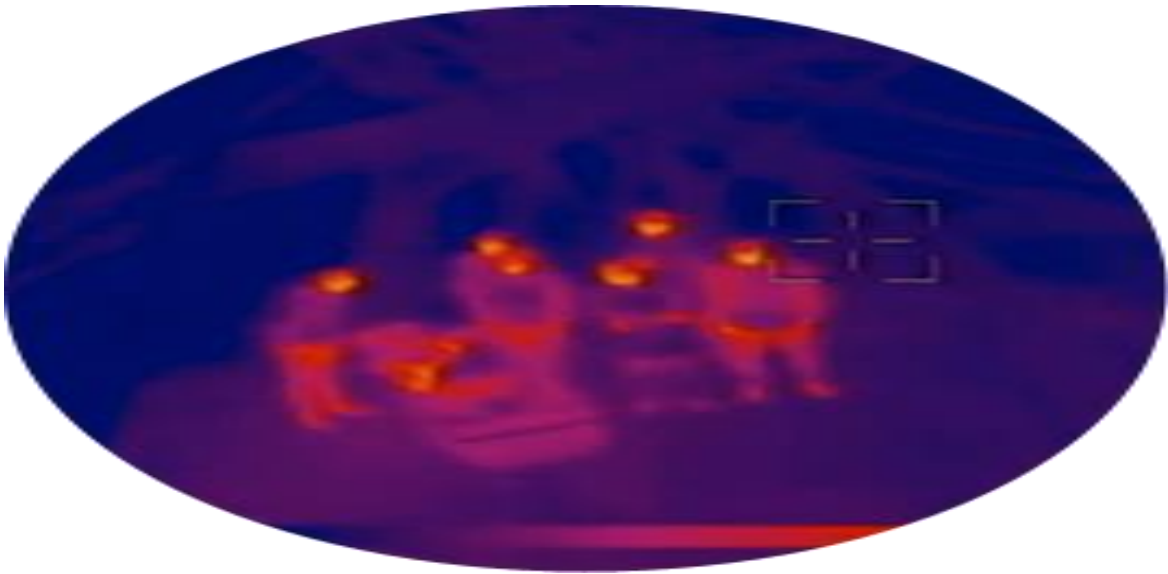
8. Unmanned Cargo: Consider the md4-3000 or md4-1000 to help get your parcel to its destination quickly and more affordable than traditional methods.



9. Search and Rescue: Affordable air support is now available via Micro drones. Fire-fighters, police, and water rescue professionals are developing creative ways to use the md4-1000 and md4-200 to help ground teams increase their effectiveness.



10. Monitoring: A higher perspective will improve your surveillance work. The Micro drones md4-1000 and md4-200 are perfect aerial platforms to carry your surveillance sensors and monitor situations from a safe distance.



11. Security: Unmanned aerial systems from Micro drones are trusted by civil security pros worldwide. Ease of deployment, stability, resistance to harsh weather, and flight endurance are just some of the reasons to consider the md4-1000 or md4-200 to carry your security payload.



ORANGE CITY DRONE RACE LEAGUE

Aerospace is a high technology industry where it deals with the development of aircraft and spacecrafts. The Indian Aerospace Industry is witnessing an unprecedented growth. Keeping this aim of promoting research in aerospace and making Nagpur as the centre for aerospace industry, Nagpur Institute of Technology, Nagpur is organizing The Orange City Drone Racing League (OCDRL), powered by Indian Drone Racing League for such innovative minds.



India's first Drone League was organized by IIT Gandhinagar at their technical fest "Amalthea" in association with the Indian Drone Association League.

OCDRL is the second biggest racing league and first of its kind in India and is expected to be one of the biggest racing leagues attracting over 40 drone racing pilots all over India flying high-speed drones.

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OCDRL
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CASH PRIZES INR 2,50,000