CONTROLLING OF A SYSTEM WITH MULTIPLE MOVEMENT OF THE CAR BASED ON IOT FROM THE CLOUD

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Abstract- The world of control is an exciting field that has exploded with new technologies where the Internet of Things (IoT) vision becomes reality. This paper proposes a multiple motion controlling mechanism of a robotic car using ARM. Each device is uniquely identifiable by the controlling software which is the core concept of IoT. Client manages the activities of the car from remote or distant places over the internet by commands and Universal Windows Application and also able to get data and feedback. The main contribution of this paper is that it leverages the efficiency of robot's motion controlling system because robotic car can receive direct commands at a time from multiple sources which make the Maneuvering system more efficient. A GPS system is incorporated thus clients can trace the car. The system has ultrasonic distance sensor for avoiding obstacles coming in between its path. We present the architecture and design of the ARM processor and illustrate how to control the car by means of commands and application.

Keywords –LPC2148 (ARM), Ultrasonic distance sensor, GPS, GPRS, and Bluetooth.

I. INTRODUCTION

The IoT allows [9] objects to be sensed or controlled remotely across existing network infrastructure, creating opportunities for more direct integration of the physical world into computer-based systems, and resulting in improved efficiency, accuracy and economic benefit in addition to reduced human intervention. When IoT is augmented with sensors and actuators, the technology becomes an instance of the more general class of cyber-physical [9] systems.The next big thing in a more connected world is internet of things (IOT), to control/monitor electronic/mechanical devices, automobiles and other physical devices connected to the internet. With IOT [5] user can control more than digital things easily through a comfortable GUI over the internet. It's distribute current information collected from your different machines and exchange them in a way so that other machine can make decision on available data and do their work automatically.

Several advanced control systems of robots have been developed based on existing control techniques or new control techniques that have been built on purposes [7]. As a result, for efficient andflexible processing, the multiple control mechanism is more than a necessity. The accessibility and availability ofinexpensive credit card sized single board computer such as ARM[1] Processor has enabled the creation of numerous automated and controlling system that has low power consumption, faster processing ability at a lower cost. The multiple control system of robots proposed in this paper integrates the use of affordable instruments, connectivity, wireless communication and efficiency of controlling mechanism.

II. LITERATURE SURVAY

Now a day, every system is automated in order to face new challenges in the present day situation. Automated systems have less manual operations, so that the flexibility, reliabilities Especially in the field of electronics automated systems are doing better performance increasingly are high and accurate. Hence every field prefers automated control systems.

In our project we can control the vehicle by using Android mobile i.e. we are sending the commands from our android mobile through Bluetooth, then the vehicle receives (acts as receiver) the signals, according to the commands being received from the mobile based on that the direction of