

# maxell

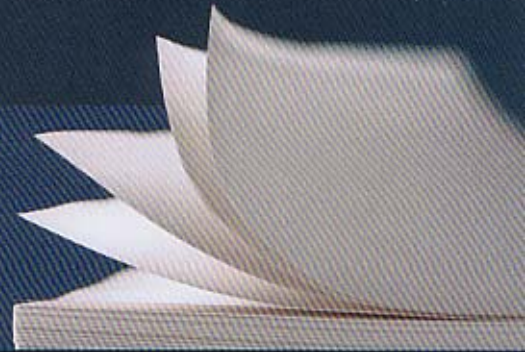
2007.09

English

Maxell Digital Pen

Penit

*makes it easy*



## Reinventing IT

An innovative interface device designed to generate digital data for a variety of information applications using a familiar, analog writing implement.

IT—making its way to you

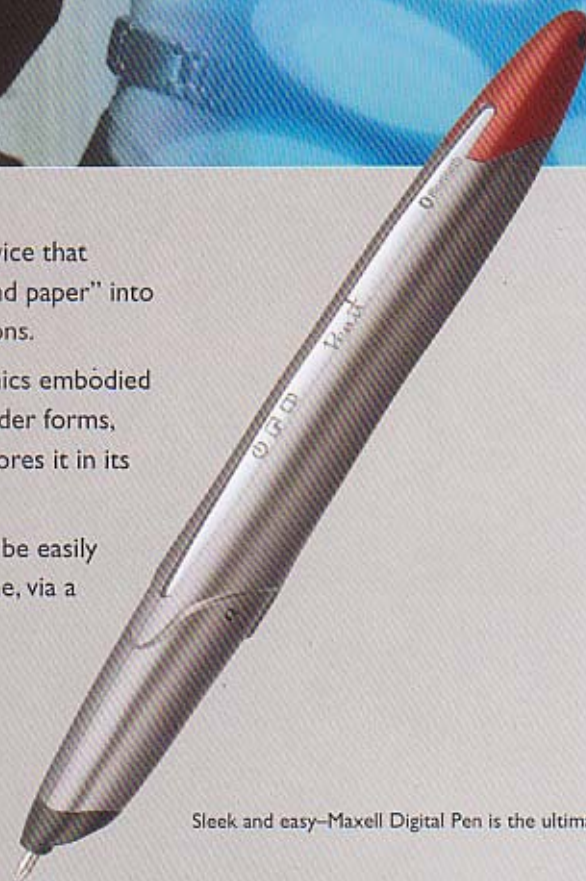
## Ubiquitous Digital Pen

The Maxell digital pen "Penit" is a high technology interface/device that converts handwritten analog information created using "pen and paper" into digital data, enabling the data to be utilized in various applications.

The digital pen is a sophisticated integration of Maxell electronics embodied in a sleek style. It converts analog information (handwritten order forms, clinical charts and handwritten memos) into digital data and stores it in its built-in memory.

Once stored in the pen's built-in memory, the information can be easily transferred to a PC or other IT devices, such as a mobile phone, via a Bluetooth® or USB interface over networks, and used in a variety of applications.

When using the digital pen, you won't even realize that you are using a state-of-the-art IT and network device. The Maxell digital pen further expands the possibility of using advanced networks for everyone from business users to consumers.



Sleek and easy—Maxell Digital Pen is the ultimate IT device.

## Applications

Digital pens are becoming more common in environments where traditional pen and paper are the norm. Digital pen use is also spreading into IT areas where data processing is the norm.



### Case 1

### Healthcare

### Handwritten electronic clinical records

This system allows doctors and nurses to make clinical records with digital pen and paper.

#### User

A hospital

#### Advantages

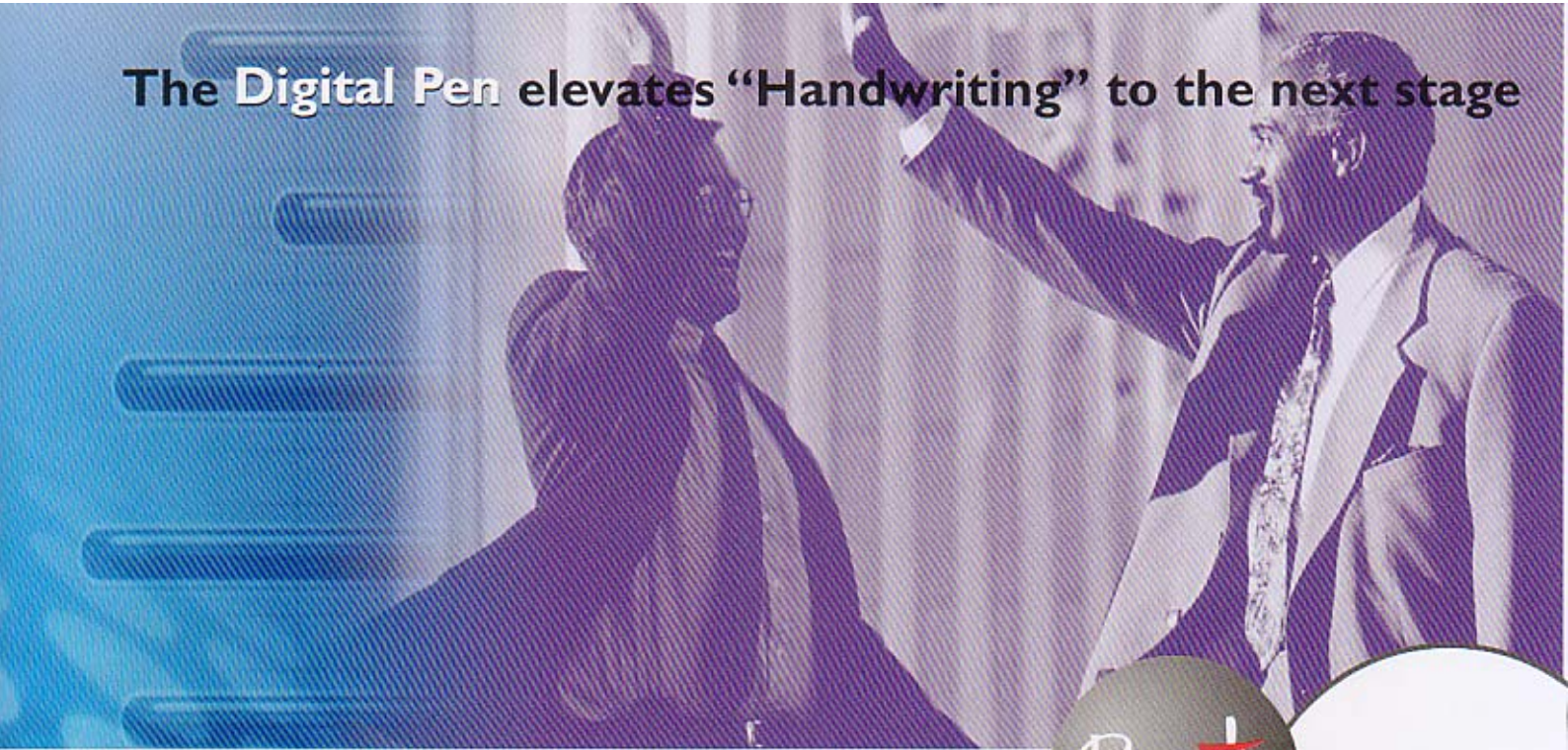
- 1 No transcription or key entry operation is necessary, reducing work loads and allowing staff to allocate more time to medical treatment.
- 2 Computerization of medical document processing is possible without modifying current workflows.
- 3 Original records can be saved both in the system and on paper, helping to prevent data loss through computer error.

#### Other uses

- Electronic clinical records
- Medical prescriptions
- Interview sheets
- Coordinating emergency patients
- Patient referrals
- Home-visit nursing records and management



# The Digital Pen elevates "Handwriting" to the next stage



Three elements of digital pen functions

Anoto communication infrastructure (Paper Look-Up Service)

## Features

### User friendly and highly portable

Just like any other writing instrument, the "Penit" Digital Pen can be used anywhere and anytime, and requires neither keyboard nor PC.

### Bluetooth® support

Through a mobile device (cellular phone, PDA, etc.) with a Bluetooth® interface, "Penit" Digital Pen handwritten information can be sent over the Internet anywhere in the world.

### Identify and activate different applications

Every application is purpose-built in combination with assigned pattern-printed paper. Once transferred to a PC or server, information handwritten by "Penit" Digital Pen on such assigned pattern-printed paper identifies and initiates its corresponding application for data processing.

### Can stop and resume writing

Unlike other types of digital pens, "Penit" Digital Pen traces and records the absolute coordinates on the pattern-printed paper of what is being handwritten in tune with a user's handwriting movement. This function makes it possible for the user to pause and resume writing anytime.

### Memory capacity

"Penit" Digital Pen can store information in its built-in memory up to an equivalent of about 40 sheets of A5 paper.

### High security protection

Each "Penit" Digital Pen has a built-in clock and a serial number, both of which personalize pen data with the time and date of writing as well as with the pen's ID (serial number), and act to make pen data secure against tampering and counterfeiting. Papers containing handwritten information can be kept for filing as ordinary (original) documents.

## Case 2

### Insurance and finance

## New credit card application system

A new credit card application system by the consumer credit industry

#### User

A credit company

#### Advantages

1. Applicants can keep filled-in forms for their records.
2. Allows the user (credit company) to speed up issuance of credit cards to applicants.

#### Other uses

- Claim investigation
- Trouble reports (tamper proof)
- Survey reports



## Case 3

### House building

## CAD system for housing

Digital pen-backed CAD system transform house plans into 3-D floor plan data.

#### User

A building company

#### Advantages

A 3-D housing model created before the client's eyes can be the most effective presentation. Pen and paper technology help a client feel at ease, even at the first meeting with a sales representative. When connected to cost data, this CAD system also assists sales activities by providing clients with on-the-spot quotations.

#### Other uses

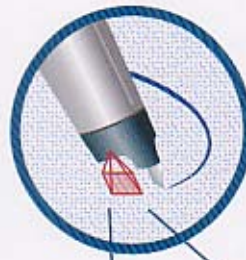
- Issuing quotations
- Processing orders
- Designing tools

## Digital Pen and dot patterns

### Dot patterns

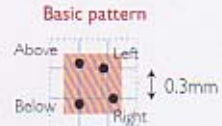
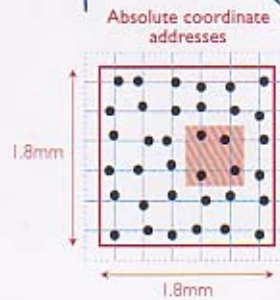
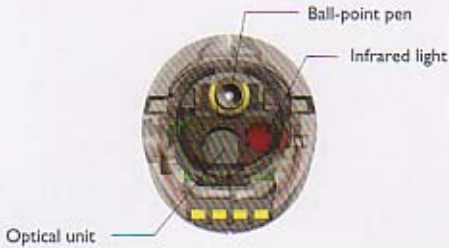
For the digital pen to function properly, special paper must be used. Such paper looks very much like regular paper, but it is actually printed with specially arranged dots known Anoto patterns, which uniquely define the absolute coordinate addresses (coordinate locations). The pen's built-in CMOS digital camera captures dot patterns based on your handwritten notes and drawings. Captured information is processed into digital signals by the pen's CPU\*.

\*Patterns are captured at a rate of 75 times per second.



### Details of dot patterns

Anoto patterns are combinations of 36 (6 x 6) dots aligned to a grid (1.8 x 1.8mm) under precise calculation. The digital pen reads these dot patterns and identifies the locations of handwritten data.



### Dot patterns

(Special Sheet of Paper)

## Communication infrastructure for digital pens

### Internet model

Handwritten data can be sent to the Application Server Handler (ASH)<sup>®</sup> via the Internet for processing.



**Paper Lookup Service (PLS)**  
PLS identifies a digital pen and matches it with the URL by referring to the ASH<sup>®</sup>.

**\*Application Service Handler (ASH<sup>®</sup>)**  
ASH provides application process services corresponding to the format of data.

s handwritten



### Case 4

### Consumer

### Email exchange by mobile phones

Handwritten email messages can be sent through a mobile phone with Bluetooth.

#### User

Individuals

#### Advantages

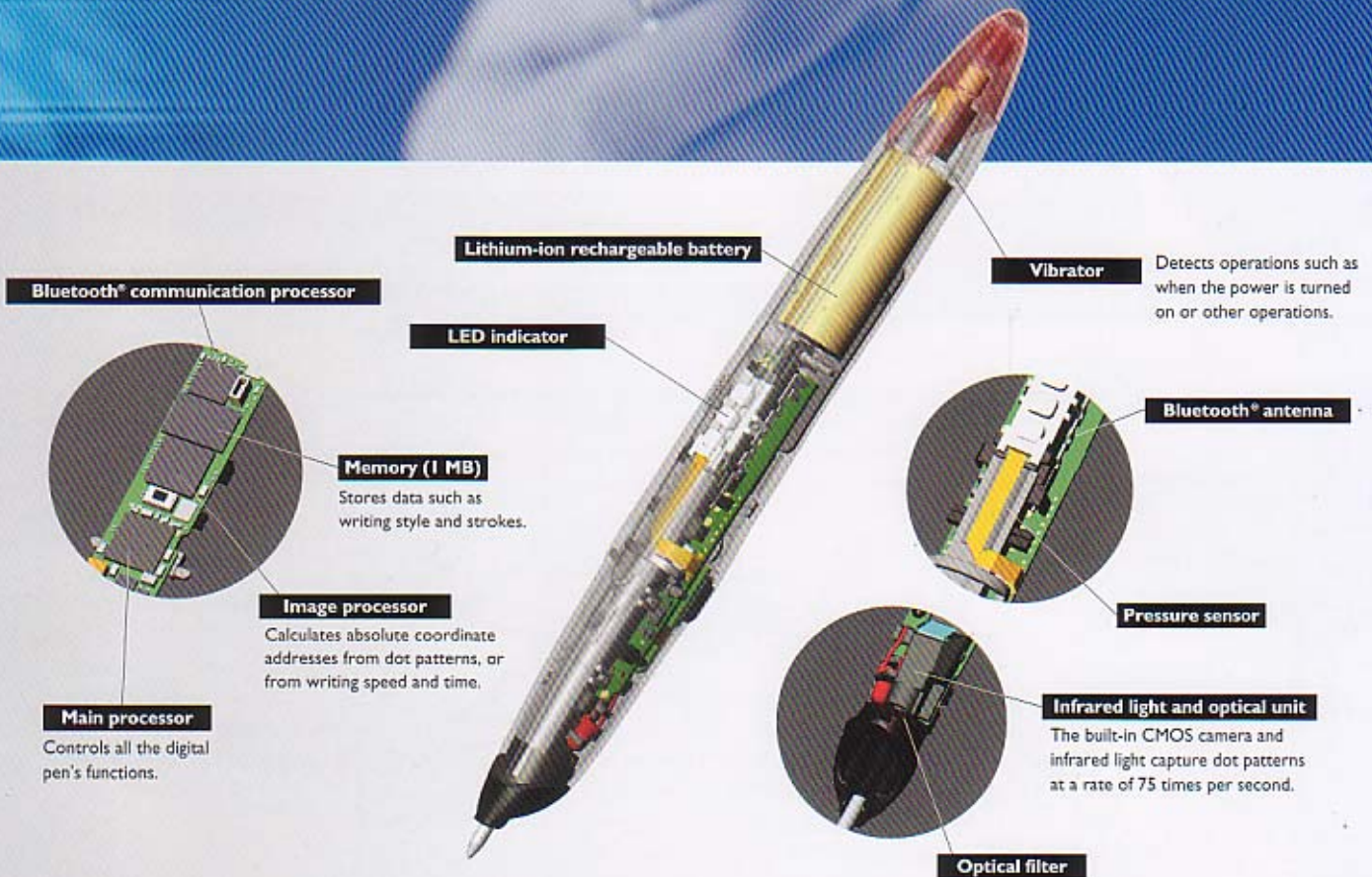
1. Easy exchange of email without key entries.
2. Personalized handwritten messages can be sent anytime and anywhere.

#### Other uses

- In-company messages
- Idea management tools



# Technology that requires no command of technology



## Case 5

### Others

## Digital note system for researchers

This system provides proof of originality for researcher ideas and experimental data using electronic signature technology. (Currently being used in trials at the institute.)

### User

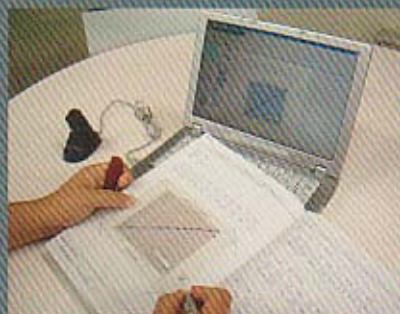
A central research institute of a company

### Advantages

- 1 An e-signature is added to all handwritten data, providing users with tamperproof security.
- 2 Data saved in a computer can be searched by researcher name and research period as keywords, allowing quick access to required research records.

### Other uses

- Reports
- Minutes



## Expanding applications

### e-Government

- Residents register/seal impression applications
- e-Government applications
- Reporting forms
- Inspection forms

### Amusement and services

- Sports scorecards
- Various games

### Insurance and finance

- Claim forms
- Accident reports (alteration prevention)

### Public utilities (electricity and gas)

- Maintenance and regular safety-check sheets
- Various inspection and meter readings



Questionnaire results in data form (in real time)

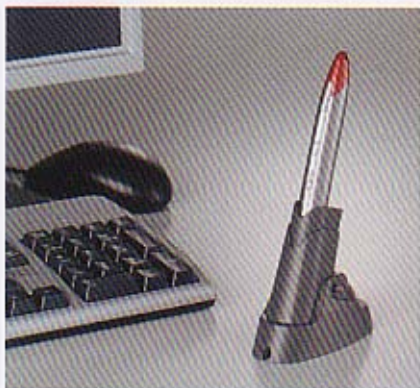
## Specifications



Model	DP-201 (Bluetooth® + USB model)
Weight	30g
Dimensions	153 x 19 x 17mm (without a cap) 157 x 21 x 18mm (with a cap)
Data communication	USB 1.1 standard (USB 2.0 standard can be used), Bluetooth® 1.2 standard

Operating temperature	0°C to 40°C (with no condensation)
Built-in battery	Lithium-ion rechargeable battery
Operation time	2 hours (120 minutes) or longer
Standby time	10 hours (min.) without a cap
Charging time	Approx. 2.5 hours
Charging method	Via cradle (AC adapter/USB)

## Cradle



Cradle for mobile use



Cradle for mobile use combined with cradle base



### Anoto AB

Headquartered in Lund, Sweden, the company has developed unique solutions for handwritten text from paper to digital media based on digital camera technology and image processing. Anoto is a pioneer in this field of technology. For the purpose of establishing an international de facto digital communication standard, the company has been expanding partnerships and business alliances around the world.



For more information on Anoto AB, please visit:  
[www.anoto.com](http://www.anoto.com)

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