MULTIPURPOSE DRONE

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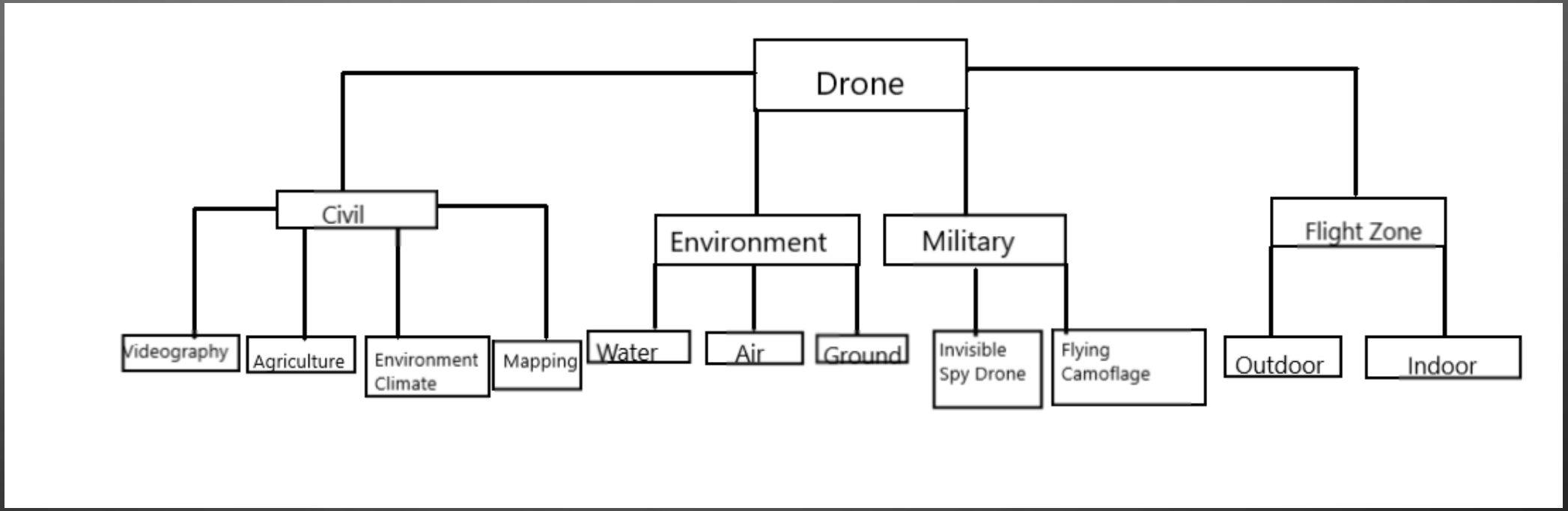
PROBLEM DEFINITION

- The problem is based on the two major pillars of the India they are our farmers and the military .
- Firstly the farmers who feed the entire nation needs to get the good access of the cultivating material ,and even to run in between in the fields and to surveillance the fields.
- And the military who are in great threat of enemies ,and need a bird view vision of the camps.

PROPOSED IDEA

- There are many drones, out of which we are using the Quadcopter.
- Easily adaptable, very handy to use.

METHODOLOGY



WORKING PRINCIPLE

- Quadcopter is a device with an intense mixture of electronic, mechanical and mainly principle of aviation.
- The rotation of the motors changes as per the transmitted signal send from the six channel transmitter.

ADVANTAGES

- The power supply of the batteries is equally distributed equally on the drone and the carrier.
- When the drone takes off, the carrier below the drone stops functioning, this gives an easy thrust to the drone.
- When the carrier is in action the drone which is over it stops working i.e, the propeller stops working, which makes the forward motion very easy.
- When there is a sudden drop in the drone the first part to hit the ground is the carrier base thus makes a minimal damage to the entire system.

APPLICATIONS

- AERIAL PHOTOGRAPHY : drones are now being used to capture the footages that would otherwise require helicopters and cranes.
- GEOGRAPHICAL MAPPING : available to the amature and professionals, drones can acquire very high – resolution data and download imaginary , in difficult to reach locations
- DISASTER MANAGEMENT : drones

PARTS EXPLANATION:

PARTS USED ARE :1.BRUSH LESS MOTORS
2.PROPLERS
3.CARBON FRAME
4.CIRCUIT PLATE
5.FLIGHT CONTROLLER
6.BATTRIES
7.CONNETING WIRES
8.RECEIVER
9.REMOTE CONTROLLER
10.CARRIER

BRUSHLESS MOTORS: BASICALLY A MOTOR WORKS ON THE PRINCIPLE OF ELECTROMAGNETIC INDUCTION.

THE MOTORS USED IN THE PROJECT IS

BRUSHLESS MOTORS : THE MOTOR ITSELF INVOLVES IN THE ROTATION AND EVEN ROTATES THE PROPELLERS ,

THE CAPACITY OF THE MOTOR IS 1000KV.

THE NUMBER OF MOTORS USED ARE FOUR.

PROPELLERES : PROPELLERS ARE NOTHING BUT WINGS .WHICH MAINLY WORKS ON THE PRINCIPLES OF AERODYNAMICS AND AVIATION .WHICH ARE PERFECTLY DESIGNED OF LENGTH 30 CM .

WHICH ARE MADE OF LOW DENSITY CARBON.

THE MAIN PURPOSE OF THE PROPELLERS ARE TO LIFT THE CARRIER AND THE DRONE .

THE NUMBER OF PROPELLERS USED ARE FOUR .

EACH BRUSH LESS MOTOR AT THE FOUR ENDS HOLDS EACH PROPELLER.

CARBON FRAME :THE CARBON FRAME GIVES THE PHYSICAL SUPPORT TO THE CIRCUIT PLATE AND EVEN TO THE DRONE . N
THE FRAME USED CONSISTS OF STAND SUPPORT TO IT SELF WHICH CAN STAND ON THE FLOOR WITH OUT ANY IMBALANCE .
AND ITS AIR TURBULENT STRUCTURE MAKES THE MOVEMENT EASY.
THE MOTORS ARE ATTACHED TO IT, AND THE CARRIER ALSO.

CIRCUIT PLATE :THE CIRCUIT PLATE IS CONSIDERED AS THE BRAIN OF THE ENTIRE CONTROLLERS AND FUNCTIONS .
SOLDERING MACHINE IS USED TO GIVE THE CONNECTIONS TO THE PLATE.
THE RECEIVER IS CONNECTED TO IT AND THE FLIGHT CONTROLLER ALSO.

THE REMOTE CONTROLLER IS USED TO OPERATE THE PERFORMANCE .

BATTERIES : THEY ARE POWER SOURCES
THE BATTERIES USED ARE 12 VOLTS
TO RUN A COMPOUND MACHINE WE HAVE USED 12 VOLTS BATTERIES.
THE MOTORS WITHDRAW THE POWER TO RUN THE WHEELS AND PROPS.
LITHIUM IS THE BASIC ELEMENT IN THE BATTERIES .
THESES ARE THE PRIMARY BATTERIES ,WHICH CANNOT BE RECHARGED

RECEIVER : THE RECEIVER IS USED TO CONTROL I.E WHEN THE SIGNALS ARE SENT THROUGH THE REMOTE THE RECEIVER CONNECTED IN THE DRONE WILL RECEIVE THEM AND PERFORM THE TASK GIVEN.

IT IS A CRUCIAL COMPONENT IN THE DRONE .

CONCLUSIONS

- By this project we can conclude that by using this drone we can spy not only in air but also on ground and water.

REFERENCES

Faculty from Electronic Department

THANK YOU