Review Paper on E-Ball Technology

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ABSTRACT:

The word "computer" comes from the word "compute" that is to calculate or manipulate. Hence, people usually consider a computer to be a calculating device that can perform arithmetic operations at high speed. This is a new concept of personal computer that is E-Ball pc. The E-Ball pc is a round in shape which is the smallest design among all the laptops and desktops. This computer has all the features and elements like a normal computers and laptops. Ball is placed on two stands, opens by holding and pressing the two buttons located on each side of the E-Ball computer; this is the latest concept of technology. After opening the stand and turning ON this computer, by pressing the connecting mouse button will allow to connect the optical mouse with the PC body. This computer has a laser keyboard that can be activated by pressing the particular button on this computer. By connecting all devices to the computer, the computer is ready to use. E-Ball is very smallest computer in world. It is only 6 inch in diameter. It has 120×120mm motherboard.

Keywords: E-Ball pc, LCD Projector, Holographic display, Laser keyboard, Optical mouse

I INTRODUCTION

E Ball pc do not have any external display unit, it has a button when press this button a projector will pop and it focus the computer screen on the wall which can be adjusted by navigation keys. If there is no wall, to overcome this situation it has a paper sheet holder which is divided into three pieces like an umbrella after popping up, and it then show desktop on the paper sheet. E-Ball PC supports a paper holder and the paper sheet on the holder which is act like a screen. It contain HD-DVD recorder,500GB HDD, 2GB of RAM, integrated graphic card and sound card, 2 x 50W speakers, wireless optical mouse and laser keyboard, LAN and WAN card, modem, Web cam and integrated LCD projector and accordingly.

Figure 1. An E-Ball

It has wireless optical mouse, laser keyboard and LCD projector. It has approximate 350-600GB of Hard Disk Drive. It has 5GB RAM. It has 50W speakers, LAN and WAN card and a Web cam. When you want to carry it with you can easily pack it into a ball. This is a futuristic concept, and one imagination that how the future computers will look. This device has an optical keyboard and holographic display. So it's size is so small. There is no physical keyboard and no monitor. Only the mouse is physical, it fits in to the computer when you want to carry it around. The main thing when using a virtual keyboard is that you need a smooth surface, otherwise you don't understand how will you be able to use it. It is strange to

call this device a computer, because it is very small, but it doesn't lack any hardware part and tends to be a future machine found in any house or office.[2]

The software interface of E-Ball concept pc is very stylized with icons that can be remembered easily. This icons support all type of windows operating system. E-Ball pc work very easy while you are making video presentations, listening music, watching movies, and chatting on the net. As years passes, the computer size is becoming smaller and smaller. Its design is given by Apostol Tnokovski, a 31 year old. He is a Macedonian product designer. It is sphere in shape because in Tnokovski's opinion is that it is the best shape in nature and it draws everybody's attention.

II. MEANING OF E-BALL TECHNOLOGY

Apostol Tnokovski introduced a new computer that is E-Ball pc. The E-Ball concept pc is a sphere shaped pc. It is the smallest design among all the laptops and desktops.   This computer has all the features and elements like a old computers. E-Ball is designed to be placed on two stands and opens by pressing and holding the two buttons located on each side. E Ball pc not have any external display unit.

It has a button by pressing that button a projector will pop and it focus the screen on the wall which can be adjusted with navigation keys. This concept PC is measure 160mm in diameter and it was designed for Microsoft Windows OS only.

E-Ball has features like a dual core processor, 250-500GB HDD, 2GB of RAM, integrated graphic card, sound card, 2 x 50W speakers, HD-DVD recorder, wireless optical mouse, laser keyboard, LAN and WLAN card, modem, Web cam and integrated LCD projector.

III. WORKING OF E-BALL

E-Ball is designed such that it can be fixed on two stands. E-Ball has two buttons on each side and the users can simply open this pc by pressing and holding them at a time. Once you open the stand and turn the E-Ball on, you can connect the optical mouse from the body of the E-ball by simply pressing the connecting button of mouse. This technology has a button that allows its laser keyboard to get activated. E Ball pc don't have any external display unit, it has a button when this button is press a projector will pop and it focus the screen on the wall which can be adjusted using navigation keys. When we are working in place where no projector is available then we can make use of a paper sheet as a screen. The paper sheet holder is placed at the back panel. The holder can be opened by pressing it in the lower part of pc. 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 perform the works.

E-Ball concept pc has a laser keyboard that is visible when the pc is in working. The keyboard is not physically present it is interpreted by lasers that appear after press the buttons on it. This recognizes your fingers with the help of an IR sensor at the time when you are typing at a particular place.

The software interface of E-Ball concept pc is most stylized with icons that can be remembered easily which support all type of windows operating system. E-Ball pc work very easy while you are making video presentations, listening music, watching movies, and chatting on the net. There are five simple steps to ON pc that are you can use-press and hold the power button for

5 second, adjust the LCD Projector and detach the optical mouse. Activate the virtual mouse and do whatever you want.

Figure 2. Activation of E-Ball

Working of an e-ball is: [7]

A. **DISPLAY UNIT:**

Devoid of any external display unit, it has a button, on pressing pops up a projector that focuses the screen on the wall. For adjustment operations there are navigation keys also there.

B. PAPER SHEET HOLDER:

It is at the back of PC and is used when there is the absence of a wall for projection. The lower part need to be press for opening the paper sheet holder. By pressing and holding the paper sheet holder on/off button for five seconds the projector will recur. It is divide into three pieces like an umbrella after barging in, and it show desktop on the paper sheet. It can act as a source for presentations or watching shows and movies or chatting on the net.

C. LASER KEYBOARD:

Laser keyboard is based on laser rays technique. It deals with fingers with an aid of an IR sensor when typing at a specific place. It is a clumsy input device.

D. OPTICAL MOUSE:

It is a detachable optical mouse which relies on the laser ray technique. It utilizes light-emitting diodes or laser as a method of tracking movement of mouse. Like an optical mouse doesn't contain mobile parts, it does not require cleaning.[8]

IV. FEATURES OF E-BALL

The features of E-Ball are[6].
A. PROCESSOR

Intel Core is a brand name. It is used for various mid-ranges to high-end consumer and business microprocessor which are made by Intel. The recently lineup of Core processors includes the following processors:

   a) Intel Core i7 Intel Core i5
   b) Intel Core i3 Intel Core
   c) Intel Core Intel Core 2 Duo
   d) Intel Core 2 Solo Intel Core 2 Quad
   e) The e-ball pc basically uses Intel core 2 Duo processor

B. RAM

RAM is stands for Random Access memory. It gets the word random because the information can be accessed in non-sequential order. Though the data itself is stored, it could be anywhere in the amount of RAM available. RAM is measure in "bits", and 8 bits equal to 1 byte. A kilobyte is equal to 1024 bits, and a megabyte is equal to 1024 kilobytes. The E-BALL pc uses 2 GB of RAM. It contains two types of RAM. They are SRAM and DRAM.

   a) SRAM does not require external refresh circuitry.
   b) SRAM is faster than DRAM.
   c) SRAM is more power efficient when idle.
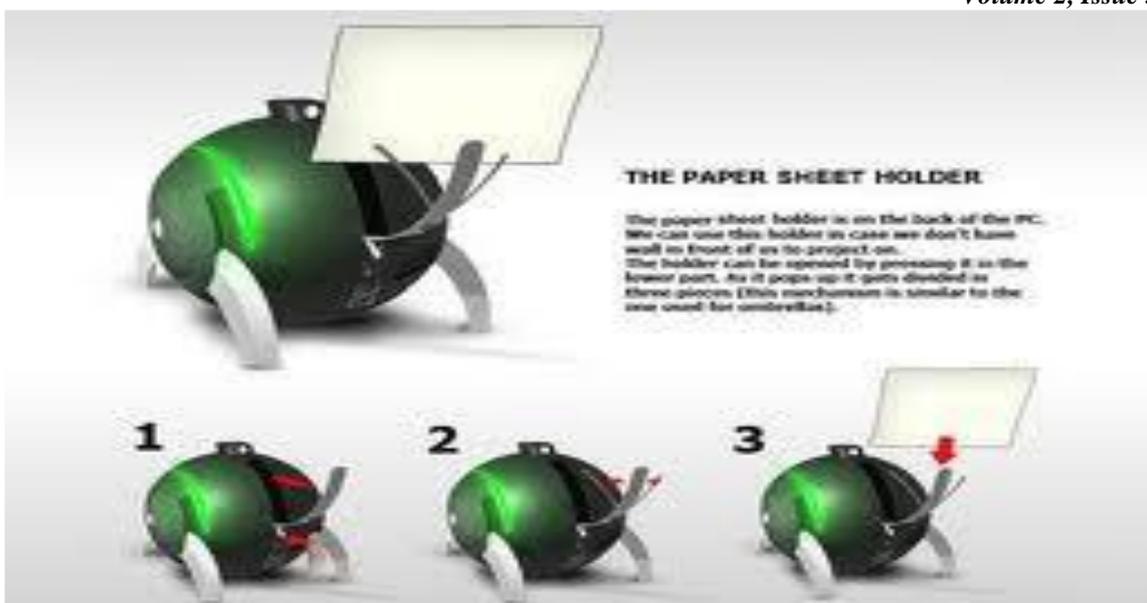   d) SRAM is several times more expensive than DRAM

C. HARD DRIVE

Hard drive is a secondary storage device. Hard drive is non volatile in nature. It consists of metal plate covered with oxide that can be magnetized to represents data. Data can directly access from hard drive. The E-ball pc mostly consists of 350-500GB hard drive.

D. GRAPHIC & SOUND CARD

A video card, display card, graphics card and graphics adapter is an expansion card which generates output images to the display. Most video cards offer various functions such as accelerated rendering of 3D scenes and 2D graphics, MPEG 2/MPEG-4 decoding, output, or the ability to connect multiple monitors. Other current high performance video cards are also used for more graphically demanding purposes like PC games. Video hardware is often integrated into them other board, all modern motherboards provide expansion ports to which a video card can be attached. In this design it is sometimes referred to as a video controller, a video card, graphics card, or graphics adapter is an expansion card controller.

E. THERE IS NO WALL:

Suppose, there is no wall in the place where you work on E-Ball, you can use a paper sheet provided to the PC as the screen. When the projector is pop out, the paper sheet holder will be divided into three pieces like an umbrella and you can see the desktop on the paper sheet. You can also watch movies, make presentation or any other thing on the paper sheet that is held by the paper holder of the E-Ball PC.

Figure 3. Scenario in case of no wall present

VI. ADVANTAGES OF E-BALL

A. It is portable and hand free.
B. It has large memory i.e.5 GB.
C. It is useful for making video presentation.
D. It supports user defined keyboard layouts.
E. It is efficient.
F. It is very easy to use and understand.
G. It is more secure than other computers due to its shape.

VII. DISADVANTAGES

A. Normal operating systems cannot work with these computers.
B. Cost of E-BALL is very high.
C. It is difficult to understand and track if any problems occur in hardware part.

VIII CONCLUSIONS

As the technology develop, the size of computer become smaller and smaller. Although the size becomes smaller and smaller, the features of computers are increases. The computer becomes more efficient and convenient to the users. E-Ball is considered to be the 8th wonder which has the potential to reform the world with its amazing features. As evolution is done in technology, it's easy to use anyone.

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