

obstacle in its path to avoid damage to the Mecabot caused due to collision.

D. Adjustable Robot Height

The Mecabot will be equipped with parabolic cover to protect the connections of the robot and flexible wheels with spring suspension. The wheel spring will be provided with manual compression and expansion mechanism. If the Mecabot gets stuck in the home furniture like sofa, table, the spring will get compressed and the height of the vehicle will be lowered and the Mecabot can come out of that area, once the Mecabot comes out, the spring get expanded to its original state. This system can be further enhanced by configuring mecabot to function without any external guidance and human interface. Thus, making Mecabot is completely compatible for home security.

VI. CONCLUSION

This paper deals with the locomotive home security system in which the mobile robot is controlled and navigated by user preferences by a Smart Phone App ROBO_CAR. When the user selects a preference either to move forward, backward, right, left or any of the differential modes, the data is transmitted from the smartphone with the help of Bluetooth to the paired Bluetooth module HC-05 attached with the Mecabot.

The data is then decoded and executed by the Arduino processing unit and is performed by the Mecabot. On further up gradation with the hardware of the Mecabot, the motor driving speed can be increased, long lasting and rechargeable power supply and faster data transmission between Smart phone, to create a more flexible and efficient interface for the user and making the mecabot move without any external guidance like guiding wire. The robot can serve as reliable, user friendly, easy to use as well as economical home security device.

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