CLAIMS

WHAT IS CLAIMED IS:

1. A blimp like Unmanned Aerial Vehicle (UAV) comprising:

   a propulsion system of the blimp like UAV, comprising any or combination of fixed wings, flapping wings, and rotary blades, and propellers;

   a payload comprising at least an electronic control system to maneuver or pilot the UAV;

   at least a power source either onboard in the form of stored power onboard such as a battery or fuel, or has a power gathering source such as a solar panel or wind energy generator, or has a power delivery source such as a tether cable, wireless energy transfer through EM radiation, or a combination of any of the these; and

   a communication system to communicate with the UAV to exchange data and instructions, and

   a gas chamber that is externally attached and detachable from the UAV, to allow removal of gas chamber and replacing the detached air chamber with another gas chamber, wherein the gas chamber is adapted to hold a gas for buoyancy purposes to reduce the net effective Gross Take Off Weight of the UAV,

   wherein the blimp like UAV requires the gas chamber for flying.

2. The system of claim 1, wherein the Three Dimensional (3D) shape of the gas chamber is a closed geometrical shape formed in 3D using basic Two Dimensional (2D) geometries and extruding them or sweeping them about a One dimensional (1D) axis.

3. The system of claim 2, wherein the gas chamber comprises a gas having density less than that of air, or a combination of gasses having the net density less than that of air.

4. The system of claim 3, wherein the gas chamber can have different size and shape configurations.

5. The system of claim 4, which uses onboard or off-board intelligent control to take real-time actions upon detection of real-time events.

6. The system of claim 5, wherein the gas chamber is transparent to an extent, or colored or camouflaged with the surroundings.

7. The system of claim 6, wherein the surface of the external surface of the gas chamber has solar cells for absorbing ambient light and converting it to electricity to supply operational power and for storage.

8. The system of claim 7, wherein the gas chamber is designed in a tubular form or a donut form.

9. The system of claim 8, wherein the inner void of the tubular gas chamber has a breathable net or mesh, which allows air to pass through, but limits objects of a minimum size from passing through.

10. The system of claim 9, which can be used to transmit live video to a remote location or a display unit.

11. The system of claim 10, which can be used to play games in the air by coordinating a set of movements with a remote controller.

12. The system of claim 8, wherein the electronics and propulsion system are environmentally proofed to allow operation on the surface of water and also in damp environmental conditions.

13. The system of claim 11, wherein the UAV can land and take off from the surface of the water, land or ice.

14. The system of claim 12, wherein the on-board payload consists of sensors for remote monitoring, automatically, manually or a combination of the two.

15. The system of claim 13, wherein the gas chamber is streamlined to minimize air drag and has external fins to passively maintain its least drag orientation while traveling through air or while encountering oncoming air.

16. The system of claim 14, wherein part of the gas chamber has a display screen, wherein an internal projection unit casts graphics on the inner surface of the gas chamber to form an aerial display unit, wherein the display is viewable from outside of the gas chamber.

17. The system of claim 15, wherein the Gas chamber is enclosed in a spinning LED mechanism to display graphics using the property of persistence of vision.

18. The system of claim 16, wherein the gas chamber is replaced with an aerodynamic donut shaped ring made of a swept 2D airfoil to provide lift when moving through air or when air is inbound towards the UAV.

19. The Unmanned Aerial Vehicle (UAV) of claim 18, comprising:

at least one surface exposed to external air is laden with at least one or more cavities or holes or vents or valves, wherein the surface of the vehicle has air moving relative to the surface, and the air moving over the vehicle surface moves in and out of the at least one or more cavities or holes or vents or valves and causes differential pressures and velocities across the one side of the surface and the other side of the surface.

20. The vehicle of claim 19, where in the valves open outwards when the air velocity is higher on the outer surface of the vehicle than the inner surface, thereby generating vortices.

21. The vehicle of claim 20, where in the valves or holes or vents cause air to circulate between the inside of the body of the vehicle and the outside air.

22. The vehicle of claim 21, wherein the cavities on the surface of the vehicle produce sound or high frequency waves.