

# Wireless Pointer and Celluon light Keypad

## Pureth Pointer and Pureth Keypad

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**Abstract—The Pureth Pointer (Wireless Finger Pointer) is a revolutionary invention which is developed to provide advanced mouse experience. A technology which let the user control the computer Pointer without holding a mouse or touching a surface. The Pureth Keypad which works on Celluon light technology let the user type input from any surface. The Pureth technology let the user carry mouse and keyboard on their wrist and finger. The Pureth technology can be used by any age group as the Pointer is made by an elastic material and the Keypad has an adjustable wrist band.**

**Index Terms—Introduction, Methodology, Comparison, Discussion, Conclusion, Future Enhancement.**

### I. INTRODUCTION

Imagine if we don't have to hold a mouse to control a Pointer on a computer display. Imagine if we never have to touch a surface to control a mouse Pointer. Imagine our index finger becoming the controller. The way we move our finger, the same way Pointer moves. This is what we achieve from the Pureth technology for mouse Pointer which we call Pureth Pointer. The Pureth Pointer is designed such that it fits the finger perfectly. The Pureth Pointer helps the user not only to control Pointer but also to write and everything is done in air. Pureth Pointer has a touch pad which takes the command input and does every task that can be performed by a mouse.

The Pureth Keypad is another concept invention which follows the principle of Pureth Pointer as it is portable too. The Pureth Keypad is based on Celluon light technology. The Pureth Keypad is a set of two wrist light emitter which when placed on a surface, Celluon light forms a keyboard. The user can provide keyboard input from this light display. The left wrist displays keys to be typed by the left hand and right wrist displays keys to be typed by right hand.

The Pureth Keypad can also be converted into a gamepad. The left wrist forms the display with keys for the game control and the right hand index finger provides the mouse input.

### II. METHODOLOGY

The Pureth technology enables the user to provide keyboard and mouse input wirelessly. For quick writing the user do not require

the keyboard as the Pureth Pointer can help the user to provide text input as well. The design and working of the Pureth Pointer and Pureth Keypad is discussed separately.

#### A. Pureth Pointer

The Pureth Pointer is a pointing device which will be placed on the index finger just like a ring. This ring is designed with gyroscope which senses the motion of the finger.

#### Design

The design of the Pureth Pointer is simple yet effective. At the center of the ring, Gyroscope is placed. The ring is made from a soft rubber material which fits the finger of any size perfectly.

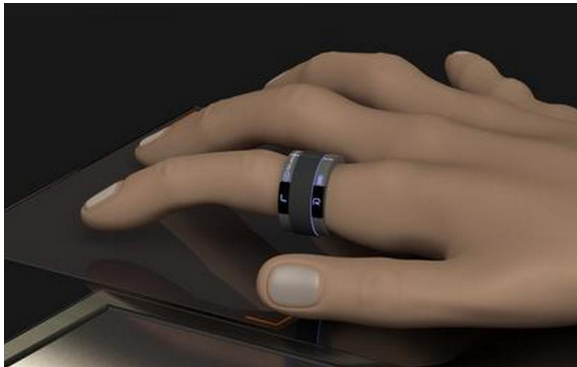


On top of the ring there is a display section. This display is programmed to show the current time and room temperature. Mouse sensor is also displayed which senses the right, left, up and down movement of the finger. A touch sensor is also placed on outer side of the ring which is used to take input command from the user. The ring can be worn in two positions on the index finger. One for the mouse input and the other for key input. A beam of light is also provided on the ring which indicates the Pureth Pointer is ON or OFF.

#### Working

The working of Pureth Pointer is simple to understand. The principle of gyroscope is applied on the Pureth Pointer. The user wears the Pureth Pointer on their finger in two positions. Discussion on those positions will be later. This

ring fits on the user's finger such that the gyroscope on Pureth Pointer perfectly detects the motion of the finger.



When the user switches ON the Pureth Pointer, the device automatically connects to the computer via Bluetooth. Now the Pureth Pointer senses the motion of the finger. The way the user moves the finger, the same way the cursor on the screen moves. The Pureth Pointer not just control cursor but does other task by following 4 touch inputs.

- Single touch : This will pass the command for left click
- Double touch: This will pass the command for right click.
- Touch and hold: This passes the command for scrolling. When the user moves his finger up and down, the respective scrolling is taken place.
- Triple touch: This passes the command for writing. When this is activated, the user can use his index finger as a digital pen.

The Pureth Pointer can also be used as a digital pen. The user just have to move the Pureth Pointer little lower to detect more accurate motion.



The computer detects the commands provided and takes the input from the motion of the finger as the input is taken from a digital pen.

### B. Pureth Keypad

Pureth Keypad is another revolutionary invention to enhance the typing experience. The user can now carry the keyboard with them as a wrist band. This wrist band is powered with Celluon Light technology.

#### Design

The design of the Pureth Keypad is based on the Celluon Light technology. The Pureth Keypad consists of three main sections.

- Celluon Light Emitter: This section is responsible for the formation of Keypad on any surface using Celluon light.
- Surface Sensor: Surface sensor is responsible for the detection of the surface to form the input display.
- Wrist Band: This part allows the user to wear the Pureth Keypad.



#### Working

The Pureth Keypad works on the Celluon light technology. This technology forms a virtual display on the surface using Celluon light which is responsible for key input. This light brings out a virtual display of keyboard on the surface.



The user now can provide key input from this display. The touch on display detects the position of the finger which is touched on a key on the display. This input is passed to the system and the input is taken just like from a normal keyboard. For example when a user touches the key 'A' on the Celluon light, the computer takes 'A' as the input.

The surface sensor senses the surface on which the Celluon light forms the keyboard. When the hands are lift from the surface, the keypad automatically gets off. And the moment the Pureth Keypad is brought in contact with the surface again, the Keypad display is automatically formed again.

The Pureth Keypad can also be converted into a gamepad. The left wrist forms the display with keys for the game control and the right hand index finger provides the mouse input. One touch pad is also provided next to the surface sensor to ON or OFF the Pureth Keypad.

### III. COMPARISON

USB Finger Optical 3D Mouse is the latest technology in mouse category. This mouse is connected to the computer through a USB cable. This device is also placed on the index finger and controls the Pointer. The Pureth Pointer is wireless and controls the Pointer. The USB Finger Optical 3D Mouse consists of two buttons and a scroll wheel. The Pureth Pointer consists of no buttons and uses a touch pad to input signal.

Celluon Magic Cube is a device which forms a virtual display on the surface which allows the user to type without actually using a keyboard. The Pureth Keypad is also similar to the above mentioned device as it also forms a virtual display on the surface which allows the user to type without actually using a keyboard. The Pureth Keypad is always attached to the user's wrist where as Celluon magic cube has to be carried separately. The Celluon Magic Cube displays the full keyboard virtually where as Pureth Keypad displays splitted keyboard as left and right. The left wrist Pureth Keypad displays the keys virtually

which has to be typed by the left hand and the right wrist Pureth Keypad displays the keys virtually which has to be typed by the right hand.

### IV. DISCUSSION

From the above facts it is very much clear that the Pureth Pointer is advance in technology from USB Finger Optical 3D Mouse. The Pureth Pointer has more controls than the USB Finger Optical 3D Mouse. Pureth Pointer displays time and shows the monitoring of motion control. Pureth Pointer is wireless and works on a gyroscope where as the other uses an accelerometer.

The Pureth Keypad is more comfortable to use in comparison with Celluon Magic Cube. The Pureth Keypad is worn by the user on their wrist so it is easy to carry compared to Celluon Magic Cube. The Pureth Keypad can be used as a gamepad as well as a normal keyboard whereas the Celluon Magic Cube does not provide a game pad.

### V. CONCLUSION

The Pureth Pointer and Pureth Keypad is indeed advance in technology compared to the latest product available. The Pureth Pointer is efficient in controlling mouse pointer. The Pureth Pointer can also be used as a digital pen. The Pureth Pointer provides date, room temperature and monitoring of the motion of the finger. The Pureth Keypad is effective in providing a virtual keyboard which user can carry in their wrist.

### VI. FUTURE ENHANCEMENT

The Pureth Pointer can be further modified to control devices other than computers. Artificial intelligence can be added to the Pureth Pointer to do some task without providing the commands.

The Pureth Keypad can be further modified to provide virtual keypad on any possible surface. The Pureth Keypad can provide control to user for arranging virtual keys in their required order.

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