

# **RAPS RIDE- Electric & Pedal Operated Car**

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*Abstract*— Now days we can see that the due to engine vehicle the pollution is increasing and the crude oil storage is decreasing day by day. The rate of petrol and diesel are increasing more and more so that Government and Vehicle Company are concentrating on the electrical vehicle to avoid the pollution as well as increase the human health. The purpose of this project was to design and build a vehicle which not requires any fuel, human health can be maintain & eco-friendly. The RAPS ride is the vehicle in which is operated by normal pedal like cycle and also by electric motor. Prototype was tested for 48kg human and we get speed of 30kmph by electric motor and by pedaling 15kmph on well condition road. We propose to design and create a vehicle which generates the electricity while in pedaling operation. The energy which generated should charge the battery which are using for electrical motor power supply. By this the pollution rate should be decrease by cycle pedal system the health of human can also become a good & the petrol, diesel and other crude oil which are we using for vehicle running it can be we use for other use or we can save it for future also.

## **I. INTRODUCTION**

RAPSRIDE is the all-weather, four wheel e-bike, that looks like a car With RAPSRIDE you can cycle anywhere, your way. Ride in comfort, improve your health, save money, and care for the environment. RAPSRIDE's electric motor allows you to adjust the level of assist, to travel further, easier. RAPSRIDE is the most practical all weather bike around. It has approximately the same seating position and seat height as a small car, allowing easy access and good visibility in traffic. It has four wheels to be narrow enough for bicycle paths but still be stable in the curves. It has a full waterproof body to keep you warm and dry in any weather, heated windshield, soft seat with back support, and studded tires. A small trunk for your shopping bags and a tow bar for a bike trailer when you want to bring your kids. The electric motor and control system are from a standard e-bike system and should make it a street legal bike in many countries. And may then be operated on bicycle paths and without a drivers license. Bicycle-Cars are practical, good for your health, cheap to run, good for the environment and fun to drive. They require no new and advanced technology to work and they would not cost much if they were mass-produced. Many other bicycle-cars have been available on the market for many years but they are still for some reason, an almost unknown vehicle. More car-like bicycle-car concept will appeal to many more people than the low streamlined tricycles that are available today.

## **II. DEFINITION OF PROBLEM**

Now a days the cost of Fuel is increasing day by day. The storage of the fuel is become null if we use it by this speed for our vehicle and other things. So to save the petrol and protect the nature the cycle is a good option for it but some time for long distance cycle is not good option. The electrical

vehicle is a good option for the Fuel and it is not create as much pollution than the fuel cars. But due to the long distance and less average of the cars we not use the electrical cars. So from that we found that cycling and electrical car is a good option fuel car and we are creating a electrical bicycle car which is more flexible than other and as per our requirement we can use either cycling option or Electrical motor to go for the ride.

## **III. LITERATURE REVIEW**

The Rony Argueta explain in his Electrical vehicle Research paper that due to the problems caused by the gasoline engine on the environment and people, the automotive industry has turned to the electrical powered vehicle. This report explains how an electric vehicle works and compares the electric vehicle to the internal combustion engine and hybrid vehicle. The paper provides some of the advantages and disadvantages of the electric vehicle.

In this paper we observed that the electrical vehicle is having low maintenance cost and other major factor which is giving it as a advantage comparative to internal combustion and gasoline. The electrical vehicle is totally depend upon the motor & battery which they have used to power generation. In gasoline and internal combustion if any cylinder or any single part damage then whole engine is affected from it but in electrical the chances of the damage is less only the problem may occur in the wire arrangement because it is some critical to arrange. The weight, power transmission, maintenance is the advantages and the speed, load carrying capacity is the limitation of vehicle.

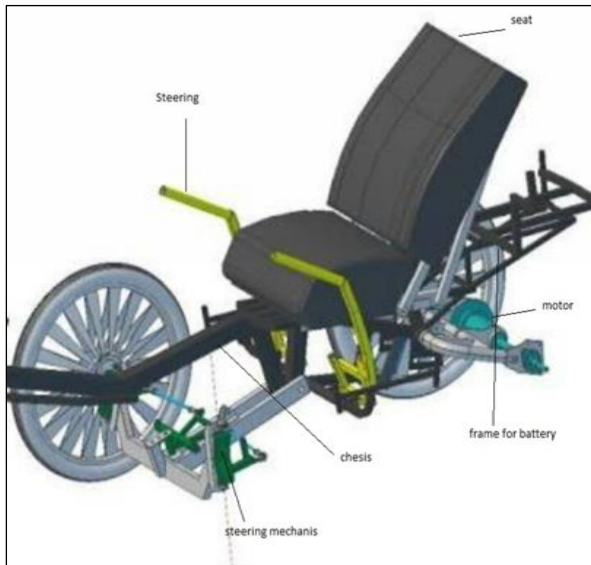
As seen in this report, the electric vehicle has many advantages and benefits over the internal combustion engine and hybrid vehicle. It is cleaner and much more efficient; however, it also has disadvantages. It is heavier, limited to the distance it can travel before recharge.

The St. vennant explained in his Paper Electronics Systems and Applications for electrical vehicle This paper provide an overview of the recent work of electric vehicle in the region. The paper describes the development and the comparison of different part of components. The major components is technology which they have used in this car. The BLDC motor they are used in the car for driving the shaft. The shaft was specially designed for the motor for transmitting the power which coming from motor to shaft. The motor is having specification as 48v and 750watt and having weight 5.2kg which is giving 60km/hr speed for car & at fully loading condition it may vary form 45-55km/hr. The steering system was power steering which they modified and reduces the effort for turning the car and they use some new technology which helps to steering wheel to constant position. The braking system was ABS which is reduces the accident effect & the type of break is Internal Expanding Break are examined.

#### IV. OBJECTIVE

Now days the problem regarding with the fuel for vehicle is become a big problem. The rate of fuel is increasing day by day and human is also becoming lazy because of latest technology. So as we know cycling is the best option for travelling and exercise also so we design a car which run on bicycle concept. But some time for time saves or speed purpose we are add some equipment and make it electrical operating also. One more addition is in this car is the steering of car. It is totally new concept to make it easy and convenient for driver.

#### V. DESIGN



#### VI. CONCLUSION

As now days the natural resources are going to finish within some year. The Raps Ride is the future of the car in which we not require natural resources and by use of this we can save the sources and use for another purpose. As the Raps ride is all weather car so we can use it any weather with minimum maintenance cost at on road and off road also. The dimensions of the car is less so easily handle by one person and parking space for the car is also reduced.

#### REFERENCES

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