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**THE FLIGHT CHARACTERISTICS OF UNNAMED AIR VEHICLES**

This technical note presents an over view of the flight characteristics of Unmanned Air Vehicles (UAV's). The research focuses on the various types of UAV before moving on to the associated technical requirements and innovations. The categories discussed cover flight control, navigation, propulsion, payload capability, launch and recovery, communications and airspace management. To conclude, current and future UAV development issues are also explored in light of the political and economic market.

An unmanned aerial vehicle (UAV), commonly known as a drone and also referred by several other names is an aircraft without a human pilot aboard. The flight of UAVs may be controlled either autonomously by onboard computers or by the remote control of a pilot on the ground or in another vehicle.

**Introduction**

Development of unmanned air vehicles has been greatly accelerated in the past decade. Major aerospace organizations have seen the flexibility of application of such vehicles in a military or battle field situation. This will inevitably do away with the high casualties associated with conflict scenarios.

There are three groups of UAV:

1. High altitude and long endurance (HALE).
2. Medium altitude and long endurance (MALE).
3. Tactical role referred to as TUAV.

A combat UAV i.e. a UCAV can fall into any of the three above categories.

**Flight characteristics are divided into several groups:**

1.Flight Control
2.Navigation
3.Propulsion
4.Payloads
5.Launch and recovery
6.Communication
7.Air Traffic Management

**Discussion and Conclusions**

The future of UAV's definitely looks bright and eventful. Given the current conflicts worldwide, UAV's have a definite part to play from a military perspective. Commercialisation of UAV's in the civilian sector will however take longer due to both technology adaptability, UAV terminology and public perception. This stems from the current UAV incident rate which is 1 in 1000. This incident rate needs to be improved to 1 in 100000 for some public confidence. Furthermore, the issue of funding, liability, safety, insurance and certification are all on-going processes for UAV's thus amplifying the public concern for such vehicles to be used for civilian purposes. In terms of funding, the United States has the most dedicated funds for UAV research and development closely followed by Europe.

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