

## The Technology

### Digital Pen and Smart Paper

#### How the technology works

##### Pen and Paper relationship

The digital pen used by Datatrac in their Pen solutions has a video camera under the nib and contains a battery, a mother board and a timer. The pen is used as an ordinary hand writing tool to write information onto "smart paper" which has been pre-printed with a unique pattern of dots and the camera in the pen locates the exact location of a pen stroke on the paper by a navigational fix in relation to the dots.

##### Storage Capacity of the Pen

Any information written on the pre-printed paper is stored on the pen, which is capable of storing up to 40 different documents. Once the data has been collected the pen is placed into its docking station that is attached to a computer and all the information is downloaded. The pen can remain in use for 6 hours.



Digital Pen & Cradle

##### Flexibility of the Paper

The paper is to be used as a 'data collecting tool' to be discarded. Where images only are required then there is no need to change any current documents. For digital data a form will be designed; there is no limit to what can be achieved.

**If you think you have a activity which could benefit from our data capture technologies we would like to discuss it with you.**  
**Contact:jtobin@datatrac.co.uk**

##### Data storage

Data is captured in three different ways, as an image (JPG) format, as Boolean entries which enable multiple choice questions to be answered and sorted or as character recognition which allows for data to be manipulated.

##### Uses include:

###### First Level

The first level of the Datatrac "digital pen" solution captures only an image as a JPG. This image may be stored at the point of data capture such as on board a vessel or if required it may also be sent ashore; pen strokes only are transmitted in very small files: only 2Kbytes instead of 50Kbytes for an equivalent JPG document.



Digital Pen

###### Second Level

The second level of the Datatrac solution uses Boolean programming to sort a series of check boxes and analyse responses. These responses may be filed and sorted in the Datatrac management database. The reporting forms and summary analysis may be transmitted to head office in much the same way as the image capture.

###### Third Level

The third level of pen technology adds character recognition to the application. Data is captured into the Datatrac management database and may then be exported into excel spreadsheets for analysis. The speed with which accurate data is captured into the computer, without the need for extra data entry, facilitates the flow of information from an operational unit to head office or a central server which in ordinary circumstances would have to wait until the operating personnel were free to key the data collected into the computer.

**Get to know more about Datatrac Solutions by ordering a Starter Pack now.**  
**Contact:sales@datatrac.co.uk**

# The Technology

## Handheld Reader with Electronic Tags

### What it does

Datatrak have combined a PDA with their own reader head in order to contact with and read data from electronic tags. This creates an electronic link between an object and a database. The resulting handheld reader is easy to operate with only one hand even when the operator is wearing a work glove.

PDA: Rugged PDA with Datatrak eTag Reader



### How it works

The contact memory tag is an electronic chip in a ruggedised case that has been manufactured with a unique identification number.

- The Datatrak solution provides that electronic tags are securely placed, either around a work area such as a vessel or on specific pieces of equipment.
- When the tag is touched by the Datatrak reader head a circuit is completed that enables the reader to read the identification number and any data saved on the tag.

The software in the PDA recognises the tag identification and through the Datatrak software program always records the time and date of contact for proof of presence and /or prompts the operator to take one or more specific actions.

**If you think you have an activity which could benefit from our data capture technologies we would like to discuss it with you.  
Contact [jtobin@datatrak.co.uk](mailto:jtobin@datatrak.co.uk)**



Oxley eTag

### Operational Use

At the commencement of his tasks the operator would have been required to enter his own unique identification (PIN) to activate the PDA. At the end of a sequence of tasks the PDA is then docked in a cradle or connected by lead to a computer and the data collected from the tags is downloaded automatically into the Datatrak management database.

It can then be imported into the client's own planned maintenance system or can be retained as a record of actions actually completed for compliance purposes.

After completion of the round the operator is not required to take any further actions, and does not need to update any maintenance record by typing into the computer.

The tag and reader automatically record the time of contact which avoids the necessity of entering time data and acts as an accurate proof that a task was performed, when it was performed and by whom.



Rugged PDA with Datatrak eTag Reader with remote readerhead

*For more information on Datatrak applications contact us at:*

**Email: [sales@datatrak.co.uk](mailto:sales@datatrak.co.uk)**

**Tel: +44(0)20 7377 5773 , or +44(0)1404 841117,**

**Website: [www.datatrak.co.uk](http://www.datatrak.co.uk)**