

learning outcomes 1, 2 & 4:

Desktop Publishing Theory



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1. Learners will be able to distinguish between desktop publishing and other forms of document production with reference to purpose, development process, and specialised DTP roles.

A. Desktop Publishing (DTP) - Purpose

DTP stands for **Desktop Publishing**. Desk Top Publishing primarily pertains to designing of documents using personal computer loaded with DTP software packages like Page Maker, Coral Draw, MS Word, Venus, Parkashak, etc.

You use DTP software to produce professional-looking documents such as reports, books, posters or leaflets. Desktop publishing combines a personal computer and WYSIWYG (what you see is what you get) page layout software to create publication documents on a computer, for both large scale publishing or small scale local multifunction peripheral output and distribution.

B. Another form of Document Production – Word Processing

Word Processing is another method of document production used primarily for the creation of letters and written documents. Word Processing is a type of software or computer program which allows the user to type words, sentences, paragraphs and then enhance and manipulate the text to produce professional looking typed documents. Word Processors now boast a wide variety of other features such as charts, tables, mail merge, images and clip art which can be added into documents.

DTP Information

Desktop publishing is a term coined after the development of a specific type of software. It's about using that software to combine and rearrange text and images and creating digital files. So the term "desktop publishing" is commonly used to describe page layout skills.

The DTP has many advantages in comparison with the manual process. It is a factual and can quickly edit with minimum mistakes. Text and graphics can be merged into single file. Achieve higher productivity, efficiency and quality in printing and publishing with economy. DTP is used for type setting, layout, printing, graphics and photographs etc. With the latest DTP software packages it is possible to undertake a variety of work in the field of printing and publishing.

Notes: Desktop publishing is simply a software tool that graphic designers can use to help translate their concepts and ideas into the proper format for printing. But desktop publishing software is also a tool that anyone can use to create and print their own designs as well.

C. Explain the difference in using page layout software over a word processor

DTP software gives you more control over the layout of a page than a word processor and lets you easily integrate graphics into your publications.

Word Processing programs are designed to focus on texts whilst Desktop Publishing devices are designed to focus more on the structure or display of a document.

WPs are generally more condensed than DTPs and so are better suited for transferrals across the internet. Smaller file size.

DTP programs give the user the tools required to greatly edit a piece of graphic whilst WPs only allow the most simple edits to graphic such as changing of its size inside a file. However WP programs allow one to more effectively edit text than a DTP.

DTPs also make it possible for people to save money on the designs of their documents. WPs do not essentially offer this because whilst there are professionals who are experts in using DTP programs WPs have never been an industry in its own. E.G. one cannot really make money from being an expert in Word processing programs.

D. Describe different page layout software such as Adobe InDesign, QuarkXPress, MicrosoftPublisher etc. and give advantages and disadvantages between them

Some common Desktop Publishing Software is as follows:

- Adobe InDesign
- Adobe PageMaker
- CorelDRAW
- Corel Ventura
- iStudio Publisher
- Microsoft Office Publisher
- QuarkXPress

LO1, LO2 & LO4 Desk Top Publishing

Adobe InDesign is a desktop publishing software application produced by Adobe Systems. It can be used to create works such as posters, flyers, brochures, magazines, newspapers and books. InDesign can also publish content suitable for tablet devices in conjunction with Adobe Digital Publishing Suite. Graphic designers and production artists are the principal users, creating and laying out periodical publications, posters, and print media. It also supports export to EPUB and SWF formats to create digital publications, and content suitable for consumption on tablet computers. The Adobe InCopy word processor uses the same formatting engine as InDesign.

Microsoft Publisher is included in higher-end editions of Microsoft Office, reflecting Microsoft's emphasis on the application as an easy-to-use and less expensive alternative to the "heavyweights," with a focus on the small business market where firms do not have dedicated design professionals available to make marketing materials and other documents. However, it has a relatively small share of the desktop publishing market, which is dominated by Adobe InDesign and QuarkXPress.[1] Publisher has historically been less well liked among high-end commercial print shops, compared with other desktop publishing applications.

QuarkXPress is used by individual designers and large publishing houses to produce a variety of layouts, from single-page flyers to the multi-media projects required for magazines, newspapers, catalogs, and the like. QuarkXPress once dominated the market for page layout software with over 95% market share among professional users. While one publisher estimates that share has fallen to below 25% and Adobe InDesign is now the market leader, QuarkXPress still has significant marketshare.

A user may choose to produce work in another package rather than directly using a desktop publisher as the other package may offer better features than the desktop publisher. For example a spreadsheet will probably be capable of producing better charts than a DTP program could.

Features of DTP Software Applications

- Probably the best known application of this type is **Microsoft Publisher**. It is an intermediate application - intermediate is defined in terms of capability and price.
- Page icons - This is the "booklet" feature—a basic feature of any DTP application. It is very useful for multi-page newsletters, among other things.
- Guides - Another basic DTP feature, the guides can be very precisely positioned, which means text and graphics can be very precisely positioned.
- Autoflow -you can automatically thread text among several pages

Advantages of DTP Software Applications

- In relation to Microsoft Publisher - previous knowledge of Microsoft Word will make it easier to learn.
- Suitable for complex documents with multiple pages and a lot of graphics, such as business documents for sales and marketing.
- PostScript compatible (A computer language that reliably converts the electronic file into a printable page).
- Necessary for volume printing

Disadvantages of DTP Software Applications

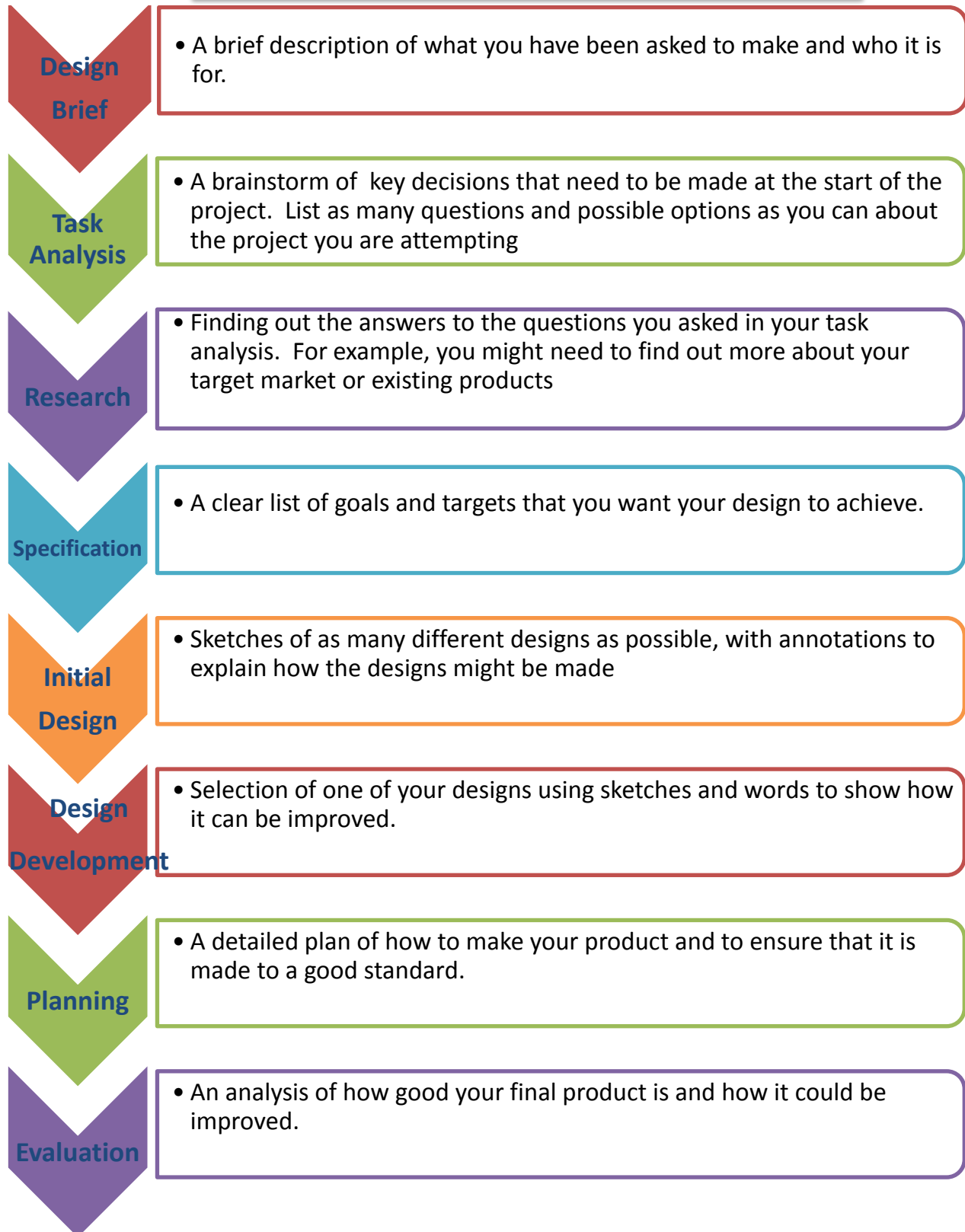
- Can be very expensive
- Requires a lot of study to learn how to use all of the features – when compared to a word processor. The more complex the application, the steeper the learning curve.

Notes:

E. Development Process

The Development Process can be seen as a cycle one example of this is as follows:

The Design Process



F. Describe specialist roles in DTP

Below you will find listings for the most frequently used job titles within the DTP world. They have divided them into Operations, Management and Peripheral roles:

Operations

Presentations Operator, Graphics Operator, PowerPoint Specialist, Word Specialist, Creative Presentations Operator, DTP Operator, DTP Secretary, Template/VBA Developer, Reprographics Operator

Management

DTP Manager, Team Leader, Workflow Coordinator, Shift Supervisor, Graphics Manager, Marketing Manager, Bid Manager, Proposals Manager

Peripheral

Microsoft Office Trainer, RFP/Bid Writer, Research Assistant, Pitch Designer, Proposals Executive, Marketing Executive

Job Titles:

- desktop publishing specialist
 - desktop publishing technician
 - documentation specialist
 - graphic designer
 - prepress technician
-
- In the job market, a desktop publisher is more than just a software user. A desktop publisher is proficient in the use of desktop publishing software — perhaps even having certification in specific programs such as Adobe InDesign.
 - A desktop publisher uses the computer and software to create visual displays of ideas and information. The desktop publisher may receive text and images from other sources or may be responsible for writing or editing text and acquiring images through digital photography, illustration, or other means.

LO1, LO2 & LO4 Desk Top Publishing

- A desktop publisher arranges text and images into the correct visual and digital format for books, newsletters, brochures, letterhead, annual reports, presentations, business cards, and any number of other documents.
- Desktop publishing documents may be for desktop or commercial printing or electronic distribution including PDF, slide shows, email newsletters, and the Web. The desktop publisher prepares the files in the correct format for the method of printing or distribution.

Desktop publisher usually denotes a more technical job; however, depending on the specific employer and job requirements it may also require a greater degree of artistic and design skills and/or writing and editing proficiency.

Desktop Publisher Skills and Education

- For desktop publishers, less formal education including on-the-job or vocational training is often sufficient for employment. Although a degree is not usually required, there are still certain skills necessary to successfully compete for desktop publisher jobs — even as a freelancer. Specific software requirements will vary by employer but general skills and knowledge include advanced PC or Macintosh computer skills, basic to advanced design knowledge, prepress skills, and understanding of printing technologies.

Notes:



LO 1: Revision Questions

1. What do the letters DTP stand for?
2. Why is a DTP package often used to prepare a document instead of a word processor?
3. Explain the difference in using page layout software over a word processor?
4. Name 3 different brands of page layout software?
5. There are 8 stages in the Design Process name each stage.
6. What is the role of a Desk Top Publisher? How does this role distinguish from someone who works with Work Processing software?

2. Learners will be able to describe the characteristics of key components of DTP systems including those used for input, storage, protection, processing, output, and transmission of images and data.

A. Describe a typical DTP system specification such as operating system, RAM capacity, disk formats and capacities, CPU speed, VDU type, printer type and resolution, scanner type and maximum possible resolution.

B. Components

A computer component is a computer part or hardware. These can be divided into two groups, the components inside the tower and the components we can see.

Main Components of a Computer Processing System – Inside the Tower

- | | |
|--------------------------------|-----------------------------|
| a. Hard Drive | e. RAM Random Access Memory |
| b. CPU Central Processing Unit | f. Modem |
| c. Motherboard | g. Video Card |
| d. PSU Power Supply Unit | h. Network Card |

Hard Drive

Like the filing cabinet inside your computer. This stores all of your programs and files its size is measured in GB (the more GB, the more you can store). The average size today is upward of 120GB.



CPU Central Processing Unit



The CPU stands Central Processing Unit - the 'brain' of the computer. This is one of the smallest yet most expensive parts of a PC. When people talk about the speed of a computer they are talking about the speed of the CPU.

The CPU interprets the instructions you give the computer and then carries out the task. The speed of a CPU is measured in Mhz and Ghz (the more Mhz the faster the PC) and the bigger your CPU the faster a computer can work. Manufactures include Intel, AMD and IBM.

Motherboard

This is the main board on the computer. All the components slot in or connect to the motherboard it is a very complicated and intricate.

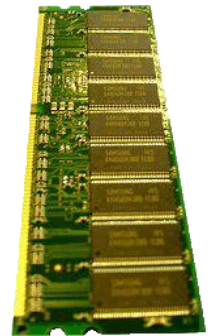


PSU Power Supply Unit

This is where the mains power plugs into the computer. It is located at the back of the computer next to the fan which keeps it cool. The PSU has lots of cables connected to it which can plug into the components on the PC including the CD ROM, Hard Drive, Fan and Motherboard.

RAM Random Access Memory

RAM - stands for Random Access Memory. This is a temporary type of memory used while you are working on your computer (where your work is saved before you actually save it). It is the memory a computer needs to run software. When you load or 'run' software, it goes into RAM. If you type something it also goes into RAM before being saved on the hard disk. When you turn your computer off all the data in RAM is lost. The performance of RAM is measured in MB, the more MB of RAM a PC has, the better it can cope with big tasks like having lots of applications open at once, if you have a small amount of RAM the PC will crash and become very slow. RAM can be easily added to a computer to improve its performance.



Modem

This is what is used to connect a computer to the internet it connects though a phone line. The performance of a modem is measured in KB. The speed of modems is limited by phone lines (that is why we now have broadband).

Video Card

A video card sends the picture signals from the motherboard to the monitor. The video card is inserted into the mother board like the RAM. It interprets what needs to be displayed and passes the message on to the monitor. You can get powerful 3D cards for games, some video



cards are so fast they have to have their own fans. Performance of video cards is measured in MB (the more 'MB' the faster the picture appears). Average size today is about 64mb.



Network Card

Network cards (network interface controller) are used to connect computers to a computer network; all the computers in the college have a network card so they can talk to each other. The speed of a network card is measured in MB per second.

C. Input Devices

Keyboard

Keyboards are one of the two basic components used for data entry. Keyboards use the Qwerty typing layout similar to typewriters. Keyboards usually also have a number keypad to the right which can be used to enter numeric data.

Mouse

Touch sensitive screen

Microphone (voice data entry)

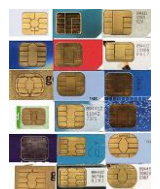
Scanner

In computing, an image scanner—often abbreviated to just scanner—is a device that optically scans images, printed text, handwriting, or an object, and converts it to a digital image. Common examples found in offices are variations of the desktop (or flatbed) scanner where the document is placed on a glass window for scanning.



Smart Cards

A smart card, chip card, or integrated circuit card (ICC), is any pocket-sized card with embedded integrated circuits. A smart card or microprocessor cards contain volatile memory and microprocessor components. The card is made of plastic.



Sensors e.g. alarms, climate control

A sensor also called detector is a device that measures a physical quantity and converts it into a signal which can be read by an observer or by an instrument. Sensors are used in everyday objects such as touch-sensitive elevator buttons (tactile sensor) and lamps which dim or brighten by touching the base. There are also innumerable applications for sensors of which most people are never aware. Applications include cars, machines, aerospace, medicine, manufacturing and robotics. A sensor is a device which receives and responds to a signal.



Sensors are used in alarms and in climate control to detect changes and computers can react according to the changes appropriately for e.g. Fire alarm, burglar alarm, air conditioning and a refrigerator.

D. Output Devices - Printers

The three main different types of printers are:

- Ink-jet Printers
- Laser Printers
- Multifunctional

Normally home computer users will use ink-jets as they are relatively cheap but superior in quality to dot-matrix. Laser jets and other printers created by new technology are more expensive and more commonly found in the offices.

Inkjet

Ink-jets(bubble-jets) printers spray ionized tiny drops of ink onto a page to create an image. This is achieved by using magnetized plates which direct the ink's path onto the paper in the desired pattern. Almost all ink-jets offer a color option as standard, in varying degrees of resolution. Ink-jet printers are capable of producing high quality print which almost matches the quality of a laser printer. A



standard ink-jet printer has a resolution of 300 dots per inch, although newer models have improved on that. As a rule color link-jet printers can also be used as a regular black and white printer.

When a Color Inkjet Printer is the Best Choice

Ink jets are a good choice if you are looking for high quality color photo output for a reasonable price. Prices start at around €150.

First, you'll need to decide on the type of machine you want: a standard ink jet for reasonable photos and a low purchase price, or a photo ink jet for superior photo quality. All of the top models offer 4800-by-1200-dpi resolution, but they vary quite a bit in terms of printing speed.

Choose an inkjet printer based on the cost of replacement ink cartridges, and not on the cost of the printer. Over time ink and paper costs can exceed the cost of the printer several times over. Avoid single-cartridge printers which only come with a color cartridge that can't print true color. It is more cost effective to purchase a color inkjet with multiple color cartridges (CMYK), so they can be replaced individually.

Another cost saving tip: Leaving any inkjet idle for even a week or two can allow the ink in the tiny tubes that feed the nozzles to dry. The resulting clogs cause streaks and other anomalies in your pictures. To avoid clogs, print at least once a week. Some printers run a maintenance routine on startup, meaning that you can keep the nozzles clear simply by turning your printer on and off once a week. Check your device's manual to see whether it has this feature.

LaserJet



Laser printers operate by shining a laser beam to produce an image on a drum. The drum is then rolled through a pool, or reservoir, of toner, and the electrically charged portions of the drum pick up ink. Finally, using a combination of heat and pressure, the ink on the drum is transferred onto the page. Laser printers print very fast, and the supply cartridges work a long time. Color laser printers use the same toner-based printing process as black and white (B/W) laser printers, except that they combine four different toner colors. Color laser printers can also be used as a regular black and white laser printer.

When to Choose a Laser Printer

If you do a lot of document printing, don't use an inkjet printer. Use a laser printer. Laser printers cost more to buy but much less to use - they are very cost effective to operate since their toner cartridges are not replaced as often.

With all costs figured in, each document page printed on a typical laser printer costs from 2 cents to 5 cents; on an inkjet, the cost per page can run from 10 cents to 15 cents, depending on the model. (This does not even count the cost of photo printing, which can cost up to a euro per page on an inkjet when you include the high cost of photo paper and the additional ink that's used in that mode.)

Digital Photo printers

Many middle range printers are now able to print photo quality images. Usually an option with color printers, specialist photo print heads allow a greater resolution to be achieved to improve photo image quality. Photo ink jet printers expand their gamuts by adding additional ink colors, usually light cyan and light magenta.



Multifunction Printer

Multifunction printers combine top-quality color ink-jet or laser printing with plain-paper and PC faxing, color copying and color scanning , telephoning- all in one convenient, space-saving machine. If you work from home or have a small office a multifunctional device may be ideal.



4. The learner will be enabled to describe the legal implications associated with use and protection of published material including licensing and copyright

Identify some of the legal implications involved in the publishing process e.g. copyright, licensing etc.

A. What is Copyright?

Copyright is the legal term, which describes the rights given to authors/creators of certain categories of work. Copyright applies to all sorts of written and recorded materials from software and the internet to drawings, photography, films and music.

In Ireland, copyright law is contained in the Copyright & Related Rights Act, 2000.

Copyright protection extends to the following works:

- original literary, dramatic, musical or artistic works
- sound recordings, films
- broadcasts, cable programmes
- the typographical arrangement of published editions
- computer programmes
- original databases

How do I register a copyright in Ireland?

In Ireland, copyright is automatic.

There is no system of registration for copyright protection in Ireland as copyright arises automatically on the creation of an original work. You do not need to publish your work, to put a copyright notice on it or do anything else to be covered by copyright – protection is free and automatic.

A work is protected automatically from the time it is first written down or recorded in some way, provided that it has resulted from the creator's skill and effort and is not simply copied from another work.

There are two ways of doing this:

1. Deposit a copy of the work with an acknowledged representative (who may be a bank or solicitor) in such a way as to allow the date and time of the deposit to be recorded or notarised.

2. Send a copy of the work to oneself by registered post (ensuring a clear date stamp on the envelope), retaining the original receipt of posting and leaving the envelope containing the copyright work unopened thus establishing that the work existed at that date and time.

How long does Copyright last?

The Copyright protection for literary, dramatic, musical and artistic works expires 70 years after the death of the author/creator. If the copyright is still in force it would be necessary to get the permission of the owner of the copyright to reproduce the work no matter what language it is in.

It should be noted that the duration of copyright in Ireland may differ from other countries e.g. the duration for sound recordings in the USA is 95 years from the date it was made available to the public whereas in Ireland, it is only 50 years.

B. Copyright and licensing

Copyright is a property right which – like other property rights – may be the subject of various types of transaction. It may be sold outright (by an “assignment”, which must be in writing), or licensed in whole or in part. Licences are often for a short term and cover only certain uses of the work. For example, you might grant a licence to a hotel chain for the use of a work in a newspaper advertising campaign, for a period of two years. While an assignment must be in writing, a licence can be verbal, although it is unwise to give any permission for the use of a work without some written evidence of the agreement.

If I have paid for someone else to create something, will I own the copyright?

Unless it is specifically stated in the contract commissioning the work that you or your business will own the copyright in the work that you have paid for, ownership will vest in the the first owner of copyright which will be the person or organisation that was asked to create the work.

If the issue of ownership is not mentioned in the commissioning contract, you will need to negotiate the transfer of the copyright to you. The creator of the work will be under no legal obligation to transfer the copyright to you. For it to have legal effect, an agreement about transfer of ownership of copyright has to be in writing, signed by or on behalf of the transferor.

What are moral rights associated with copyright?

The concept of moral rights in copyright works was introduced into Irish law by the Copyright & Related Rights Act 2000. These moral rights are: the paternity right (the right to be identified as the author of the work); the integrity right (the right to prevent mutilation, distortion or other derogatory alteration of the work) and the right of false attribution (the right not to have a work falsely attributed to you).

(Patents Office)

C. Legal Implications - Remedies and Penalties for Infringement

Copyright infringement has both civil and criminal dimensions. On the civil side, breach of copyright is actionable at the suit of the copyright owner and a range of remedies are available, the most common of which are injunctions and damages. On the criminal side, certain acts in relation to the copyright work are characterised in copyright legislation as offences, for which penalties are prescribed. These offences include, not only the making of counterfeit works but also dealing in infringing works – by, for example, importing them, selling or renting them. Criminal penalties extend to fines of up to €127,000 and/or terms of imprisonment of up to 5 years.

(Copyright and the Visual Artist)

D. Educational Uses

The use of author's works for certain educational purposes is permitted. These include the use of the work in examinations, and the inclusion of a short passage from the work in an anthology for schools.

Further information is available from the Patents Office and the Copyright Association of Ireland.

Notes: Copyright restrictions apply on the Internet. Always ask permission when using other people's work or images. It is permissible to reproduce a small part of a work, where it is relative. Remember to be aware of bias, propaganda, ethical issues and plagiarism.

Copyright applies to all digital media, remember to reference and attribute your source material.

If you do decide to include text or images from any source, for example the internet or a book you should contact that site to ask permission to use the material. Otherwise you are infringing on copyright laws.

(Nicholson & Dempsey, 2011)

5. Additional Resources

Websites:

<http://desktoppub.about.com/od/history/tp/dtpmyths.htm>

Copyright Association of Ireland www.cai.ie

Patents Office <http://www.patentsoffice.ie/en/copyright-frequently-asked-questions.aspx>

There are two types of pages in desktop publishing, electronic pages and virtual paper pages to be printed on physical paper pages. All computerized documents are technically electronic, which are limited in size only by computer memory or computer data storage space.