# Coltness High School
# Technical Department

# Graphic Communication

# CAG & DTP

## GLOSSARY OF COMMON CAG TERMS

*This is a brief guide to CAG terms likely to be encountered through the course.*

**CAD**   Computer Aided Draughting

**DTP**   Desk-top Publishing

**CAG**   Computer Aided Graphics
A term encompassing CAD, DTP, and Modelling

2D   Two-dimensional drawing in which an item is depicted as a flat object.
Example – first and third angle projection.

$2\frac{1}{2}$D   Two-and-a-half dimensional drawing in which three surfaces of the drawn item can be seen. e.g. isometric, oblique, etc.

**3D**   Three-dimensional drawing or model in which the complete object can be displayed, normally in colour, and manipulated to show views from a chosen direction.

**A**

**Adaptor**
An expansion card that connects to the monitor to generate the video/screen display.

**Application Software**
Software that has been specially written to carry out a certain task to solve a specific problem.

**Automatic Dimensioning**
Any system of generating dimension lines in specific locations.

**B**

**Back-up**
A term used o describe the process of making a second copy of drawing files, CAG programs, etc. in case the working copies are damaged.

**C**

**CAE**
Computer aided engineering

**CPU**
Central processing unit – at the heart of the computer, it controls all other units.

**CGA**
Colour graphics adaptor. A colour adaptor which provides low resolution and up to 4 colours.

**D**

**Database**
A store of organised information. Any data which have been stored in a readily retrievable form can be regarded as forming a database.

**DTP**
Desk Top Publishing. The creation of a whole publication on computer, and preparing it for printing without the normal process of typing, typesetting, cutting and pasting, and laying out.

**Digitiser**
A means of transferring information into the computer by a hand-held device which makes an electronic 'tracing'. A mesh of wires under the digitiser surface detects the position of the hand-held device.

**Disc**
A random access magnetic storage device.

**DPI**
Dots per inch. A measurement of the resolution of output devices.

**Drum Plotter**
A pen type plotter in which the paper is rotated on a drum under the pen while the pen also moves across the drum.

**Dump**
A colloquialism for transferring what is in the computers memory to disc or printer or other output device.

*E*

**Extrusion**
A command whereby an existing 2D shape is translated into a 3D shape by addition of the depth.

*F*

**File**
A file is the collection of data of which a drawing is comprised and which has been given a file name by which it can be recognised.

**Flat-bed Plotter**
A flat table over which the pen moves in both the x and y planes.

**Font**
A style of text, the size of which can be changed by the operator.

**Format**
In terms of DTP, the arrangement of text on a page defined by the alignment and text style.

*G*

**Graphics Tablet**
A flat-bed input device with a grid of fine wire below the surface. A puck, stylus, or light pen will chase the cursor around the screen as it moves over the surface. Useful for 'tracing over' existing drawings to convert them into computer stored versions, and for making freehand sketches dimensionally accurate.

**Grid**

All CAG systems provide 'transparent' grids; patterns which appear on the screen as construction aids but not to form part of the drawing.

*H*

**Handles**

The small rectangles that surround a selected shape. Text blocks in DTP software commonly have four handles.

**Hard Copy**

Simply means any copy of drawings produced as a plot, printout, or photograph, etc.

**Hardware**

The physical parts of the computer.

*I*

**Import**

To bring in a copy of a text file or graphics, for example from an external application to the page layout application.

**Input**

A term used to describe information that is being sent to the computer.

*J*

**Joystick**

An input device that normally moves in two axes. The output from the joystick can be used to control the cursor movement.

*L*

**Landscape**

Description of the shape of a page document that is wider than it is high.

Laser Printer

A non-contact printing device that is predominantly used in DTP. Laser printers use a laser beam focused on an electrically charged drum which forces the ink to follow the light pattern and form the characters. It is a fast method of printing which also provides very clear images.

**Layers**

CAG software allows drawings to be built up as a series of layers, each layer dedicated to one aspect of the drawing, e.g. construction lines, text, dimensions, hatching, or electrical layout. Layers can be switched in and out and act like clear film overlays which are always in perfect alignment with each other.

**Light Pen**

A light sensitive device which can be used as an input device.

**Linetype**

There are a variety of linetypes; continuous, dotted, dashed, and dot-dash.

*M*

**Modelling/Model**

A CAG model is more than just a 3D screen representation of an object: it is something which the computer recognises as having 3D 'shape' and which it can interrogate as such.

**Mouse**
A mobile hand-held interaction device for controlling the cursor position.
**N**
**NLQ**
Near letter quality. Printed output of high quality.
**O**
**Optical Scanning**
A process in which documents are scanned and the incident light from their contents generates signals which are received by the scanning device and transmitted to the computer.
**P**
**Pen Plotter**
A drawing device that uses a pen. Any plotter using detachable pens is a pen plotter. There are two types; flat-bed and drum.

**Peripherals**
External equipment that can be added or connected to the computer. Examples are printers, graphics tablets, etc.

**Pixel**
Picture Element. Video and screen displays are made up of tiny dots called pixels.

**Portrait**
Description of the shape of the document page which is higher than it is wide.

**Printer**
An output device for obtaining hard copy of drawing and text.

**Program**
It describes a sequential set of instructions to the computer.
**R**
**Real Time**
The term used to describe an event that is executed immediately, rather than an event that will be carried out after a delay.

**Resolution**
The sharpness of definition of a digitised image depending on the number of pixels displayed on the screen.

**ROM**
Read Only Memory. Its contents are fixed during manufacture and cannot be changed. It is used to store the permanent programs which form the basic intelligence of the computer.
**S**
**Screen Dump**
When a screen image is sent to the printer to obtain a hard copy.

**Scrolling**
The vertical movement of the screen image.

**Snap**
A CAG command that locks or 'snaps' the cursor to the nearest 'snapable' point.

**Software**
The program which the computer executes. In addition all data files can be classed as software.

**Solid Modelling**
The creation of a 3D image on screen, thereafter capable of manipulation to show other views and surfaces.

**Surface Modelling**
A 3D model in which the surface is defined by connecting elements.

*T*

**Template**
A dummy publication that acts as a model, providing the structure and general layout for a similar production.

**Type Sizes**
The standard 'point' system used to describe type sizes is based on 72 points per inch.

*V*

**VDU**
Video Display Unit. An alternative way of describing a monitor.

**VGA**
Video Graphics Array. A colour adaptor allowing high resolution and a high range of colours.

*W*

**Window**
A rectangular box that can be used to define a space around an object or set of lines. At its simplest, a window can be a frame drawn around a selected area of the screen, to isolate the area within the window.

**Wire-Frame Model**
A 3D image made up of a series of connected lines between all the edges and line end points.

*GLOSSARY OF COMMON DTP TERMS*

*This is a brief guide to DTP terms likely to be encountered through the course.*

### *A*

**Alignment**
The positions of text lines on a page or column.
e.g. Aligned left, Aligned right, Justified

**Arabic numerals**
The numerals in common use: 1, 2, 3, 4, 5, 6, 7, 8, 9, 0 (as distinct from Roman numerals: I, II, III, IV, V, etc.)

**Automatic hyphenation**
The automatic insertion of a hyphen in a word which does not fit on the end of a line. The page layout software normally checks an internal dictionary of words to make sure that the word can be hyphenated before insertion.

### *B*

**Banner**
In newspaper work, a main headline running across the top of the page. Often used to describe the title heading on a newspaper or journal.

**Baseline**
In type, the line on which both capitals (e.g. G, H) and lowercase (e.g. x, m) letters stand.

**Bold type**
A heavier, blacker version of a type (commonly used with Roman type)

**Box**
Text which is ruled off on all four sides.

**Bullet/Blob/Cannon ball**
A symbol, e.g. large dot, square, asterisk, etc., which is used to emphasise key points in text. Bullets are often used to highlight lists within a block of text.

### *C*

**Caps**
Capitals, upper case letters.

**Cap height**
The height of capital letters in a given font.

**Caption**
The descriptive text accompanying an illustration.

**Centre-spread/fold**
The pair of pages that come at the centre of a folded section (e.g. pages 4 and 5 in an 8 page section)
*Note: A double-page layout design is often used for a centre-spread in magazines and newspapers.*

**Column**
The vertical strip, or band, on a page into which text can be placed.
*Note: The columns on a page are usually set up before frames containing graphics, or photographs are located on the page. The columns often provide a structure to build the page.*

**Column rules**
Lines (rules) inserted between columns of text.

**Column width**
The horizontal size, or width, of a column.

**Copy**
Any matter - words or illustrations- such as handwritten text, typescript, photographs, artwork which are to be reproduced by printing.

**Crop/Cropping**
To mark artwork and graphics in order to indicate which portion is to be reproduced.
In DTP: Cropping is the on-screen cutting of photographic or graphic images to remove excess material using a frame grabbing process.

**Cut-off rule**
A horizontal line (rule) printed across text columns to separate different text items - usually in newspapers and magazines.

*D*

**Desk Top Publishing (DTP)**
The creation of a whole publication on computer, and preparing it for printing without using the traditional processes of typing, typesetting, cutting and pasting and layout.

**Display type**
The larger sizes of type - i.e. those sizes used for headlines. (14 pt and above)

*F*

**Facing page**
Two pages which face each other, when the publication is open, in a double sided publication - e.g. book, magazine. The even numbered page is on the left, the odd numbered pages are on the right.

**Folio**
A printed page number in a publication.

**Font (*Fount*)**
Is a set of type in one size and style. In DTP, 'font' is used to describe 'type styles' the size of which can be changed by the operator.

**Foot (margin)**
The margin at the foot of a page in which the footer is usually located.

**Footer**
A line of text/or page number (folio) placed at the bottom of the page which is repeated throughout the main body of the document. (See Header)

**Footnote**
Text placed at the bottom of a page prefixed by a superscript number (or bullet character) which is cross-referenced by the same character in the text.
Footnotes are used to provide additional or subsidiary information.

**Format**
In DTP terms, is the arrangement of text on a page defined by the page size, alignment and text style. Formatting means applying a style or alignment to a document or paragraph.

**Frame/Frame grab**
DTP packages use frames to capture images, or inputted text, in order that they can be manipulated separately on a page and if necessary worked on using separate software.

*G*

**Graphic**
Line, box, circle options available within page layout packages.
An illustration /artwork prepared on a paint, draw, CAD, graph applications package or captured by image scanner which is then imported into the page layout package.

**Grid**
All CAG systems provide 'transparent' grids; patterns which appear on the screen as drawing aids but do not necessarily form part of the drawing. Grids are used to divide the page up into orderly areas with which to structure the printed elements of the page. Grids are very important tools in designing DTP layouts.

**Guide**
Non-printing lines on the screen page (usually dotted) which mark grid lines, columns, margins etc. These are intended to assist in the placement on text and graphics on the page.

**Gutters**
DTP - refers to the spaces between columns on a page.

*H*

**Handles**
The small rectangles, or other icons, which surround a selected frame. Handles allow the frame to be resized, moved, or rotated independently of the other items on the DTP page.

**Hard copy**
Any copy of drawings, or documents, produced on a printer, or plotter.

**Head (margin)**
The margin at the top of a page in which the header is usually located.

**Header**
A line of text and/or page number placed at the top of a page which repeats throughout the main body of the publication. (see: Footer)

**Headline**

Line or lines of type set in a display (large) size of type and placed above accompanying text. A headline usually guides the reader on the content of the body text. A headline may be repeated on the top of each page of a publication as a header, or may be used only once at the beginning of the publication.

*I*

**Import**

This is a DTP menu function which brings a text file, or graphic, from an external application into a DTP page layout.

**Indent**

Beginning a line of text further in from the left margin than the rest of the text.

**Italic type**

A type of lettering style in which the characters slope to the right. Many fonts are available in bold and italic as well as normal forms.

*J*

**Justification**

Setting of type lines in which the space between words is varied from line to line so that each line is of equal length.

*K*

**Kerning**

A DTP function which is used to adjust the spacing between pairs of individual letters on a page. This is used to eliminate unwanted 'white space' and to enhance the visual impact of words.

*L*

**Landscape**

A page layout function which arranges the page so that its widest side is horizontal. This is often used in the layout of leaflets which requires folding (gatefold or concertina fold) *opposite: Portrait*

**Leading** (Interlinear space)

The spacing between lines of type.

**Logo/Logotype**

An emblem, or symbol, printed in a specific way as a trademark. Often used as corporate identity symbols by organisations.

**Lowercase**

The small letters such as a, b, c, d - as distinct from capitals.

*M*

**Make-up**

The operation of assembling all elements - text, captions, headlines, illustrations, etc. - on a page, or pages. The great advantage of DTP packages is that they do this onscreen very accurately, and that mistakes can easily be rectified without starting the whole process from scratch.

**Margins**

The area of white space at the outside of a printed page - top, bottom, left, rightsurrounding the image area. Individual margins can be adjusted easily on DTP packages allowing for different binding techniques to be used for the same publication. These are called margin guides. (See: back, binding, head, foot, foredge)

**Montage**

A combination of separate images combined to give a composite picture/image.

*O*

**Original**

Any photograph, drawing, or piece of artwork provided as copy for reproduction.

**Outline**

A typeface which uses an outline effect. e.g. OUTLINE

*P*

**Page**

One side of a leaf or sheet of paper.

**Page size**

The dimensions of the pages of a publication. The page size is the finished size and may be different from the paper size which may be larger to allow for a trim allowance. (particularly in pages which contain a bleed )

**Point**

The basic unit of measurement in printing.

**Portrait**

A page layout function which arranges the page so that its widest side is vertical. This is the common page layout used in letters, books, newspapers and magazines.
*see: Landscape*

*Q*

**Quotes**

Marks which indicate speech, e.g. They can be 'single' or "double".

*R*

**Run**

The number of copies of a publication to be printed. **Run on,** extra copies printed at the same time as the original run.

*S*

**Sans serif**

A typeface with no serifs - i.e. with no terminal strokes on the letters.
Examples include: Arial, Univers, Helvetica, Futura, Avant Garde.

**Serif**

The small terminal stroke at the end of a main stroke of a letter. Typefaces which have serifs are derived from hand-cut letters or calligraphic lettering styles.
e.g. Times Roman is a serif font.

**Shadow**

A typeface which uses a drop-shadow effect. e.g. SHADOW (See: Text formatting, Drop-shadow)

**Spine**
The bound edge of a document/publication.

**Subheading**
A heading appearing within the body of the text.
_T_
**Templates**
These are dummy publications that act as a model, providing the structure and general layout for particular document types.
For example: business letter, greetings card, report, etc.
Templates can be run by Wizards which help beginners when they start up a software program for the first time.

**Text type**
The sizes of type used for normal body text; generally taken to be those sizes below 14pt.

**Typeface**
A matching set of characters for printing, identifiable by their design, with distinct names (e.g. Arial, Helvetica, Futura etc.), and usually available in a variety of sizes.

**Type sizes**
The standard point system used to describe type sizes. This is based on 72 points to an inch. (12 points is, therefore, 1/6" high)
_U_
**Underline**
A typeface which is underlined.

**Uppercase**
Capital letters, e.g. CAPITAL LETTERS.
_W_
**White space**
Areas of empty space on a page. When used effectively in page layout/design, white space aids comprehension by complementing and setting off graphic images and areas of solid text.