

# Flying Cars



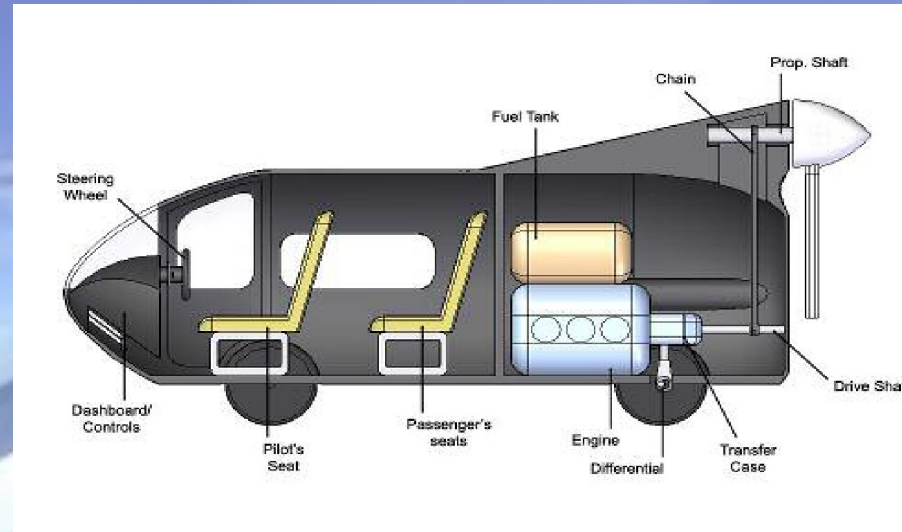
By:

SHAIKH SHARJEEL ZEESHAN

Under The Guidance Of:

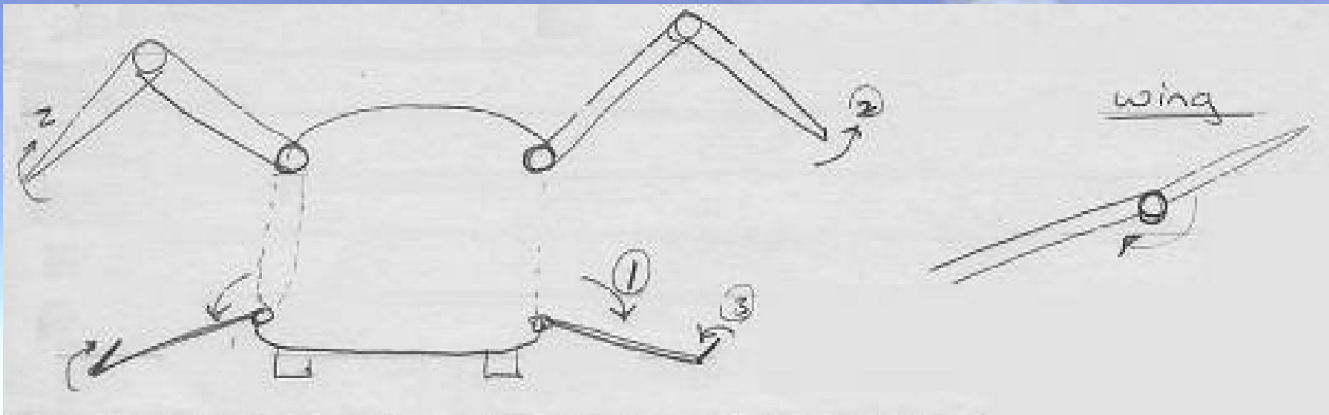
Prof. LINGARAJ KALE

# PROPULSION SYSTEM



- The flying car was required to be run on Jet Fuel A or similar and have a single engine and method of propulsion (to make maintenance simpler and the overall weight of the aircraft lighter). This section discusses the main power requirements for the vehicle, engine and propulsion method selection, and also describes the method of conversion between the engine powering the car and aircraft.

# Wings



- The first configuration considered was to have the wings folded vertically, flush with the sides of the car. The wings would be mechanically constrained vertically onto the sides of the vehicle. There was also the option of stowing the wings the fuselage through the use of a strategically placed door which would allow the wings to fold into the fuselage.

# Introduction

- Have you ever daydreamed about your car taking off and flying over the road?
- Creating a new type of transportation that doesn't depend on roads. At the beginning of a new century, we may see the realization of a century-old dream.
- The technology to make flying cars safe and easy to fly may finally be here.
- We will take a look back and examine some of the flying vehicles that you may soon be able to park in your garage in the next decade!



# EVER SINCE WE SAW THE MOVIE STAR WARS...



# History

- **Curtiss Auto plane** - In 1917, Glenn Curtiss unveiled the first attempt at a flying vehicle.
- His aluminium Auto plane sported three wings and a four-bladed propeller at the back..



# History

- **Arrow bile** - Developed by Waldo Waterman in 1937, the Arrow bile was a car where the wings could be detached for storage.





# History

- The wings and tail section of the plane could be removed to accommodate road travel.
- It took only five minutes to convert the plane into a car.
- The Airphibian was the first flying car to be certified by the **Federal Aviation Administration (FAA)**.





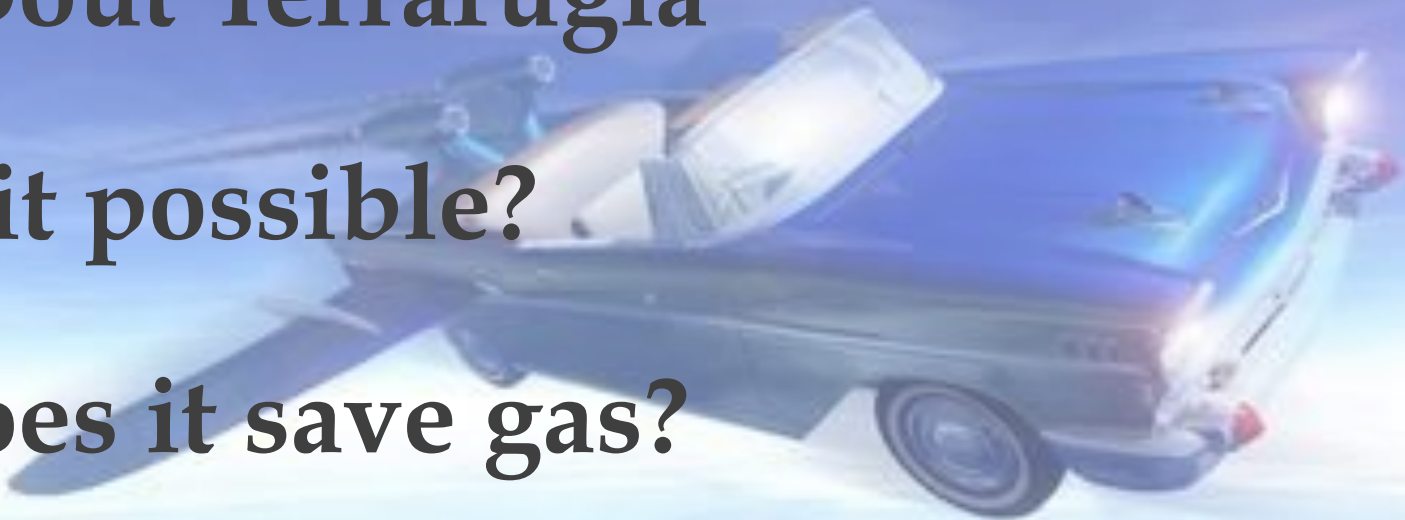
# History

- **ConvAirCar** - In the 1940s, Vultee developed a two-door car equipped with a detachable airplane unit.
- The ConvAirCar debuted in 1947,
- And offered one hour of flight and a gas mileage of 45 miles
- It crashed on its third flight!



# TERRAFUGIA

- About Terrafugia
- Is it possible?
- Does it save gas?



# FLYING CAR DETAILS

- The flying car Transition also has four wheels and wings usual eight meters down-scale coupled with a rear propeller will be able to rise. Weighs 600 kilograms. But quiet to manning the pilot need not be flying because it requires only a U.S. license comes with 20 hours of flight.
- The 'aircraft wheels, ' as called Terrafugia, can fly at speeds of up to 114.5mph (184kms / h) and their average flight is 460millas (740kms). To take off, you need a track about 500 meters. Thanks to use unleaded gas instead of fuel for airplanes or planes, the aircraft flying car is the most 'green' is in the world, consuming just 7.85 liters of gasoline per 60millas flight. This prototype will drive the front wheels to travel through the streets and a propeller to fly.



# WORKING

- How to Work from Terrafugia:  
when on land, the Transition uses motion-rear-wheel, independent suspension and CVT transmission. Transition flight range of 750 km, with maximum speeds of up to 185 km / h, and the fuel consumption of 18.9 km / liter.

To change of the car into a light plane, it only takes about 30 seconds. Driving force comes from the regular gasoline engine that can be filled at regular gas stations. The design is slim, making this car can still get into the garage of the house.

However, to be able to use this flying car, the driver must have a pilot's license can be obtained after 20 hours of flying. Terrafugia also provide special training for every consumer to be able to use this flying car safely.

# TERRAFUGIA

- CARS WITH WINGS
- GASOLINE AS FUEL
- WORKING FOR ADVANCEMENT



# Save Gas?

- Normal high-octane gasoline
- 30 miles per gallon
- Fly about 115 miles per hour
- Go Green!





# MODERN FLYING CARS



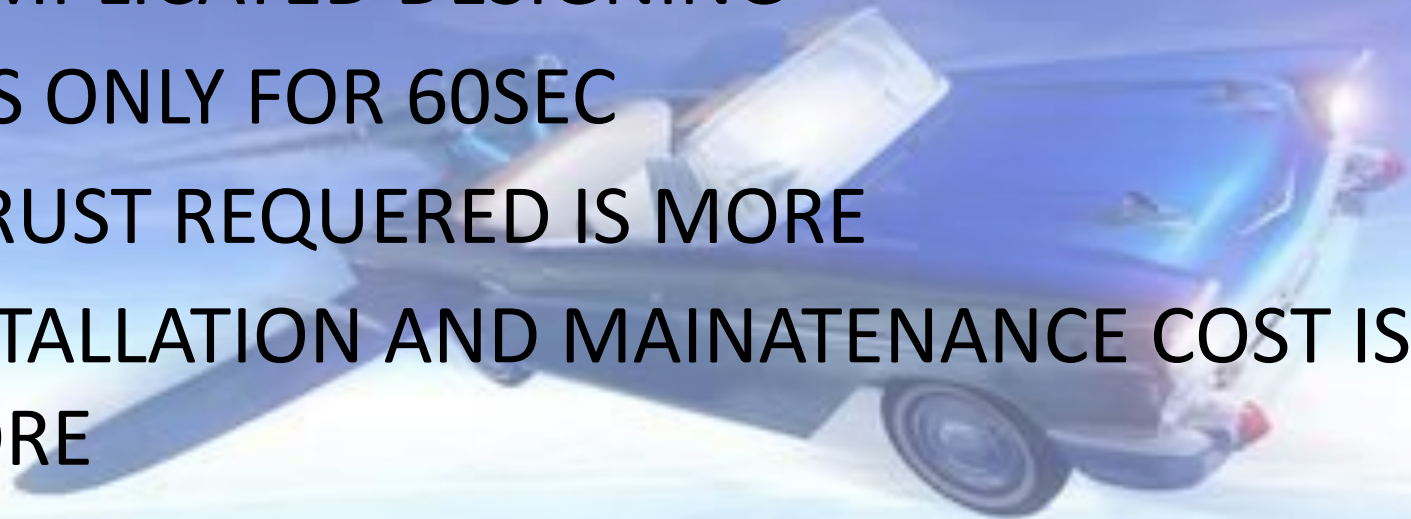
GEAR  
FACTOR

# ADVATAGES

- WORKING PROCESS IS NOT YET REVEALED
- NO NEED OF SPECIAL TRACKS
- CAN BE USED IN ALL TYPES OF VEHICLES
- NO MORE TRAFIC JAM
- ACCUPIES SAME PLACE AS THAT OF NORMAL VEHICLES

# DIS-ADVANTAGES

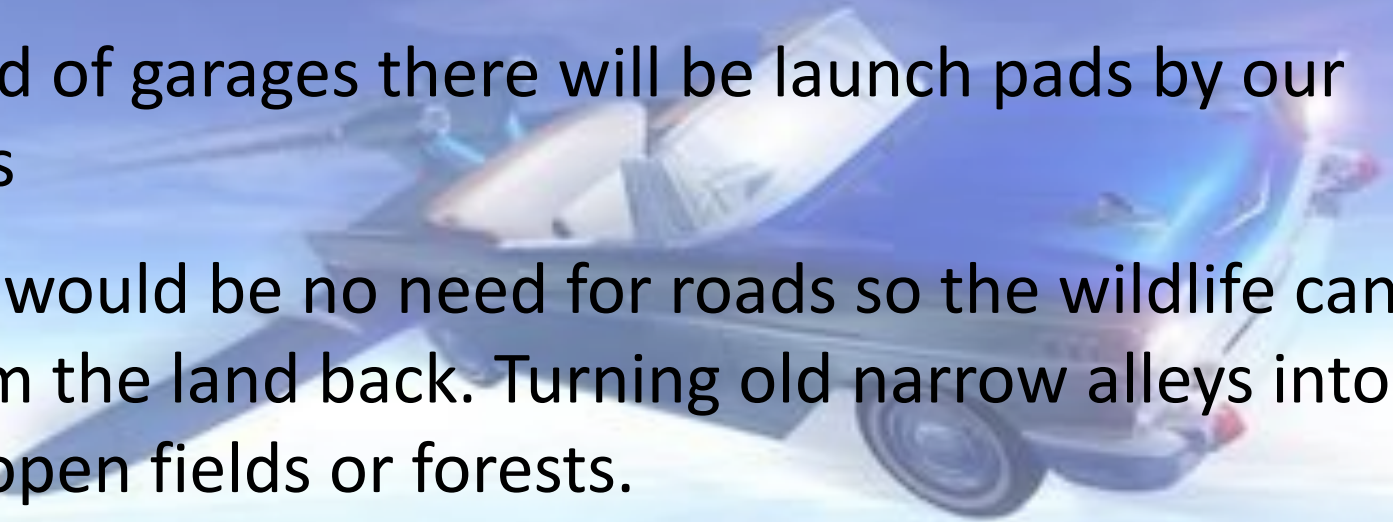
- COMPLICATED DESIGNING
- FLYS ONLY FOR 60SEC
- THRUST REQUERED IS MORE
- INSTALLATION AND MAINATENANCE COST IS MORE
- CANNOT BE USED IN ALL PLACES





# Future of Flying Cars

- In the future all this technology will develop so much that buses or even trains will fly.
- Instead of garages there will be launch pads by our homes
- There would be no need for roads so the wildlife can reclaim the land back. Turning old narrow alleys into large open fields or forests.
- Ferrari, Audi and BMW showing interest in this type of cars.



# CONCLUSION

- This car, unlike earlier models, is very practical, therefore it can be stored in a garage, like a normal car.
- It is hoped that this new model, successfully meets all flight testing and management, scheduled.
- Obviously, this car, will call attention worldwide.
- Hope that the Terrafugia transitions can be transformed from car to plane in just 30 seconds.

# References

- <http://www.terrafugia.com/POC.html>
- <http://www.popsci.com/cars/article/2010-06/flying-car-gets-faa-approval-goes-sale-soon>
- <http://www.youtube.com/user/TerrafugiaInc>





# THANK YOU

