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microscopy

AND ANALYSIS

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ie, J. S. Pathology, London
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COVER STORY

The cover shows a 3-D confocal reconstruction of a human placenta syncytiotrophoblast. Grown five days in culture, the cell was stained with a fluoresceinated antibody to trophoblast membrane* (green) and counterstained with propidium iodide to label the multiple nuclei (red).

The confocal fluorescence slices were collected using a Meridian Instruments *INSIGHT PLUS* Laser Scanning Confocal Microscope System with a 100x oil immersion objective (NA 1.4), an argon ion laser, the *INSIGHT PLUS* Multi-Color Argon Laser Filter Wheel with 605 longpass and 530/30 bandpass filters, and the Meridian Cooled CCD. The 3-D reconstruction was generated from the slices using the premium *INSIGHT-IQ* Computer System from Meridian Instruments. (Courtesy of Don Thompson, Dr. In C. Kim, and Dr. Gloria Sarto, Department of Obstetrics and Gynecology, University of New Mexico, Albuquerque, New Mexico.)

The *INSIGHT PLUS* (shown above) is a modular system that offers through-the-oculars confocal viewing at 120 scans per second. It is available on upright or inverted fluorescence microscopes from several manufacturers, including Olympus Corp., Nikon Inc., and Carl Zeiss Inc. The *INSIGHT PLUS* system can be used either in confocal mode (fluorescence or reflectance) or in non-confocal mode (transmission), and is able to acquire and store as many as 30 confocal images per second.

MOON ROCKS UNDER THE MICROSCOPE

Michael W. Davidson

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CRYSTALLOGRAPHIC IMAGE PROCESSING ON A PC

ENHANCING OLUTION

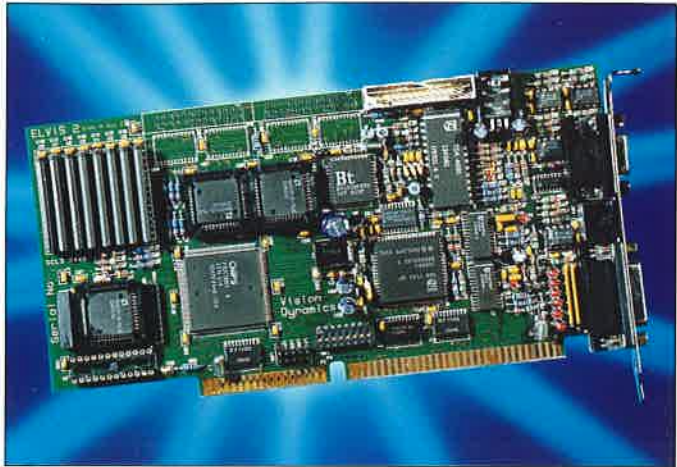
roduced in the 1993 Vector catalogue, DAB enhancing new reagent useful for toning d sections.

as a simple, one-step addition ing sequence, enhancement 5-20 seconds and generally DAB reaction product to a ish-brown colour. This treat-revents any decolourisation ydration and permanent

a 30ml package, the DAB solution can tone approxi- 300 slides depending on the oloyed per slide. It is not use with other peroxidase such as AEC or Vector VIP ept that it does somewhat new Vector SG (blue-grey) substrate for horseradish

e information or a new ontact: Vector Laboratories ffric Square, Bretton, Peter- 8RF, UK. Tel: 0733 265530.
Reader Enquiry No. 109

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FOR IMAGE ARCHIVING

Aequitas IDA Image Database and Image Archive Management software uses an Entry Level Vision System, ELViS for short.

This displays live video on the VGA screen of a PC. It accepts composite video signals, converts them to a digital format which is processed then displayed.

The process can be stopped at any time, freezing an image to allow software to access it and if required compress it, add graphics and save it with associated text and data.

ELViS II is compatible with 1024x728 pixel VGA systems and features broadcast standard colour encoding (4:2:2).

Details from Dynamic Data Links Ltd., PO Box 31, Elsworth, Cambridge CB3 8LG. UK. Tel: 095 47 309/0954 789703.
Reader Enquiry No. 110

Slow scanning CCD TV systems permit Transmission Electron Microscopes to be used without the need for a dark room. A new Hitachi Technical Data Sheet (number 65) features the use of SSCCD TV on the H-9000NAR TEM. Copies are available free from Hitachi Scientific Instruments, Hogwood Industrial Estate, Finchampstead, Wokingham, Berkshire, RG11 4QQ, UK. Tel: 0734 328632.
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SMART CAMERA

VLSI Vision Ltd (VVL) launches the *imputer*, the first miniature imaging computer that can analyse what it sees. This tiny 'smart' camera, measuring only 107x53x24mm, can be programmed to perform a wide range of functions, from industrial inspection tasks to multi-media uses. The arrival of the *imputer* (imaging computer) means that vision product development has become accessible to all product developers, instead of being expensive, highly specialised and available to only a few companies.

Programming is very straightforward using the Windows-3.1 compatible IDS software developed by VVL for this purpose. These two factors make it attractive and profitable for companies to develop and market programmed *imputers* as smart vision modules.

The *imputer* is not tied to any particular vision application, but is a completely generic development platform for vision products. The unlimited range of applications includes inspection, process control, smart surveillance, traffic monitoring and control, numberplate recognition, multi-media, character recognition, biometrics, metrology, fluid-flow dynamics, automotive, navigation aids, robotics and vision toys. Details from VLSI Vision Ltd, Aviation House, 31 Pinkhill, Edinburgh EH12 8BD. Tel: 031 539 7111. Reader Enquiry No. 111

WHAT'S NEW

DIRECT OUTPUT TO VIDEO PRINTER

COMPUTER INTERFACE

HIGH RESOLUTION VIDEO MONITOR

CLICKER FREE IMAGE

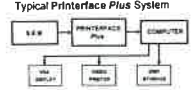
PRINTERFACE Plus

- SEM to Printer Interface
- Captures Slow Scan Image from SEM and converts to VGA format
- High Resolution Flicker Free Display in 64 grey levels with 640 x 480 pixels
- Continuous Frame Updating
- Frame Averaging for Noise Reduction
- Micrograph Archiving
- Low Cost Micrographs from Video Printer
- Quick Mount Composite Prints
- Saves Time and Money
- Attaches to Most SEM's

PRINTERFACE Plus interfaces your SEM directly to a cheap-to-run video printer. In the process it converts its high quality slow scan video signal to computer compatible VGA format.



Wolver Coast, Berkshire, 1.3KV, Unmounted.



Its output is suitable for feeding to a wide range of video printers. These are now able to produce images of near photographic quality at a small fraction of the cost of conventional photographic records. Good results may even be obtained on plain paper with a standard laser printer.

The images passed to the computer may be further processed as required using commercially available programs for retouching or to correct for brightness and contrast discrepancies.

Another big advantage of PRINTERFACE Plus is that the operator is now freed from the requirement to work in the dark.



FACE Plus