

CLASSIFICATION OF UAV (UNNAMED AIR VEHICLE)

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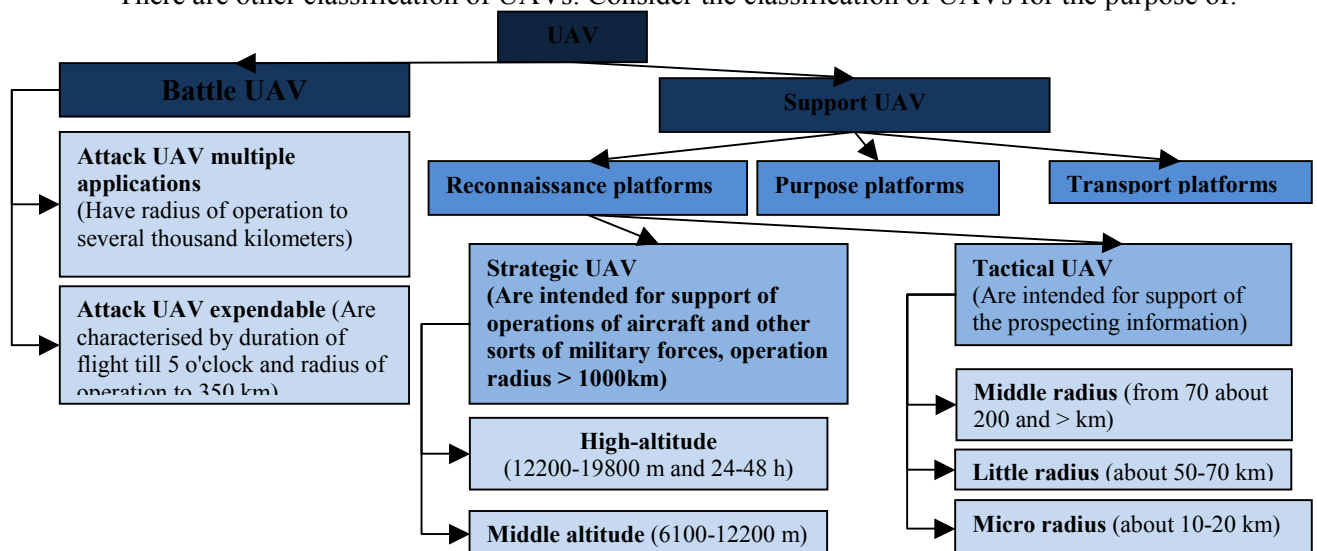
Unmanned Air Vehicle became one of branches of military and civil technics which dynamically develops presently. The basic advantage UAV over piloted air vehicle is absence of the pilot, and consequently UAV is convenient in operations dangerous to the person (the infected areas and the manufactures, remote districts and others). In working out of pilotless flying machines all achievements of development of aircraft of mankind are used. It allows UAV to occupy the niche in the development of modern techniques and to become a perspective direction of the subsequent scientific probes.

Much of our time existing in practical developments in the creation and use of UAVs for various purposes requiring their scientific generalization of purposes development of modern theory and legal basis of their design and application. Due to the fact that the development of UAVs, many momentum is filled with modern aviation science and technology, the main emphasis of this theory should be made to develop models and methods of System Integrators designing unmanned systems and their effective use for different people's economic and military tasks. The first stage of development of any theory is a unified terminology and classifications of research and development.

Consider the example of the classification of UAVs for such basic parameters as the take-off weight and range:

- micro-and mini-UAV close-range (take-off mass of 5 kg, a range to 25...40 km);
- lightweight UAVs small range (take-off mass of 5...50 kg, the range of 10...70 km);
- lightweight UAVs medium-range (take-off weight of 50...100 kg, the range of 70...150 (250) km);
- average UAVs (take-off weight 100...300 kg, the range of 150...1000 km);
- medium-heavy drones (take-off weight of 300...500 kg, the range of 70...300 km);
- heavy, medium-range UAVs (take-off weight of more than 500 kg, the range of 70 ... 300 km);
- heavy drone large duration of flight (take-off weight of 1500 kg, the range of about 1500 km);
- unmanned combat aircraft (BBL) (take-off weight of more than 500 kg, the range of about 1500 km).

There are other classification of UAVs. Consider the classification of UAVs for the purpose of:



There are other classifications of UAVs. For the purpose of: Attack UAV multiple applications; Attack UAV expendable; Strategic UAV; Tactical UAV; Miniature UAV.

The direction of development of UAV is directed towards reduction of their sizes (tiny flying devices MUAV) and towards increase in their sizes (for example creation of the pilotless passenger device). The following generation UAV, necessary for the operative adaptation, will engage at itself both fighting, and prospecting devices. It is planned that fighting UAV – very fast and maneuverable can use laser and beam weapon.

References

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