Ornithopter

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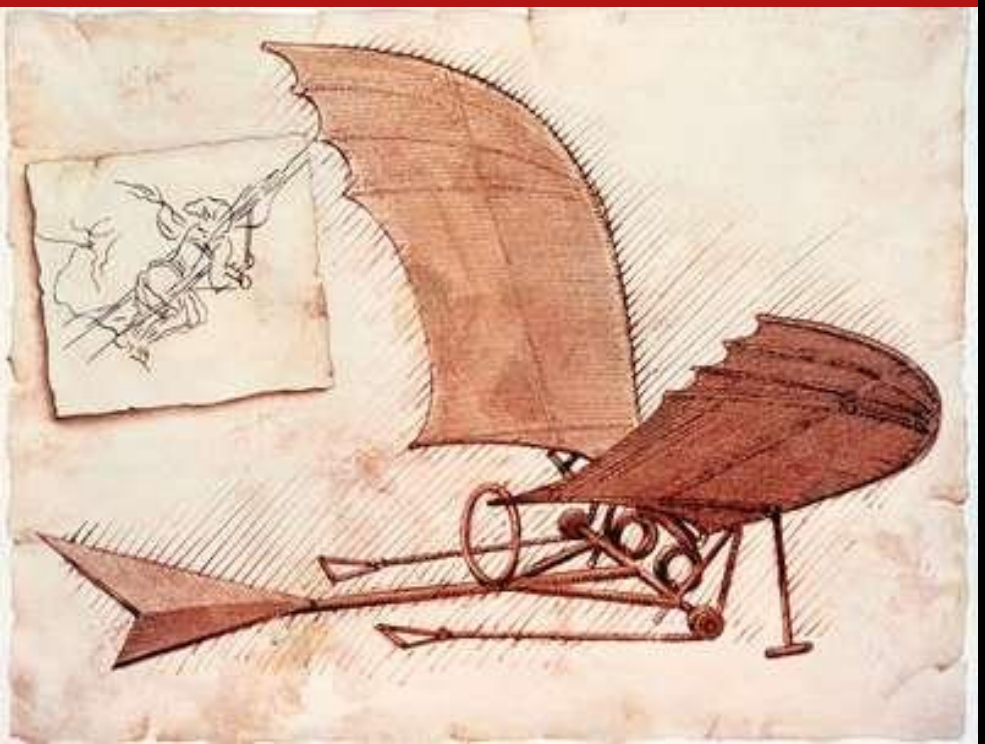
ABSTRACT



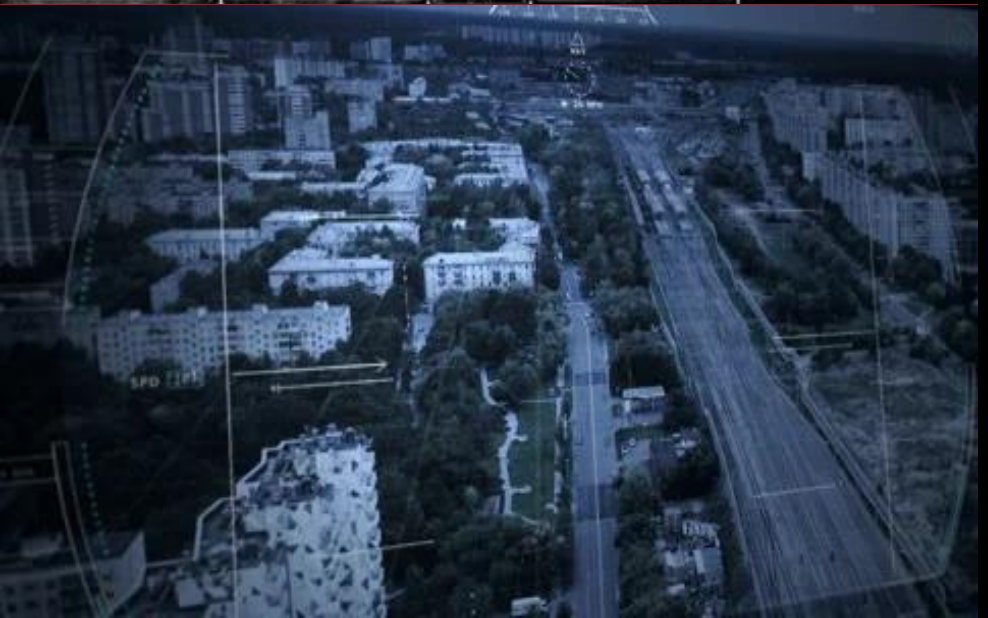
- The main objective of our team is to design a radio control ornithopter . Ornithopter is nothing but an aircraft , a machine which is designed in such a way that it achieves flight by flapping wings just like a bird does .**Leonardo da Vinci** made the first real studies of flight in the 1480s. He had over 200 drawings and sketches that illustrated his theories on flight. His ornithopter flying machine was an aircraft that would fly by flapping its wings, a design he created to show how humans could fly.

- Now there are three different major types of ornithopter as follows ,

1. Free Flight Ornithopters-These ornithopters are the simplest and least expensive to build.
2. Radio Controlled Ornithopters: Many ornithopters are powered by electric motor and battery
3. Manned Ornithopters: A few manned ornithopters have made successful flights.

- Our team will design in the category of unmanned radio controlled ornithopter , rather a sustainable ornithopter delivering its purpose based on the problem statement we will see.

PROBLEM STATEMENT/ CHALLENGES



- Defence based surveillance
  - Unkown identity across the border

For the past few years as reported as we know that Illegal entry is the act of foreign nationals arriving in or crossing the borders into a country in violation of its immigration law. Human smuggling is the practice of aiding people in crossing international borders for financial gain, often in large groups. Human smuggling is associated with human trafficking. A human smuggler will facilitate illegal entry into a country for a fee, but on arrival at their destination, the smuggled person is usually free.Trafficking involves physical force, fraud, or deception to obtain and transport people, usually for enslavement or forced prostitution.Not only that we have also seen active cases of terrorist entering in our nation with a force resulting in killing in mass of our Indian army.The main problem arises here how effective they do become in executing hazardous products , even bombs in mass across the border , the fact that we completely rely on our army.Questions arised like ,

- Why the terrorist are'nt track down easily even after one gets successful in executing a mission ?
- Why the nearby control system is unable to track it with a full force , where the evidence will lead them too?
- How much efficiently does the army gets reported to the exact current scenario taking place?
- Why are'nt our army report it to the nearby control base , even if it does how much effiecent it is to track the single terrorist or the whole mass?

SOLUTION

Ornithopter for surveillance near the border?

Our team came up with an solution of making an ornithopter for surveillance purpose.When we say about its primary purpose we know that the ornithopter is used for surveillance purpose only , and we very much know army kight have already proposed it already.Now what we will be doing is in a different algorithm. We will design our ornithopter with the soul pupose of ofcourse surveillance , but it will only be launched/controlled when there a intentional attempt in crossing the border.

There will be sensored intalled or enabled under the line of border with a limited distance and if any unintention attempt will led to the alert to the control room and it will be our ornithopter controlled by the control room present nearby , to check whether everything is perfect or there is a problem that is going on near the border .

This would enable the army to take quick and instantaneous action and keep an eye on it , and when we mentioned action we have to keep in mind few things.

- Our ornithopted should be fast and quick enough to track and control it from the nearby control room.
- Our ornithopter should have enough power to be regulated when we speak of distance and time of taking the action further.
- Our ornithopted should be effective enough to keep an eye on the particular targeted area.
- Our ornithopted will have to be in a limited radius to get it controlled.

CONCLUSION

SRM UAV

- Lastly our team would like to conclude it that , we are focuing on designing a ornithopted which is effiecient enough to float in air with a very maximum distance from the line of border till the nearby control room present for a sole purpose for carrying a surveillance so that it is efficient enough to eirther report or track down the epicentre of the case happened there .Our primary objective is not only delivering a ornithopter for spying purpose rather making it a sustainable one too so that it will be eco friendly to use .We will have few problems based on the distance and time specifically when it comes to the line of border because it might be too late to track down easily , but any such attempt will led with an update to the control room without notifying the culprit know.We can easily track such terrorist or smuglers or such related attempts of illegaly crossing the border .If tracking is an option near the border , where still today thousands of such people do attempt and get successfull , all we have to do is trust our UAV , our ornithopter.

RESOURCES

Website

Illegal entry - Wikipedia