E-BALL TECHNOLOGY

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Abstract - Apostol Tnokovski has replaced the good old PC from the shackles of the monotonous squares and rectangular shape with his newly designed wonder in a spherical shape named E-BALL computer concept. E-Ball concept pc is a sphere shaped computer because according to Apostol it is the best shape in nature and it draws everybody attention. It is the smallest design among all the laptops and desktops. This PC concept features all the traditional elements like mouse, keyboard, large screen display, DVD recorder etc. E-Ball is very small, having only 6 inch diameter sphere. It is having 120×120mm motherboard and 160 mm round sphere. E Ball is designed that pc is be placed on two stands, opens by pressing and holding the two buttons located on each side of the E-Ball pc,this pc is the latest concept technology

Keywords - E-ball, Computer Concept, Sphere Shape, Smallest Pc.

I. INTRODUCTION

E Ball is designed that pc is be placed on two stands, opens by pressing and holding the two buttons located on each side of the E-Ball pc, this pc is the latest concept technology. This concept PC will measure 160mm in diameter and it was designed for Microsoft Windows OS, sorry about the others. For the moment there is no word on pricing or when it's going to be available. It's going to be a PC with all conventional components like (1) mouse,(2) keyboard,(3) normal screen. E Ball concept pc don't have any external display unit.



Fig. E-Ball

A.Features of e-ball –
It contain I-Tech virtual keyboard with dual core processor,2GB RAM,350-500 GB harddrive, integrated graphics and sound card.It contains wireless optical mouse and laser keyboard, and LCD projector.It has around 350-600GB of Hard Disk Drive.It has two 50W speakers.It has LAN and WLAN card and a Web cam.

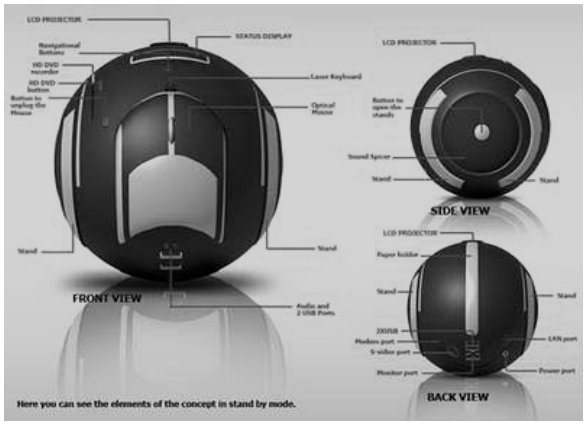

Fig. E-Ball front view, side view and back view

1.PROCESSOR -
Intel Core is a brand name used for various mid-range to high-end consumer an business microprocessor made by Intel. The current lineup of Core processors includes the latest following processors:

Intel Core i7	Intel Core i5
Intel Core i3	Intel Core
Intel Core	Intel Core 2 Duo
Intel Core 2 Solo	Intel Core 2 Quad

The e-ball pc basically uses Intel core 2 Duo processor. Figure shown below shows the Intel core 2 duo process.Figure (I)



Fig.(I)

2. RAM –

RAM stands for Random Access memory. It gets the word "random" because information can be accessed in non-sequential order. Though the data itself is stored tighter, it could be anywhere in the "container" or amount of RAM available.RAM is measure in "bits", and 8 bits equal to 1 byte. A kilobyte is equal to 1024 bits, and mega byte is equal to 1024 kilobyte. The E-BALL pc uses 2GB of RAM.There are two type of ram: SRAM N DRAM

3. HARD DRIVE –

It is basically a secondary storage device which is volatile in nature.It cosist of oxide coated metal platter that can be magnetized to represent data.We can directly accesss data from hard drive.

4.GRAPHIC AND SOUND CARD –

A video card,display card,graphics card or graphics adapter is an expansion card which generates output images to display.

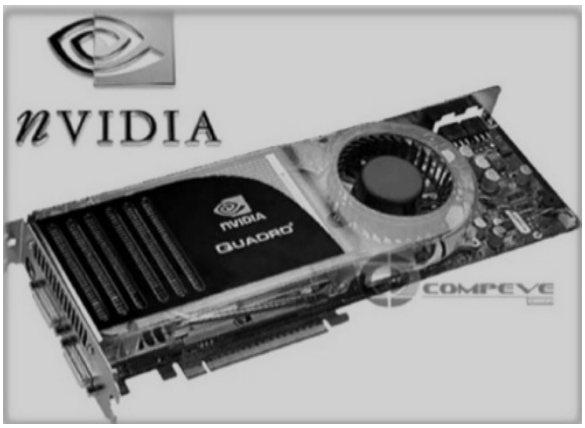

Fig. Graphic card

II. WORKING OF E-BALL

E Ball concept pc don't have any external display unit, It has a button when you press this button a projector will pop and it focus the computer screen on the wall which can be adjusted with navigation keys. If there is no wall then it has a paper sheet holder that divides into three pieces like an umbrella just after popping up and it will show desktop on the paper sheet. Also, the E-Ball PC supports a paper holder and the paper sheet on the holder could act like a screen where you can watch movies or something.This concept PC will measure 160mm in diameter and it was designed for Microsoft Windows OS. E-Ball concept pc has a laser keyboard that is fully a concept keyboard that is visible when the pc is in working. The keyboard is not physical – it is interpreted by lasers that appear after press the respective button. It recognizes your fingers with the help of an IR sensor when you are typing at a particular place, while the mouse is a pop out wonder making this an existing piece of technology.



Fig. Start of E-Ball

III. ESSENTIAL PARTS OF E-BALL

Virtual keyboard –

It is a projection keyboard that is projected and touched on any flat surface and uses the principle of sensor technology also artificial intelligence to let users work on any surface. Whenever we press the keyboard button, it is projected optically on the flat surface and, as the user touches the image of the key, the optical device detects the stroke and sends it to the computer.Virtual keyboard basically consists of three components:-

a.The Sensor Module –

The sensor module serves as the eyes of the Keyboard Perception technology.The Sensor Module operates by locating the user's fingers in 3-D space and tracking the intended keystrokes.

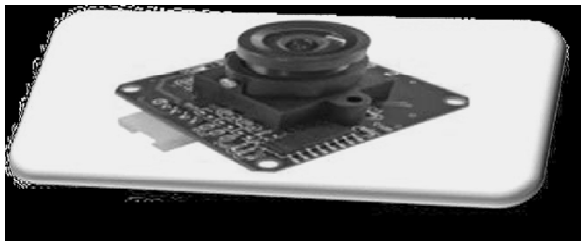

Fig. Sesor module

b. IR-light source –

The Infrared Light Source emits a beam of infrared light. This light beam is designed to overlap the area on which the keyboard pattern projects. This is done so as to illuminate the user's fingers.



Fig.IR-light source

c. The Pattern Projector –

The Pattern Projector basically presents the image of the keyboard. This image can be projected on any flat surface. The projected image is that of a standard qwerty-keyboard, with all the keys and control functions as in the keyboard.

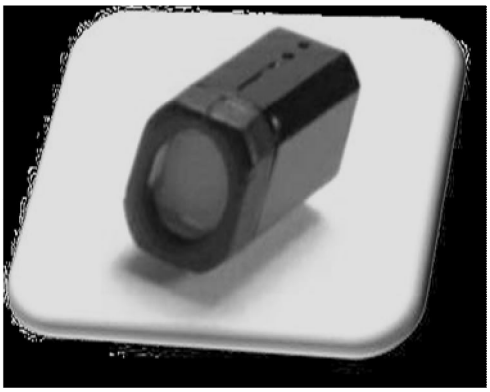

Fig. The Pattern Projector

IV. PROJECTOR

E-ball concept pc uses two types of projector :A. LCD Projector B. DLP Projector

A.LCD Projector –

LCD stands for liquid crystal display. LCD projectors are systems that display or project information or video onto a flat surface. Video signals are comprised of three colors: red, green, and blue.LCD projectors contain a separate glass panel for each. Each panel consists of two plates of glass with a layer of liquid crystal between them. When a charge is applied, the crystals open to allow light through or close to block it. This opening and closing of pixels is what forms the image.

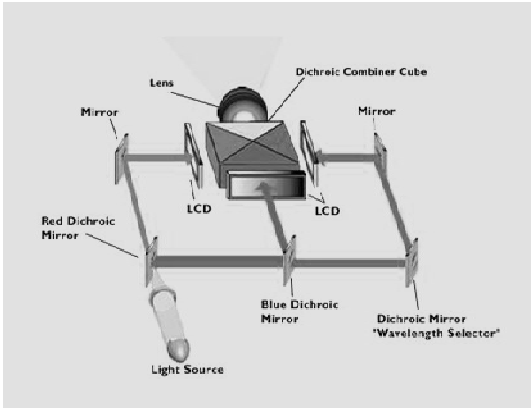

Fig.LCD Projector

B.DLP Projector-

Digital Light Processing (DLP) is a type of projector technology that uses a digital micromirror device. It was originally developed in 1987 by Dr. Larry Hornbeck of Texas Instruments. While the DLP imaging device was invented by Texas Instruments, the first DLP based projector was introduced by Digital Projection Ltd in 1997.Digital Projection and Texas Instruments were both awarded Emmy Awards in 1998 for the DLP projector technology. DLP is used in a variety of display applications from traditional static displays to interactive displays and also non-traditional embedded applications including medical, security,and industrial uses.

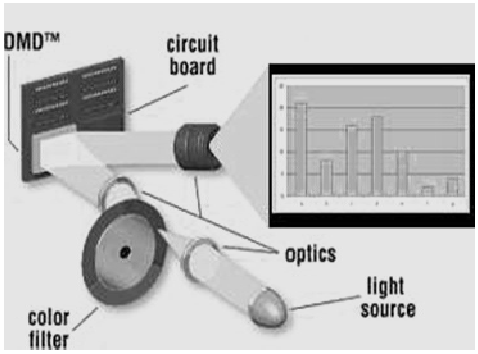

Fig.DLP Projector

V. IF THERE IS NO WALL ?

When we are working in an open place we can make use of a paper sheet as a screen.
Paper sheet holder is placed at the back panel of this computer.
The holder can be opened by pressing it in the lower part.

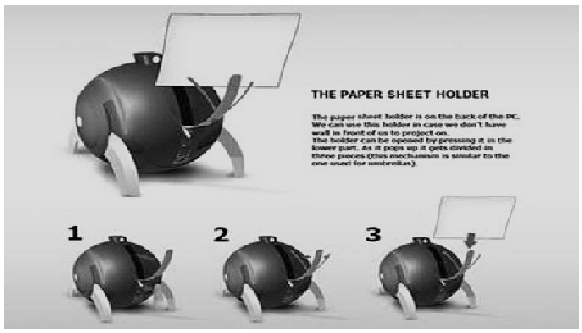

Fig. Paper sheet holder

VI. THE SOFTWARE INTERFACE

The software interface of E-Ball pc highly stylized with icons that can be remembered easily that support all type of windows operating systems. E-Ball concept pc don't have any external display unit.



Fig. Software interface

VII. RESULT

The E-Ball concept pc is a sphere shaped computer which is the smallest design among all the laptops and desktops. This computer has all the feature link a traditional computer elements like keyboard or, mouse, dvd,large screen display. E Ball is designed that pc is be placed on two stands, opens by pressing and holding the two buttons located on each side of the E-Ball pc, this pc is the latestconcept technology.This concept PC will measure 160mm in diameter and it was designed for Microsoft Windows OS, sorry about the others. For the moment there is no word on pricing or when it's going to be available. It is Design by APOSTOL TNOKOVSKI.**E-Ball** concept pc don't have any external display unit. The scenario of use of E-Ball computer concept is as shown below –



Fig. Scenario of use

VIII. ADVANTAGES AND LIMITATIONS

E-Ball is portable. It has large memory. Useful for making video presentations. These have greater speed. Supports user-defined keyboard layouts. It is efficient. It is very easy to useIt is more secure than other computer. Bt normal OS can't work in these computers. Also cost of E-Ball is very high and it is difficult to understand if any problems occur in hardware components.

IX. FUTURE SCOPE

It can be used in high-tech and industrial sectors, used with smartphones, PDAs, email, word processing and spreadsheet tasks,also in operation theatres. It can be PDA input/ as computer. Also in gaming control and TV remote control.

CONCLUSION

As years passes, the computer size is becoming smaller. Today's technology is at its peak point beyond what we could ever imagine. New inventions and innovations are emerging on daily basis. Our imaginations have dressed into reality and today it has become possible to have a whole computer in our pocket all the time. This ball computer has taken the computer technology to new horizons

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