

NEW

**8 MEGAPIXEL
DIGITAL
CAMERA**

MacroPATH D

MACRO DIGITAL IMAGING SYSTEM FOR THE GROSSING ROOM



MILESTONE

COMPASSIONATE TECHNOLOGIES FOR SAME-DAY DIAGNOSIS

MILESTONE

A Company with a Caring Goal

Milestone is committed to reducing patients' anxiety and stress by providing pathologists and histologists with innovative technologies to enable same-day diagnostic results



**Ivory, creamy, arctic white, snow white?
...Pea size, nut size, orange size?**

A picture is worth a thousand words

"*Histopathology, more than other disciplines in medicine is very much a visual science. Diagnosis is ultimately based on the gross and microscopic appearances of the biopsies or excised specimens. Currently, documentation of those appearances that substantiate the histological diagnosis is done in words. A large part of the routine histopathology report is devoted to the macroscopic description of the specimen. In addition, there is also the necessity to document the location in the specimen from which each tissue sample is taken in the form of a block key. Reports of complex specimens are often supplemented with the occasional photograph of the gross specimen. The transcription of all these data occupies a major portion of the time required to generate a histopathology report. Furthermore, the filing of hardcopy photographs and negatives becomes a problem as the database expands."

* Leong AS-Y, et al. "An advanced digital Image computer system for gross specimens: a substitute for gross description. Pathology (2000) 32; pp131-135

The MacroPATH D system

A new, innovative, highly visual productivity and quality tool for the grossing room.

MacroPATH D is a user-oriented capture/storage system of digital macro images and videos to support macroscopic descriptions and to dramatically reduce specimen turn-around time at the grossing station.

The system serves as a comprehensive method of storing the macroscopic images, with spoken comments, of all specimens examined in the laboratory, providing an invaluable diagnostic database for routine grossing, teaching and research.

Engineered for flexibility and for simple and intuitive use, MacroPATH D does not require any prior computer knowledge to operate.

A

8 Mpixel
high sensitivity
industrial digital
camera

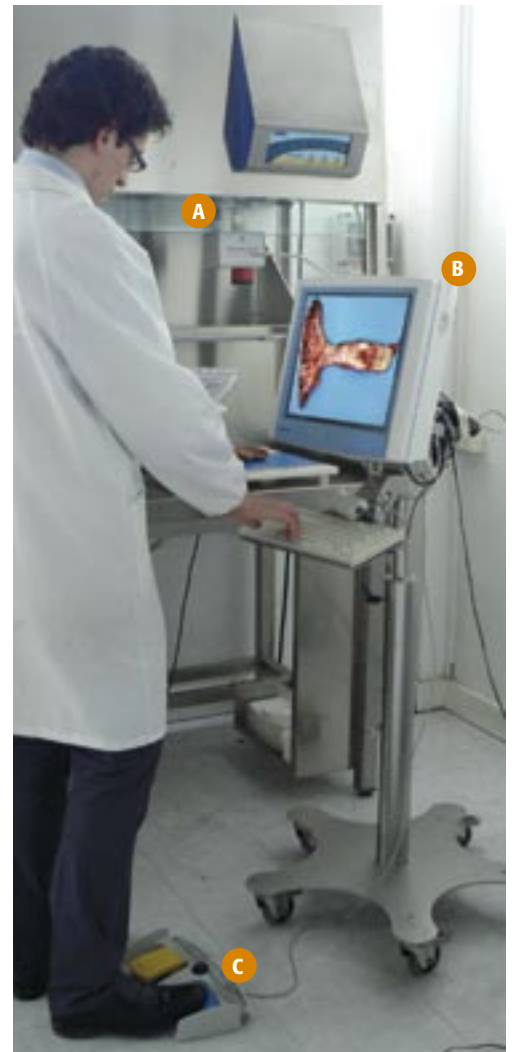
- x 12 optical magnification
- autofocus
- Splash resistant enclosure

B

Professional 15"
touch screen
color terminal.
- Splash resistant enclosure

C

Heavy duty foot
control system
for zoom,
in/out, voice
recording and
save features



MacroPATH D

Benefits for the patient care management team



In the Grossing Room:

- A major visual complement to standard descriptions.
- Availability of images eliminates vagueness in description of shape, size and color of specimens.
- Substantial reduction in gross specimen description time. Faster specimen turn-around-time.
- Enhanced close-up observation of tissue surface/structure through the camera zoom feature.
- Rapid and accurate on screen sizing of specimens.
- Precise indication on screen of tissue block sampling sites.
- Easy labeling of sampled block sites.
- Full documentation of specimens "as received".



In the Microscopy Room:

- Macro images files available on Intranet to all pathologists.
- Immediate availability of macro images relative to the case under examination.
- Export of macro images via e-mail to complement micro images.
- Complement and support pathology reports with high quality printed macro images.
- **Digital image files can be retrieved by all LIMS systems.**
- Highly efficient supervision in a teaching/training environment.



For the Laboratory Manager

- Full documentation of cut up grossing procedures for Quality Assurance.
- All digital images can be easily stored on and retrieved from LIMS, Intranet, CD-ROM/DVD or USB memory stick supports.
- Reduction in image storage space when compared to conventional photographs.



For the Hospital Administrator

- Substantial reduction in secretarial support for transcription.
- Clear, precise, real-life images of specimen for medical /legal purposes.
- Same day availability of high quality specimen images to assist clinicians in preparing detailed post-operative reports.



MacroPATH D



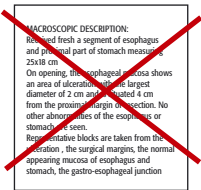
NO MORE 35 mm photographs...



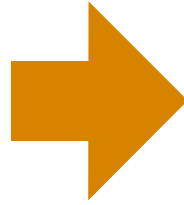
NO MORE instant photographs...



NO MORE hand drawings...



NO MORE long description...



... Just MacroPATH D.
A rapid sequence of
digital images and
spoken comments



3

Create a series of images and videos

Capture real size, close up images of excised specimen in rapid sequence. Saved images and videos appear as thumbnail on the right side of the screen.

4

Automatic sizing

Recall the required image by pressing on it. Select "ruler" icon -. By finger or with a plastic pen touch and drag across specimen. Measurement in mm (inches) and mm² will automatically appear.

Better documentation in less time



1

Start a new file

Enter specimen/patient data by keyboard or scan bar code with reader – MacroPATH D program automatically opens.



2

Capture in 2 seconds a digital image of the requisition form

An optional feature to exclude potential mismatch errors when manually entering the patient/specimen data. Ideal documentation for Quality Assurance.



5

Automatic block key indication

Recall the required image. Select "scalpel" icon. Draw on specimen for a rapid indication of tissue area sampled and labeled in sequential order.

6

Correlation of labeled cassettes and sampled tissues

An optional step to eliminate potential mismatching of cassettes labeled/number of blocks, sampled tissues. Ideal documentation in educational/training environment and for Quality Assurance.


MacroPATH D **D** Simplicity,

IMAGE SIZE	COMPRESSION QUALITY	SIZE
Large 3264x2448 (8 Mpixel)	Normal-Fine Super Fine	From 2 Mb to 6 Mb
Medium 1 2816x2112 (6 Mpixel)	Normal-Fine Super Fine	From 1 Mb to 4 Mb
Medium 2 2272x1704 (4 Mpixel)	Normal-Fine Super Fine	From 500 Kb to 2 Mb
Medium 3 1600x1200 (2 Mpixel)	Normal-Fine Super Fine	From 200 Kb to 800 Kb
Small 640x480	Normal-Fine Super Fine	From 100 Kb to 500 Kb



1 **Camera Resolution**
User can set image size from 0,3 to 8,0 Megapixel


2 **Annotation screen**
Simple, visual commands
1) Drawing and examine
2) Audio functions
3) Settings and commands.

3 **Automatic linear and area sizing**





7 **Text**
 Add any text... or select it from customer preset list



8 **Color**
 Choose from 8 colors.



9 **Examine**
 Zoom in for further examination of saved images, e. g. close-up of disease area.

Interfacing MacroPATH D to LIMS

MacroPATH D has been designed to allow an easy interface with your existing database. Milestone can provide LIMS manufacturers with the required simple interfacing data to enable LIMS to open MacroPATH D.

MacroPATH D software operates on Windows 2000 – XP Systems with image format in JPG.

MacroPATH D software can be rapidly opened from the LIMS (Laboratory Information Management System) database by simply clicking on the appropriate icon.

The ID patient code is automatically transferred into MacroPATH D allowing an immediate start to the image capture sequence.

At the end of this session, the operator only needs to exit MacroPATH D and return to his existing database to continue working as per normal. With this procedure, the LIMS database knows the exact file location for each patient case containing the macro images, for an easy retrieval at a later stage for inclusion in the final diagnostic report.

performance and flexibility



4 Automatic block key indication.



Choose sequence of letters/numbers or combination of (A1, A2, 1A, 2A).



5 Drawings-freehand



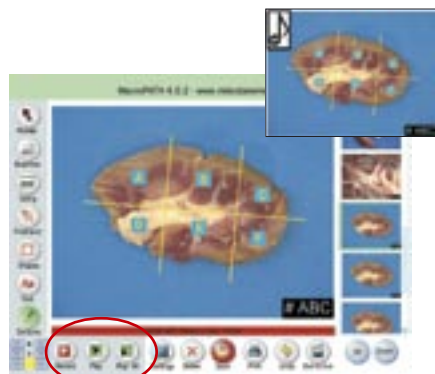
Draw any shape on the touch screen



6 Drawings



Five standard shapes to choose from.



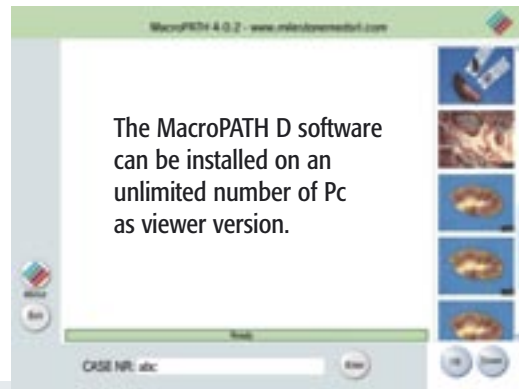
10 MP3 Audio Recording



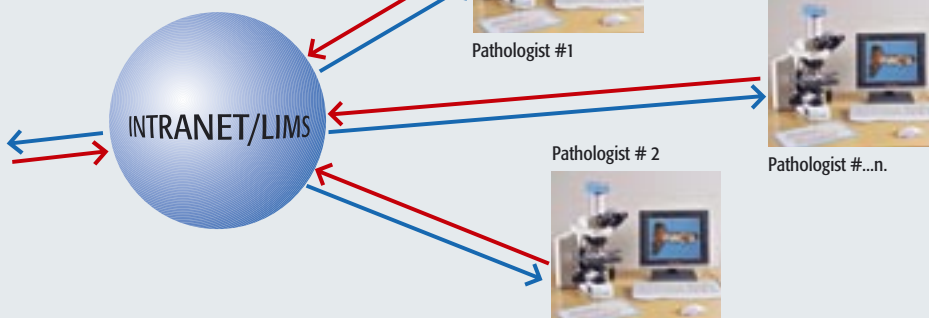
MP3 audio file saved and associated to the images. Possibility of playing single audio file or slides show at time of signing off.



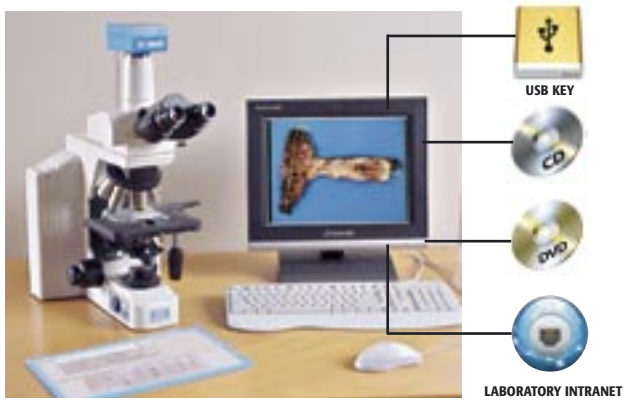
11 - Print out capability.
- Export capability in preset report form



MacroPATH D Station(s)



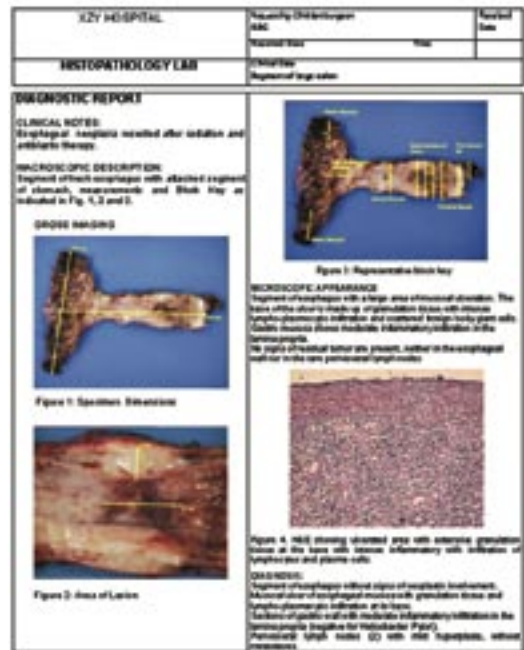
From the Grossing Room to the Enhanced Diagnostic Report



Retrieving macro images in the microscopy room

After grossing is completed all macro images are readily available and can be retrieved either CD/DVD or via the laboratory's Intranet. In the latter situation, at time of slides examination, all pathologists can call up the specific patient/specimen MacroPATH D file to select, and further process the stored macro images of the excised specimen.

Once imported, images to complete the diagnostic report can be printed on commercial ink jet or laser color printer.



Enhanced diagnostic reporting

As much of the current descriptive documents are wordy and tedious. The ability of MacroPATH D to store high quality images at low cost for immediate use allows the opportunity of enhancing the current method in which histopathology reports are being generated and presented to surgeons or clinicians.

The flexibility of MacroPATH D in the grossing room

In consideration of the wide variety of grossing stations and space availability in histology laboratories, Milestone has developed a complete line of camera holders and control terminal supports to fit any existing grossing station setup.



Table top camera holder
High impact, polymer camera holder. Camera can slide along X, Y, 2 axis to fit any space requirement. (Camera not included).



Camera holder for hood-type grossing station



Camera holder for photographic stand
High impact, polymer camera holder. Holder will fit any existing screw mount photographic stand.



Floor type control terminal holder
Heavy duty steel construction with wheels for improved flexibility. Built-in keyboard holder. (keyboard not included).



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