PART 1 GENERAL COMPUTING

The chapters in this part of the manual look at various types of business documents, lists the most appropriate software for producing them, and describes some factors that may help with their production. Ergonomic and environmentally friendly computing are also discussed, as are some of the standard interface features found in Microsoft Office 2016 applications such as the ribbon and getting help.

NOTES:

CHAPTER 1

INFOCUS

DOCUMENT STANDARDS

It is important that companies have standards and guidelines in place for document preparation and production. Documentation standards ensure that quality documents are produced in the most efficient manner.

In this session you will:

- ✓ gain an overview of the different types of business documents
- ✓ gain an overview of the meaning and origins of word processing
- ✓ gain an overview of the common types of documents that can be word processed
- ✓ gain an understanding of spreadsheets and how they work
- ✓ gain an understanding of what spreadsheets can be used for and what is inappropriate
- ✓ gain an understanding of the different types of software available for producing business documents
- ✓ gain an overview of who prepares business documents
- ✓ gain an overview of the various ways of speeding up document production
- ✓ gain an understanding of aspects to consider when developing document standards.

TYPES OF BUSINESS DOCUMENTS

A business must communicate with its customers, employees, suppliers, the government, and other businesses. This communication is mostly done through a variety of business documents. As a result there are a large number and variety of documents produced by businesses.

A good way to understand the types of business documents produced in organisations is to examine the needs and requirements of the various parts of an organisation, and to group documents according to the functions performed.

Management

Management requires documents that help make business decisions and help keep the business running. These types of documents include:

- Production reports
- Sales reports
- Meeting minutes

Sales and Marketing

Sales and Marketing require documents that help promote the business and its products to the customers. These types of documents include:

- Price lists and order forms
- Product brochures
- Sales reports
- Bulk mail-outs to customers

Human Resources

Human Resources deal with a variety of matters regarding employees. They require a very broad range of documents including:

- Job descriptions
- Employment forms
- Training manuals and guides
- Job procedures

Manufacturing and Production

Manufacturing and Production produce the goods and services sold by the business and require documents that help them produce these goods and services on time and in the most cost-effective manner. The types of documents they require include:

- Production reports
- Supplier price lists and forms
- Product specifications and procedures

Administration and Accounts

Administration and Accounts are responsible for ensuring that the day-to-day operation of the business proceeds smoothly, that customers are invoiced, that bills are paid, that money is collected and banked, and the like. They require a variety of documents including:

- Memos, faxes and letters
- Sales reports
- Accounting reports

UNDERSTANDING WORD PROCESSING

Every facet of our everyday existence is controlled by the written word. We receive information, follow instructions and record events, often using documents that consist of carefully chosen words. The ability to create these documents, to change them, to enhance the way they look, and to print them is what is now referred to as ***word processing***.

Word Processing – A Definition

Word processing refers to the ability to create, edit and store text, and to reprint it as many times as desired. Word processing is used to create a multitude of personal and business documents, such as letters, memos, faxes, reports, books, essays, brochures, flyers, price lists, and the list goes on!

The Roots of Word Processing

The desire for humans to communicate in writing can be traced back to our cave dwelling ancestors who painted images of hunting and everyday life on cave walls. Who knows, these might even have been the first training manuals or reports on hunting expeditions!

The ancient Egyptians used writing to record commercial trading transactions. Initially using clay and stone, they then invented writing on paper, or papyrus, to speed up the process of writing.

In 1492 Johannes Gutenberg invented the world's first printing press which allowed one document to be produced and disseminated many times. Many historians attribute world-shaking events such as the English, French and American revolutions to the invention of printing and the communication of ideas.

The printing press marked the beginning of using machines to produce writing. This idea of using machines for writing was kicked on in 1873 when Christopher Latham Scholes invented the first commercially-practical typewriter. This typewriter was marketed by the Remington Arms company. Earlier experimental typewriters used an alphabetical keyboard. However, the action of the type bars in these machines was sluggish and the bars tended to jam. Scholes developed the QWERTY keyboard so that letters used in combination were further apart, therefore allowing more time for the type bars to return to their normal position and avoid jamming. In 1878 ten-finger typing was established using the QWERTY keyboard – essentially, this has meant that the QWERTY keyboard has survived to this day even on modern computers.

Typewriting gained enormous popularity in offices around the world in the first half of the twentieth century. New office procedures and jobs were created around the typewriter – many organisations had special typing pools, which consisted of teams of people (usually young women) typing documents.

In 1961 IBM introduced the Selectric typewriter. It was an electric typewriter with fewer moving parts than a manual typewriter, and was much faster to use. In 1964 IBM released the Magnetic Tape Selectric Typewriter that allowed typed information to be stored and retrieved. This machine was marketed as a word processing machine because for the first time text could be stored, replayed (typed automatically from the tape), changed and printed as many times as required.

In 1972 Lexitron and Linolex introduced the first modern word processing system which displayed documents on a screen rather than on paper. This machine stored the documents on cassettes. The screen allowed text to be entered, rearranged or deleted without the need for producing a paper copy.

In 1973 IBM released a new word processing machine that stored documents on floppy disk. Early storage systems could hold only several pages. The floppy disk allowed the storage of large, multi-page documents. The word processors were special machines designed specifically for producing documents.

In 1981 IBM released the IBM Personal Computer which used floppy disk storage technology. This was one of the few machines ever invented in history that had no specific purpose. It soon became apparent that the programs used in word processing machines could be stored on floppy disk. Once stored on floppy disk they could be used in personal computers, thus converting the personal computer to a word processing machine.

This concept has grown and is the underlying basis of modern word processing. Programs such as WordStar, DisplayWrite, WordPerfect and later, Microsoft Word, emerged, allowing the personal computer to produce documents with a size and complexity far greater than earlier machines. Today, virtually all word processing is done on personal computers using word processing programs.

TYPES OF WORD-PROCESSED DOCUMENTS

The first word-processed documents were business documents such as letters, memos and reports. With the development of screen and print technologies, it is now possible to use word processing software to produce a much greater variety of documents such as brochures, newspapers and newsletters, greeting and business cards, and more.

Type	*Characteristics*	*Intended Audience*
Letters	Letters are usually one or two pages in length and consist mostly of text	Business associates, customers, suppliers, friends, relatives, etc
Memos	Memorandums are internal business documents that usually consist of one or two pages of text	Fellow employees, management, subordinates
Faxes	Faxes are documents transmitted over telephone lines. They are usually brief and are used to convey information quickly and succinctly. Faxes can be printed and sent from a fax machine or they can be sent in electronic format directly from a computer connected to a telephone line	Business associates, customers, suppliers
Reports	Reports are normally multi-page documents providing information or findings of an investigation or survey to the reader. They usually consist of text. Long reports may also have a table of contents and an index	Business associates, clients, management, creditors, shareholders, general public, community groups, etc
Briefing Papers	Briefing papers are documents that provide background and useful information regarding an historical or upcoming event	Sales people, managers, committee members, company board members, etc
Minutes	Minutes records what officially went on in a meeting. They can be informal or formal and basically describe what was discussed, what decisions were made, what actions need to be taken, and who is responsible for carrying out those actions	Attendees and other interested parties
Essays and Assignments	Essays and assignments are normally multi-page documents conveying ideas, opinions or research findings. They mostly consist of text	Teachers, lecturers, mentors
Training Manuals	Training manuals are normally multi-page documents designed to instruct and inform. They range from mostly text to highly structured documents. (Note: this publication was produced using Microsoft Word)	Course attendees, people wishing to acquire new skills and knowledge, people wishing to gain a qualification or accreditation
Books	Books are multi-page documents consisting mostly of text. They have a table of contents and usually an index	People seeking information and/or entertainment
Brochures	Brochures are mostly laid out with graphics and text. They are often no more than several pages in length. Increasingly, these are transmitted electronically via the internet	Clients, potential customers
Newsletters	Newsletters are used to convey news, updates and activities for clubs, groups, organisations, products, and the like. They are organised into columns and consist mostly of text	Clients, customers, general public, club members, etc
Flyers	Flyers are normally one-page information sheets that are highly graphical and structured advertising a product or event	Clients, potential customers, club members, etc
Emails	Emails are usually short letters sent via the internet or through a computer network	Anyone with an email connection

HOW SPREADSHEETS WORK

Word processing packages are designed to process words – they let you write letters, compose faxes, prepare reports, write books, and much more. ***Spreadsheet*** packages on the other hand, are designed to process numbers. While word processing applications are perfect for creating documents, spreadsheets are ideal for budgets, statistics, sales analyses, and the like.

What Is A Spreadsheet?

According to the *Oxford Dictionary of Computing* a spreadsheet is…

> *"A program that manipulates tables consisting of rows and columns of cells, and displays them on a screen; the cells contain numerical information and formulas, or text… The value in a numerical cell is either typed in or is calculated from a formula in the cell; this formula can involve other cells. Each time the value of a cell is changed by typing in a new value from the keyboard, the value of all other cells whose values depend on this one are recalculated."*

The screen below shows a spreadsheet application being used to calculate weekly pay for four employees. Spreadsheet applications are laid out as tables comprising ***rows*** and ***columns*** – notice how the columns have alphabetical headings and the rows are numbered (down the side) numerically. The intersection of a column and a row is known as a ***cell***. Your data, comprising text (referred to as ***labels***), numbers (referred to as ***values***) or ***formulas*** is typed into these cells.

Text *is typed into cells and is normally used as labels – here text has been used as headings, to list employees, and to identify the types of calculations.*

	A	B	C	D	E	F
1	**Weekly Pays**					
2						
3	**First Name**	**Last Name**	**Hourly Rate**	**Hours**	**Gross Pay**	
4						
5	Margaret	Adams	15.5	24	372	
6	John	Brown	16.75	16.2	271.35	
7	Grace	Francis	12.5	12	150	
8	Stephen	Simpson	9.65	18.2	175.63	
9						
10			**Total**	70.4		
11			**Average**	17.6		
12			**Maximum**	24		
13			**Minimum**	12		
14						
15						

Numerical information *appears here as values representing the Hourly Rate and the Hours worked.*

It also appears here as ***formulas*** *which calculated the Gross Pay, the Total, the Average, and the Maximum and Minimum hours and pays.*

What Are Formulas?

In the example above, the gross pays, total, average, maximum, and minimum figures are ***formulas*** that are dependent on the data values under ***Hourly Rate*** and ***Hours***. Each time a value in ***Hourly Rate*** or ***Hours*** is changed, all of the formulas that are dependent on that value are recalculated instantly. In the screen below, the hours worked by ***Stephen Simpson*** have changed from ***18.30*** to ***27.50***, and the hourly rate for ***Grace Francis*** has increased from ***12.50*** to ***18.00*** – notice how the relevant ***Gross Pay*** information and statistics have changed.

	A	B	C	D	E	F
1	**Weekly Pays**					
2						
3	**First Name**	**Last Name**	**Hourly Rate**	**Hours**	**Gross Pay**	
4						
5	Margaret	Adams	15.5	24	372	
6	John	Brown	16.75	16.2	271.35	
7	Grace	Francis	18	12	216	
8	Stephen	Simpson	9.65	27.5	265.375	
9						
10			**Total**	79.7		
11			**Average**	19.925		
12			**Maximum**	27.5		
13			**Minimum**	12		
14						
15						

Only two changes, to the value in hours for Stephen Smith and the hourly rate for Grace Francis, led to the instant recalculation of many of the formulas in the other cells – this is an important aspect of spreadsheeting.

THE APPROPRIATENESS OF SPREADSHEETS

Basically spreadsheets can be used for virtually any task that uses numbers and needs to be calculated. While they initially gained momentum in the accounting professions, spreadsheets are now used throughout the business community, in Government, manufacturing, science, and many other areas of industry.

Advantages Of Spreadsheets

There are millions of uses in the modern world for spreadsheet applications such as Microsoft Excel.

- **In Business and Government:** Spreadsheets are used for a diverse range of purposes, including budgeting, analyses of sales and costs, monthly reporting of sales and costs, financial modelling, loan recalculation and amortisation, petty cash, bank and credit card reconciliations, producing simple lists, producing charts and graphs for business presentations, and more.
- **In Industry:** Spreadsheets are used in manufacturing for estimating things such as materials, costs, and the like, and for analyses of data captured by manufacturing or scientific equipment. Other uses of spreadsheets include price lists and statistical analyses for quality control.
- **At Home:** Spreadsheets can be quite useful for things such as tracking personal finances, credit card and bank reconciliations, hobby and small business bookkeeping, asset registers, and the like. The lists functionality is perfect for keeping small lists (consisting of about several hundred lines) of things such as names and addresses, CD collections and wine collections. Spreadsheets can also be used for sporting clubs, hobby associations, and other groups or clubs where basic accounting and member records need to be kept.

Disadvantages Of Spreadsheets

Spreadsheets are probably the simplest of all of the personal computer applications to use. As a consequence some people tend to use spreadsheets for everything, including tasks that they are not designed for such as lengthy text documents.

Some of the pitfalls of working with spreadsheets include:

- **Capacity:** Spreadsheets are like electronic pieces of paper ruled into columns and rows that allow you to perform calculations. The piece of electronic paper that you work with, known as a *worksheet*, is very large. However, spreadsheets have one disadvantage – all of the worksheet must be loaded (or at least pass through) the computer's memory, known as RAM. So while a worksheet may appear to have the capacity to be very large, it actually needs to be kept relatively small in order to perform efficiently.

  Having said this, there is no reason why you can't create a whole series of smaller workbooks that are linked together.
- **Text:** You shouldn't attempt to produce text-based documents such as a letter or a memo using a spreadsheet. Spreadsheets are designed to work with numbers and perform complex calculations, and are structured with cells in order to fulfil this purpose. Word processing programs such as Microsoft Word are a far better choice for a text document.
- **Database:** Spreadsheets are useful for producing and manipulating lists – providing they are kept small. However, some users create a list in a spreadsheet and then keep adding new data until there are too many entries for it to continue to be efficient. Usually lists of more than several hundred lines (sometimes known as *records*) are better placed into a database application such as Microsoft Access.

CHOOSING APPROPRIATE SOFTWARE

The large number of documents required for businesses to operate can be produced by a variety of software packages and applications. In fact, many of the documents can be produced by more than one type of software application. It is useful to know about the role and function of the various software applications.

Type of Document	Typical Software Application(s)	Level of Sophistication	Comments
Production reports	Spreadsheets Database Word processing Specialised production software	Low	For internal communication only
Sales reports	Spreadsheets Database Word processing Accounting software	Low	For internal communication only
Meeting minutes	Word processing	Low	For internal communication only
Price lists	Spreadsheets Database Word processing Accounting software Desktop publishing software	Medium	For internal use as well as external communication to customers
Order forms	Word processing Desktop publishing software	Low	For customer use
Product brochures	Word processing Desktop publishing software	High	For customer use
Merge letters	Spreadsheets Database Word processing Accounting software	Medium	Used to communicate to customers
Job descriptions	Word processing	Medium	For prospective job applicants
Employment forms	Word processing Desktop publishing software	Low	For internal use only
Job procedures	Word processing	Low	For internal use only
Supplier price lists	Spreadsheets Database Word processing Accounting software	Low	For internal use only
Product specifications	Database Word processing Accounting software	Medium	For customer use
Memos, faxes, letters	Word processing	Low	For internal and external communication
Accounting reports	Spreadsheets Database Word processing Accounting software	Low	For internal use

WHO PREPARES BUSINESS DOCUMENTS

With such a diversity of business documents in use today, and with a variety of software applications available to create these documents, it is obviously not possible for one person or department to assume total responsibility for document preparation. So, who does prepare documents in a business?

Standard Business Documents

Standard business documents are relatively simple in layout, and are authored, printed and distributed by the same person within a company. These documents are usually memos, letters, faxes, minutes of meetings, and the like. The focus is more on the content and the subject matter than on the layout and overall appearance of the document.

These would form the bulk of the documents produced within a company.

These documents are usually produced on a personal computer or laptop and printed on the author's printer. Increasingly, these documents are circulated internally via email rather than through the mail system.

Large companies often have directives that specify how these documents should be laid out. In small to medium companies, however, the look and layout of these documents is less formal and left to the discretion of the author. Many authors simply use the templates found in word processing applications to assist them in the layout of these types of documents.

Specialised Business Documents

Specialised business documents are by nature more complex and difficult to produce. These types of documents are usually colour brochures promoting the company and its products, annual reports for shareholders and investors, and the like. Often they incorporate pictures and artwork (graphics), and are produced as full-colour documents on high quality paper.

These documents are usually produced by a team of people. Some of these people work within the company, while others are contracted by the company to perform a specific job. For example, the content is usually prepared by people within the company that are expert in the products and services of the company. However, these people do not usually have professional design and printing skills so these aspects of document production are outsourced to an external company that specialises in layout, design and printing.

Generally, there are three steps to the production of these types of documents.

1. The text (also referred to as the 'copy') is prepared by the subject experts within the company.
2. The text, relevant pictures and general information about the purpose of the document is handed over to a designer to lay out the design, choose the appropriate colours and fonts, and so on.
3. The completed document is then provided in an electronic format to a printing company that prints the document in the quantities required by the company.

Naturally, there should be someone within the company who manages and coordinates this process. If these documents are for sales and marketing purposes, it is usually someone from the marketing department who undertakes this role.

SPEEDING UP DOCUMENT PRODUCTION

Most software applications that are used to produce business documents contain a number of features that can speed up the production of documents. There are also things that can be done within a company to ensure efficient and fast document production. Some of the software features and company tasks are detailed below.

Features Found In Software

Macros

Originally, macros were simply recorded keystrokes that could be stored and executed over and over again. These were used for the production of documents, or parts of documents, that remained the same from document to document. The keystrokes, such as a series of sequential steps to complete a specific task or perform an action, were recorded when the first document was created. They could then be replayed to create more of the same types of documents. Today, macros still perform the same role. However, they are now based on sophisticated programming commands and languages and, while still relatively easy to use, offer much more power than earlier keystroke macros.

Themes

Themes let you create professional-looking documents with a co-ordinated set of colours, fonts and backgrounds in a flash. By applying one of the 40 built-in themes you can change the overall look of your document immediately. To make the best use of themes, however, you will need to apply ***styles*** (via the ***Home*** tab) to the various elements in the document.

Templates

One of the most tedious tasks in document production is designing the layout and overall presentation of a document. A template allows you to create a document based on an existing design and can save much production time. Templates can also be created from an existing document. The existing document is converted into a template and the design of that document can then be used to produce future documents.

Styles

Longer documents require consistency in the look of their headings, text, tables, and the like. ***Styles*** in word processing applications allow you to store a set of formatting attributes and then apply that formatting to different parts of the document. For example, you can create a style for main headings that consists of a range of formatting attributes, such as a specific font style, font size, adjusted paragraph spacing, etc. You can then apply that style to any text that you want to use as a main heading. If you later want to change the way those headings look, you only need to change the style and all of the headings will automatically update. Styles can save a considerable amount of time in document production.

Building Blocks

You can recycle content that you use constantly in your business, such as contracts, agreements, procedures and the like, by creating and using building blocks. For example, you might save your company's contact information as a building block in the ***Quick Parts*** gallery, and whenever you require that information, you can simply open the ***Quick Parts*** gallery and select the desired building block.

Speeding Up Document Production

Guidelines and standards

One of the most time-consuming aspects of document production is deciding how you want it to look – what fonts to use, colours, margin settings, headers, footers, and so on. It is extremely beneficial for any company to have a set of procedures and guidelines that define these aspects of document production for authors. Every company, even the smallest, will decrease production time by having a set of standards in place. In addition these should be incorporated into a standard set of company templates (see above) which can be easily accessed by authors.

ESTABLISHING DOCUMENT STANDARDS

It is important for all companies, both small and large, to have a set of guidelines and standards in place for document production and handling. These guidelines ensure a consistent look and feel amongst the documents, allow new employees to become quickly acquainted with document production, and convey a professional image of the company to its customers and clients.

Things To Consider When Developing Document Standards

Storage

It is important that company documents can be located and accessed by relevant people. Documents can be stored on a personal computer or on a network server. If company documents are stored on a personal computer, and if those documents are to be made available to other users, then the documents should be stored in shared folders that are accessible to other users on the network. Generally, it is advisable for public documents to be placed on a network server if one exists. Some liaison with the network administrator may be necessary to ensure that document authors have appropriate access rights to the network.

Folder and file naming

It is important that the company implements a standard for file and folder naming. Using proper guidelines ensures that important documents can be found easily in the future. A handy technique used in document production is to include the file name and folder path somewhere in the document. This can be in the header, the footer, on the front or last page, or even in the document properties. The desired method should be clearly detailed in the company guidelines.

Templates

Detailed information should be placed in the guidelines with regard to what templates are available for document production. There should also be instructions explaining how the templates are to be used, where they can be accessed, and appropriate information detailing what can and what can't be altered in the templates.

Company logos, colours and general branding

Most companies have an established logo, colour scheme and other form of branding. The guidelines should clearly indicate what these are, what the minimum and maximum sizing for logos is, the placement of logos, the colour of the text, and other branding issues.

Styles

The document guidelines should contain information about the size of font, line and paragraph spacing, and indents that are to be used for the body text (the general text), headings, table text, figure text, captions, and other text in the document.

Output

The document guidelines should include detailed information about how the document should be produced. For example, many computer printers will print in draft mode and quality mode. The guidelines should indicate when it is appropriate to print the document in quality mode (which is more expensive and sometimes slower). Also, it is increasingly popular to transmit documents electronically via email. The guidelines should indicate when documents are to be printed on paper and when they are to be transmitted electronically.

Review of standards

It is not possible to lock in standards forever – needs and technology are changing too fast to make this possible. Consideration should be given, therefore, as to how frequently the standards will be reviewed and how the amendments will be provided to the user.