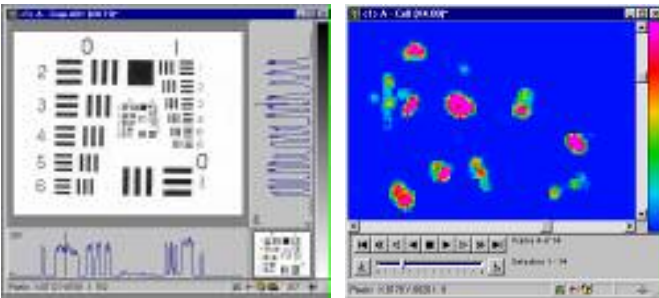# IFS32 IMAGING SOFTWARE

KEY FEATURES

- The IFS32 image processing and data acquisition software is a 32 bit Window 95/98/NT application.
- Up to 26 image buffers (designations labelled A to Z).
- Images may be either 8 bit, 16 bit, 32 bit, floating point or colour format.
- Each designated image buffer may be either a single image or a sequence of images.
- The number of images in a sequence is limited by hard disk and memory capacity.
- A simple and consistent "point and click" style user interface.
- A range of powerful image processing and data extraction and graphing routines.
- Image processing functions may operate between images or between images and constants.
- A simple "learn and recite" macro system allows sequences of operations to be memorised and replayed.
- User definable toolboxes provide quick access to complex functions.
- Hardware drivers for HRPCS photon counting, IPD photon counting and video frame grabbers.
- "Developers Code" modules may be developed using Microsoft C++ and seamlessly integrated into the main

Image Windows

Image windows may display either a single image or a sequence of images. Sequence windows may be recognised by the VCR style play control buttons underneath the image.
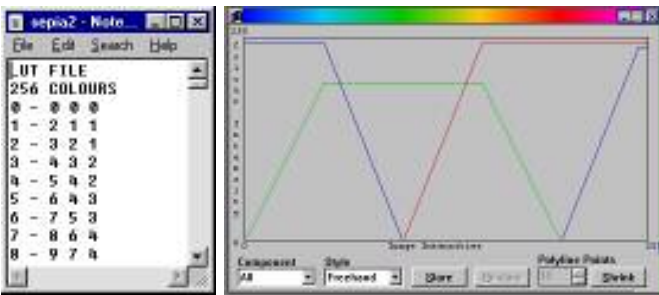
There are four window display modes.

- o Image only
- o Image and colour palette
- o Image and x,y intensity profile
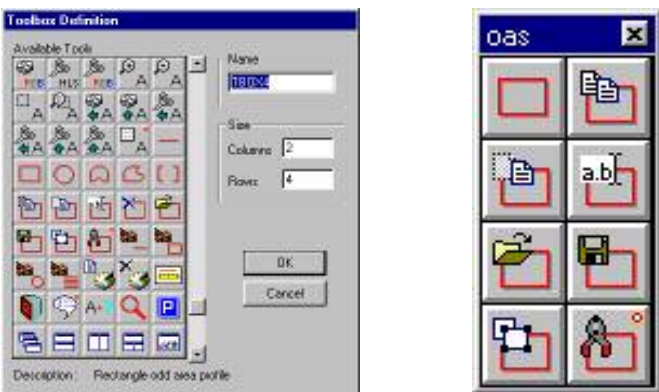- o Image, colour palette and x,y intensity profiles

Colour Palettes

Image intensity is normally displayed using a grey scale. Alternatively, colour may be used to represent intensity or ranges of intensities. A number of predefined colour palettes are provide. Colour palettes may be modified by the use of text or graphical editors

Toolboxes

Nearly all functions accessible via menu commands are available through icons which may be built into user defined toolboxes. This facility provides a short cut to commonly used functions.
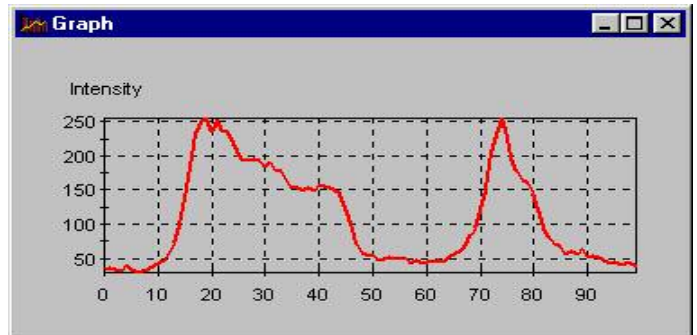

Hardware Requirements

Minimum – Pentium 120, 16Mb Ram, 600x800 true colour display, 14" monitor, CD ROM, 5Mb spare disk capacity plus storage space for images.

Recommended – Pentium II 300MHz, 64Mb Ram, 1280x1024 true colour display, 17" monitor, 4Gb hard *disk, CD ROM (or CD Writer)*
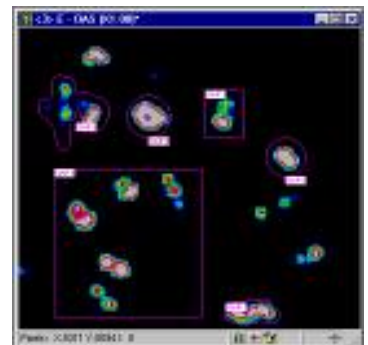
Graph Utilities

- o Lines may be drawn at any angle over an image and the intensity profile of the data along the line is plotted as a graph.
- o Columns or rows in a rectangular area may be displayed as an average line profile.
- o Circular line profile allows the intensity profile of the circumference of a circle to be plotted as a line graph.
- o The area profile command shows intensity variations in a defined area as a histogram

Odd Area Sets

Multiple odd areas consisting of circles, rectangles, polygons or freehand areas may be drawn over an image.

Statistics from a single image or a sequence of images may then be extracted and displayed in the OAS statistics results

Available Functions

Constant Operations:	*Add, Subtract, Multiply, Divide, AND, OR, XOR, NOT, Clip High and Clip Low*
Image Operations:	*Add, Subtract, Multiply, Divide, AND, OR, XOR, Negate and Average*
Image Enhancement:	*Smooth, Sharpen, Threshold, Contrast Stretch, Erode, Dilate*
Image Orientation:	*Mirror LR, Mirror TB, Rotate 90, Rotate 180, Rotate 270, Rotate*
Copy:	*To 8 Bit, 16 bit, 32 bit or to Floating Point*
Sizing:	*Enlarge, Reduce, Crop Area*
Measure:	*Pixel, Line Profile, Area Profile, Circumference, Calibration*
Presentation:	*Join, Split, Matrix*
Colour Palettes:	*Various colour and grey scale palettes*
Odd Area Set Analysis:	*Rectangle, Circle, Trapezoid, Freehand*
Statistical Reports:	*Max, Mean Total, Standard Deviation*
Macro Language:	*Record and replay sequences of operations.*
Annotation:	*Annotate Images with text and arrows.*
Printing:	*Printer support is via MS Windows.*
File Format:	*PCX, BMP, TXT, BIN, PCT, SEQ*

Thursday,

Photek Ltd *reserves the right to update and improve this specification without prior notice*