

DIGITAL JEWELLERY

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ABSTRACT

Mobile computing is beginning to break the chains that tie us to our desks, but many of today's mobile devices can still be a bit awkward to carry around . In the next age of computing, there will be an explosion of computer parts across desktops. Basically jewellery adorns the body and has very little practical purpose. The combination of micro computer devices and increasing computer power has allowed several companies to begin producing fashion jewellery with embedded intelligence. Digital jewellery can be best defined as wireless, wearable computers that allow the user to communicate by the means email, voicemail. It seems that everything we access today is under lock and key even the devices we use are protected by passwords . This article discusses about new java based, computerised ring(JAVA Ring) will automatically unlock doors. They have the potential to be all-in-one replacements for your driving license, key chains, business cards, credit cards. They can also solve a common dilemma of today's weird world the forgotten passwords.

The whole concept behind this is to able to communicate to others by means of wireless appliances .The other key factor of this concept market is to stay fashionable at the same time.



I. INTRODUCTION

The changes in the technology have bought about many miniature devices which allow people to do things with ease. The rapid use of these portable technology and their multiple functionalities in assisting the people to engage with other useful activities have made the technology a versatile tool for learning and leisure purposes. The fundamental issue in wearable computers is it's ability to equip the individual with personalised and customisable information. The wearable computer can be a video screen worn on both eyes like Google, body-worn processor ,input devices such as push button, switches held in one hand and a micro phone

The latest computer usage has been to be able to wireless computers. The computer fashion wave, "Digital Jewellery" looks to be next sizzling fashion trend of technological wave. Today's manufacturers place millions of transistors on a microchip, which can used to make small devices that store tons of digital data. Digital

Jewellery appears to be one of the biggest growing promotions of its time. Digital Jewellery will be evolution in digital jewellery that makes computer elements entirely compatible with human form. By this we would be able to communicate by means of email, voice mail.



II. HISTORY OF DIGITAL JEWELLERY

The history of wearable computer dated it to 16 th century when pocket watch was invented. The advent of some advanced software brought a tremendous various types of wearable computers age. Later in 1994 Edgar Matias and Mike Rucci of university of Toronto invented wrist computer. Their wrist computer presented an alternative approach to the emerging head up display plus chord keyboard wearable. The system was built from HP 95LX palmtop computer. Warwick’s wife, Irena wore a necklace which was electronically linked to Warwick’s nervous system via an implanted electrode array. The colour of necklace between red and blue depending on the signals on Warwick’s system nervous system.

III. COMPONENTS OF DIGITAL JEWELLERY

Soon, cell phones will be broken up into their basic components and packaged as various parts of digital jewellery. The concept of digital jewellery is to piece the various components and make the user to access it easily and wear it. The various components inside the cell phone such as Microphone, Receiver, Touch pad, Display, Circuit board, Antenna, Battery.

COMPONENTS:	PICTURE OF THE COMPONENT:
<p>Earrings: Speakers embedded into these earrings will be of the phone receiver .The digital jewellery. The digital Jewellery companies are developing things like Bluetooth devices in form of earrings that people can wear that help enhance their devices</p>	

<p>NECKLACE: Users can talk into the necklace embedded microphone with the help of embedded voice recognition software.</p>	
<p>RING: This is equipped with LED's that flash to indicate an incoming call. It can be programmed to flash different colour to identify the particular call or the importance of the call</p>	
<p>BRACELET: The bracelet is equipped with video-graphics array display could be used as caller identifies that flashes the name and the phone number of the particular caller.</p>	

IV. WORKING OF DIGITAL JEWELLERY:

With digital jewellery, the keypad and dialling function is integrated into the bracelet. Voice recognition software will be used to make calls, capability that is all ready common in many cell phones. We need to mention the name of the person you want to call at, the phone will dial that person. Users talk into the necklaces embedded microphone the information is transferred in the form of signals. The embedded sensors help transmit information through a blue tooth wireless technology. If there is any phone call, the ring flashes to inform and can as well notify you that email is piling up in your inbox. The mouse ring, Bluetooth, bracelet built in rechargeable battery vibrates when call is coming.

IBM has designed prototype of a cell phone that consists of several pieces of digital jewellery that will work together wirelessly with bluettoth.IBM also works on a miniature rechargeable battery to power these components. Digital jewellery devices have a screen or display for information which consists of LCD's,electro luminescent or an optional display. It also has an audio visual, speaker flashing light or a sensor. The display layer sits on a face of the device that is enclosed in some material such as plastic, metal ,crystal or other material. It has external switches and buttons on it's side and data part for accessing the programmable electronic circuit inside. A micro controller that is a surface mounted

device on a printed circuit board with resistors and capacitors are the internal components of the jewellery and their working.

V. APPLICATIONS OF DIGITAL JEWELLERY:

The applications of Digital Jewellery are:

- 1. Java Ring
- 2. IBM Ring

<p>JAVA RING:</p> <p>Java Ring is a finger ring that contains a small microprocessor with capabilities for the user. Java ring is a sort of smart cart that is wearable on finger. Java ring is a stainless steel ring, 16 millimetres in diameter. Java ring is extremely secure Java powered electric token.</p>	
<p>IBM RING:</p> <p>The IBM magic decoder ring is a mouse ring .IBM is developing that will use the IBM track point technology like one embedded in laptop keyboard to wirelessly move cursor on computer monitor .There is a little black ball, look like a pearl the user will rotate or turn around to move the cursor.</p>	

VI. ADVANTAGES

1.Portability:

One of the most distinguishing features of a wearable computers that it can be used while walking or moving around because of its small size. This particular feature distinguishes wearable computer from desktop to digital jewellery.

2. Sensors:

A wearable computer should have sensors for it’s physical environment .Such sensors might include wireless communications ,cameras or microphones.

3. User Attention Free:

This particular type of technology shall not require attention or any type of interaction. It is unobtrusive and unrestrictive to the user. The user shall be able to walk around or ride in a crowded bus.

4. Freedom from Desk:

A wearable computer is a wireless device. But it should not depend on external devices.

5 .Immediately usable,it does not need to get it from bag or pocket.

VII. LIMITATIONS

The health hazard poses by the mobile devices can never be optimised. It ranges from eyes strain and head ache. The huge cost is making this digital jewellery unreachable to purchase.

VIII. CONCLUSION

The concept behind this digital jewellery is to have a smart devices that are wireless and always on while remaining attractive to people. It is nothing but broken pieces of components inside the mobile phone which are repackaged as a jewellery that can be worn out. The fundamental idea will later resolve into total elimination of computer on one’s desk but lead to situation where computer will be worn on the body.

We are gradually moving to the fifth generation computers which are portable, small to be a part of people’s dressing. However this small computing devices offer limited interaction capabilities compared to a computer or even a phone.

“By the end of this Decade, we would be wearing our personal computers instead of sitting in front of them.”

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