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CONTROL THE TOY CAR REMOTELY BY A COMPUTER

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ABSTRECT

We will work in this research program to move the car by remote control Computerized unencumbered by connecting the printer, the printer connection contains three ports are the "data port", "control port", "port state", and we will use in our research "data port". The program has been programmed Delphi language, a language known in programming has been moving the car through the computer to the distances and well and without any problems and was controlled by car in front of and behind the right and left via the keyboard

KEYWORDS: Computer Control System, Remote control Car, Cable Parallel, DC Motor, VoIP

INTRODUCTION

The present age is the age of information technology where we seen win ventions every day that even show us a new technique is quite different from its predecessors. The use of technology is intriguing, especially for business owners because they Aakad on assert any technique they're going to use it for fear of the emergence of other technology the best ones.(1)There is no doubt that the technology at the moment has become a tool of competition in the market, but the most important and therefore equired the prosecution techniques and review the best and acquisition to achieve competitiveness(2)

Was the invention of the first engine in the world at the hands of the English scientist James Watt in 1768. He was the first scientist has installed a steam engine (the railway) is a Stevenson English and also that in 1825 AD

The Who invented the first internal combustion engine, a French scientistLenoirandin1860was confined to the engine on the types of fixed tethered gas network a she was working in a non-economic Nevertheless, the world Lenoir put invented this basis, the engines of internal combustion Current

This is the last stages of the evolution of technology where it becomes technical at this stage(1), one of the foundations of the facility and without it will lose its competitive position. For example, the presence of Internet service in the constructors without which it would be difficult to continue. Without the Internet there will be no dealings by e-mail and there will be connected by an

External third-party sit established In addition, the maps will be linked to data bases allows the driver to know the nearest refuelling stations and gasoline prices as well as the nearest Jeraฺ at and the number of places to wait out. The system will include all the information and entertainment radio stations on the Internet and will allow the driver the possibility of at telephone at an affordable price, thanks to technology, "VoIP" "Voice over IP", will also be able sitting on the rear seats of surfing the Internet during the flight

OVERALL DESIGN

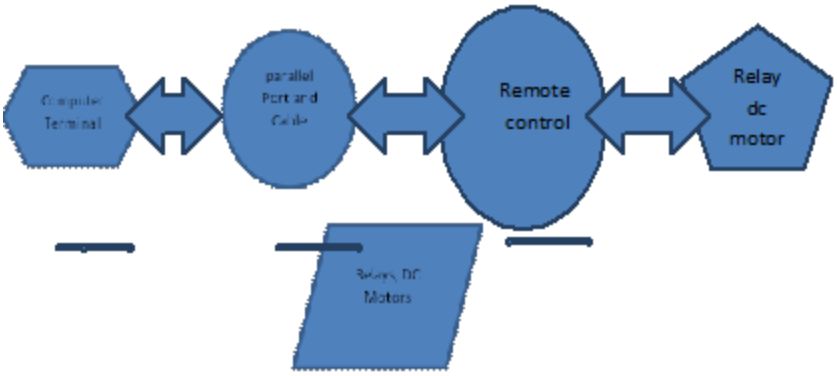

Figure 1: The Structure System Diagram

Hardware architecture of the main part of the system as it is shown shape and part of remote control car and prone circuit using Remote was directed by four wires have been linked with Cable parallel has been using Cable printer, a data porth as been linkedin motherboard computer and then was activated program shares and run the keyboard(3)

The overall design scheme of the system based on the software and hardware co-design theory which from a functional information point of view, system is divided into three parts: car-end,(2)

PC-receiver-end and PC-control-end. As shown in Figure 1, system's three parts connect together through the constitutes a complete system

SOFTWARE SYSTEM DESIGN

Use Delphi to develop programs and applications quickly, therefore referred to as the same recipe RAD and this trait means to develop programs quickly any Rapid Application Development and it is achieved by using components and tools ready to coordinate properly and be programmed left several programs linked to specific events, especially those components or elements referred to this type Programming of programming events(6).

Programming is programming events depends on the occurrence of an event of an element in the application there is the sense that when a specific event occurs, such as clicking a button or close a window, the application of a particular program is already written in the application and understood that each object or element

```
procedureTForm1.FormShow(Sender: TObject);
begin
  OUT32($378,$FF);
  Image2.BringToFront;
  DataOut := $0F;
  Label2.Caption := IntToStr(ORD(DataOut));
end;
procedureTForm1.FormKeyDown(Sender: TObject; var Key: Word;
```

```
  Shift: TShiftState);
begin
If Key = 87 then
begin
    DataOut:= DataOut AND $0E ; //0000 1110;
    OUT32($378,DataOut);
    Image5.Show;
    Image4.BringToFront;
    Label1.Caption := 'Forward';
    Label1.BringToFront;
end;
If Key = 83 then
begin
    DataOut:= DataOut AND $0D ; //0000 1101;
    OUT32($378,DataOut);
    Image7.Show;
    Image4.BringToFront;
    Label1.Caption := 'Back';
    Label1.BringToFront;
end;
If Key = 68 then
begin
    DataOut:= DataOut AND $0B ; //0000 1011;
    OUT32($378,DataOut);
    Image6.Show;
    Image4.BringToFront;
    Label1.Caption := 'Right';
    Label1.BringToFront;
end;
```

```
If Key = 65 then
begin
    DataOut:= DataOut AND $07 ; //0000 0111;
    OUT32($378,DataOut);
    Image8.Show;
    Image4.BringToFront;
    Label1.Caption := 'Left';
    Label1.BringToFront;
end;
```

HARDWARE SYSTEM DESIGN

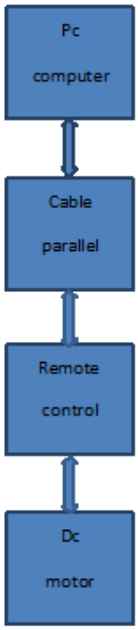

Figure 2: The Hardware Structure Diagram

Linking remote control your car parallel port of the calculator We will work in this research program to move the car by remote control Computerized unencumbered by connecting the printer shown in figure (3), the printer connection contains three ports are the "data port", "control port", "port state",(7) and we will use in our research "data port".

Associate trends remote control your car port Calculator parallel (printer port), there are four trends remote control, "forward", "back", "right", "left", is linked to a wire for each direction of trends in the remote control with the printer port to be received signal from the printer port to implement is a specific example (move forward, move back(4), move the wheels front to the right, move the wheels front to the left, move to the front with a turn to the right, move forward with the turn to the left, move to the back with the turn to the right, move back With the turn to the left), are linked as follows shown in figure (2): -

- Is connected to the printer port of wire and wire precisely the number "1" from the port number 378, "$" to the

printer port of the remote control with the trend "in front of" Programming with sending the signal through the wire when you press the letter "W".

- Wire is connected to the printer port and specifically wire number "2" from the port number 378, "$" to the printer port of the remote control with the trend "behind" with programmable transmit the signal across the wire when you press the letter "S".
- Is connected to the printer port of wire and wire precisely the number "3" from the port number 378, "$" to the printer port of the remote control with the trend "right" with programmable transmit the signal across the wire when you press the letter "D".(5)
- Wire is connected to the printer port and specifically wire number "4" from the port number 378, "$" to the printer port of the remote control with the direction "left" with a programmable transmit the signal across the wire when you press the letter "A" shown figure (2)

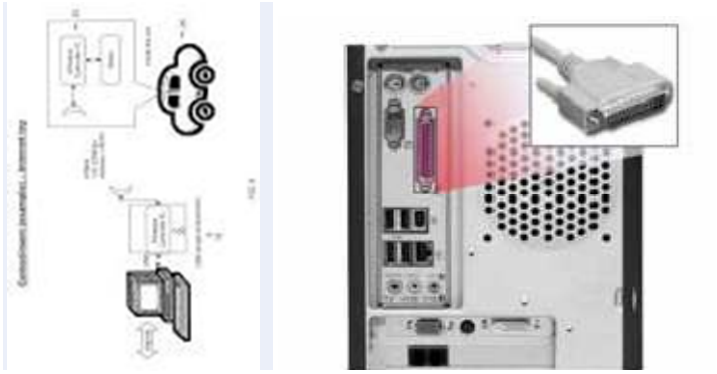

Figure 3: The Hardware Structure Diagram

System Test

keyboard controlling is the first stage in our project, we do not include mouse controlling because there is no vital difference from the keyboard, but there is a new goal was to draw a path to the car and then make the car move according to drawn path(9)

The experience has to movements of the caris forward and backward, left and right through the keys shares Keyboard Calculator(8), shown in figure (4)

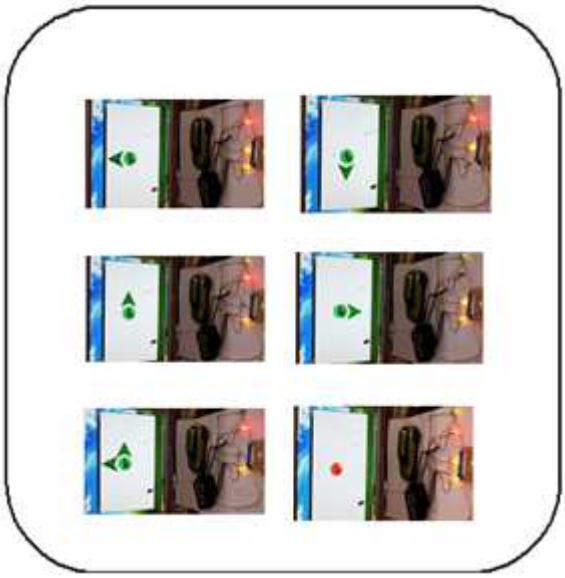

Figure 4

CONCLUSIONS

Control system alleged device compute is efficient and as a means of modern numerous tests has been tested car children as she can accomplish the information in this research has allowed us to know drive control remote and knowledge and the development of technology and that the cost of car children with peripheral devices by approximately 15 U.S. dollars, The bad hardware of the vehicle.(7) The car doesn't have a constant speed because of power source supply; also the front tires are not turning with good accuracy. This would be faced by making a feedback from the car and making the car control a close-loop system

Rare use of parallel port was the major problem in our project till we found it in old PC. where the battery is located Remote car 4 volts and will underperforms the car for the low level of the battery and can develop(8)

Adding a camera to the vehicle, so that it would be able to bring pictures and videos of places, and can avoid any obstacle that would be on its way

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