

Bluetooth enabled Smart Digital Pen

Meena N. Perla¹, Reshma Chaudhari², Suman Saurabh³

¹Department of EXTC Engineering, VIVA Institute of Technology, University of Mumbai

²Department of Computer Engineering, VIVA Institute of Technology, University of Mumbai

³Principal Member Technical Staff, Oracle India Pvt Ltd , Bangalore

Abstract - Digital technology has entering today's classrooms and learning environments. Convert your pen and paper processes into the digital world. Pen and paper is the easiest and most comfortable way for workers to be productive, and digital writing solutions can improve and automate the workflow that companies rely on. Devoid of changing how employees work, the digital writing method eliminates inefficiencies in the existing processes with flexible, cost effective solutions.

Bluetooth enabled digital pen is designed to address the current shortcomings of mobile or office data capture devices. A digital pen with USB/Bluetooth/Barcode/Streaming technology, used with a wireless communication device help an organization to more efficiently gather, transmit and share data in real time.

Keywords— Bluetooth, Barcode, Digital Pen, Digital Media, USB

I. INTRODUCTION

A Bluetooth enabled smart digital pen is a device that captures the handwriting of a user and converts it into digital data. The number of applications a digital pen can be used for is considerable, there are number of uses for collecting data with a normal ballpoint pen. The main feature of a digital pen over traditional pen is that the latter requires no manual data inputting. As soon as the data has been recorded it is uploaded instantly to an office based server allowing processing to begin almost immediately.

II. HARDWARE REQUIREMENT

Design of Digital Pen includes following things listed below with specifications

1. Built-in lithium battery (chargeable via USB): up to 10 hours of continuous writing
2. Note pad is capable of storing up to 100 pages, operated via infrared
3. Bluetooth connectivity to transfer your notes to any mobile device like iOS or Android.
4. Standard ink cartridge included. Refills available from our online store
5. As lightweight and comfortable to use as a traditional pen.



Fig. 1. Digital Pen

2.1 Charge The Pen Battery

Digital pen is charged by connecting to the computer using the mini USB cable. Time taken by Pen to be fully charged is about 3.5 hours.



Fig. 2. Charging Digital Pen

2.2 Charge the Receiver Unit

Receiver unit can be connected to the computer using the mini USB cable. Time taken by receiver to be fully charged is about 3.5 hours.

2.3 Insert an Ink Refill

Digital Pen works like actual ball point pen and have same ink refill which can be inserted as shown below.

Slide the refill into the tip of the pen and gently press the refill until it is securely locked in place.



Fig. 3. Ink Refill in digital Pen

2.4 Remove an Empty Refill

Refill can be easily replaced by new one if not in proper condition.

Use the extractor to hold the refill and gently pull the old refill out.

III. WORKING OF DIGITAL PEN

Digitize your handwritten notes anywhere. Recognizes handwriting in 30 languages, graphs, and drawings. Digitize the notes keeping the simplicity of a classic pen i.e. standard paper and ink, Digital notes is export to the favorite text editor like Word, Notepad, Outlook. Share your notes, video memos and annotated photos anywhere.

When writing becomes digital at meetings, in lessons, or just at home: Digital Pen converts your writings into editable digital text. It recognizes any writing (isolated characters and cursive handwritten text) and digitizes it very reliably. Time consumed for transcribing the notes into the computer is saved: Digital Pen does it for you. The notes are stored in the memory of the receiver in .ink or .note format and ready to be edited, shared, and archived.

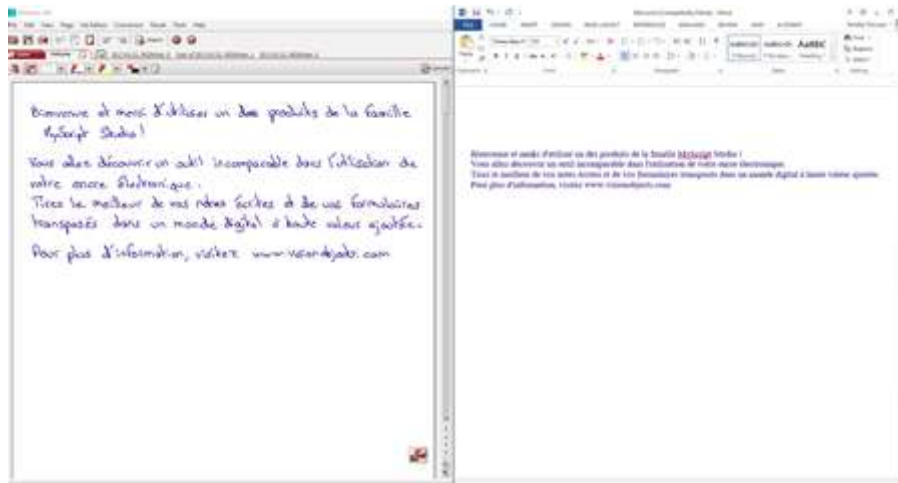


Fig. 4. Written Text Converted To Word Document

Export the notes as editable text in Word, with a single click and convert your handwritten notes to text in Word. All the class notes or notes on meetings are instantly converted into an editable Word document. It is also easy to tidy up your notes and share them. The notes are easily accessible at all times.

It makes your notes more mobile than ever. Transfer them directly via Bluetooth to any mobile device like Android or iOS. Also you can instantly send your notes by email or just archive them. You will never again need a computer to share your notes.

IV. CONCLUSION

The paper describes digital pen that transmits writing into digital media. The useful feature of this computer invention is that hand-written digital files can be easily converted into text fonts for use in word documents or emails. This technology will allow us to interact with our world like never before. We can get information we want on anything from anywhere within a few moments.

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