PART IV

MULTIMEDIA TEXTS

PART OVERVIEW

Part IV explores the next media: texts.

Though texts are one of the oldest forms of communication mediums, they do manage to find a place in the fascinating world of multimedia. Multimedia texts are not so different from conventional texts – but depending upon the applications and contexts in which they are used, certain interesting situations may arise.

This part has only one chapter that deals with everything concerning multimedia texts - including titling and hypertexts.

Chapter 11

Designing Texts

CHAPTER OVERVIEW

In this chapter, we first introduce texts as integral components of multimedia projects.

Though they might sound pretty simple at the first glance, multimedia texts do involve lot of design and development considerations. You might be in for a surprise, as we discuss these strategies one after another.

Hypermedia and hypertexts get a neat focus in the pages that follow, and finally we get to know some of the tools available for editing multimedia texts.

Throughout the course of the chapter, several commercial CD-ROM titles have been references to illustrate various concepts.

11.1 Introduction

Texts play an important role in our lives.

Since the advent of editing programs like WordStar and MS Word, the influence of information technology on print media has only been increasing. Our scope, in this book, is however limited to the treatment of texts as an element - in multimedia projects.

The extent, to which texts are used in a multimedia project, depends upon three factors:

❑ The nature of the project (Multimedia CD-ROM, Presentation multimedia, Game etc.)

❑ The subject (Dinosaurs, War games or Corporate profits?)

❑ The treatment of the subject (Heavy graphics / Light text, Heavy text / Light graphics etc)

Examples

❑ Multimedia reference encyclopaedias like Microsoft's Encarta or the Grolier multimedia encyclopaedia may contain extensive text based information – since they literally replace multiple volumes of Encyclopaedia Britannica.

❑ Edutainment CD ROMs like the learning company's 'Reading Blaster' - meant for teaching spellings and grammar to kids, relies more on visuals and audio than text – to deliver the contents.

❑ There may be few exceptional CD-ROMs like my favourite 'Tune land' (a very compelling nursery rhyme teacher) - from seventh level communications - that doesn't make use of any text at all!

11.2   Texts as a part of multimedia project

Texts can be used in multimedia projects for different purposes.

These include

1.   Title texts

2.   Body texts

3.   Menu and navigation texts

4.   Button texts

5.   Miscellaneous texts

The design rules that govern multimedia texts, largely depends upon the context in which a particular text appears. For example, we can evolve some quick rules like title texts should be big in size and should employ some of the brightest colours and that body texts should be of smaller size.

The rest of this chapter is dedicated to discussions on the importance of proper text design, how to design texts for various kinds of multimedia projects etc.
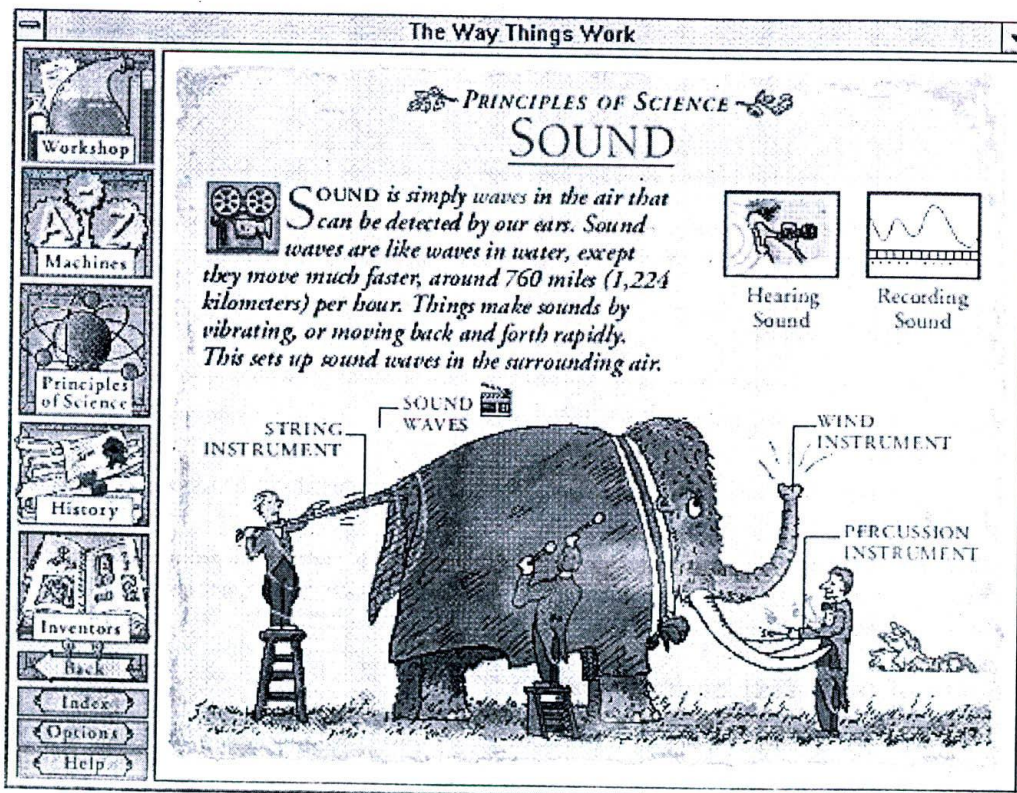

*Figure 47: Extensive multimedia texts in David McCauley's CD-ROM "The way things work".
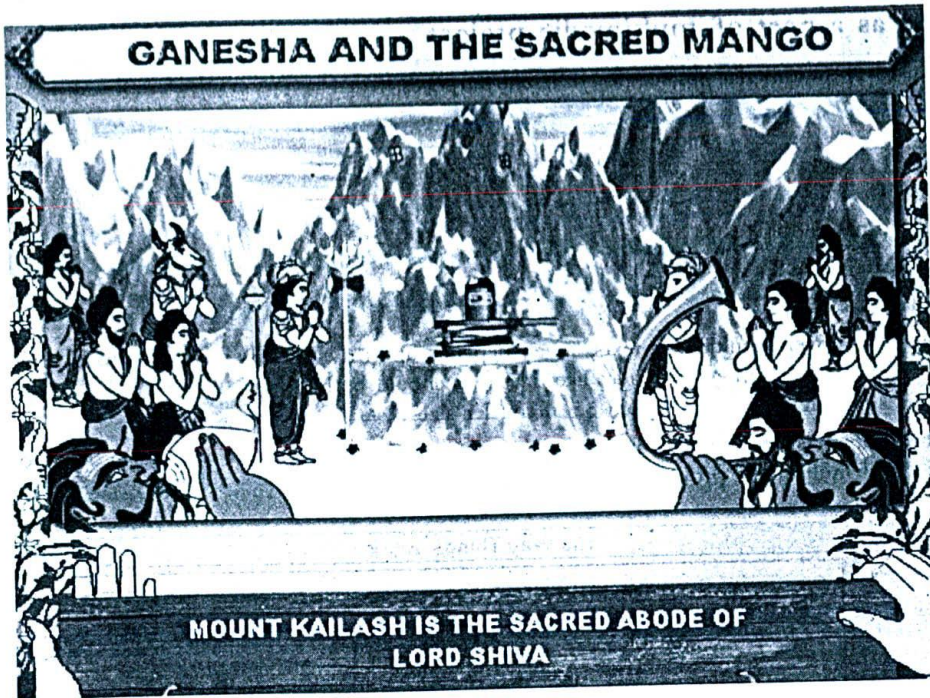Notice the usage of various fonts.*

Figure 48: On the contrary, my CD-ROM title 'Tales from Indian Mythology' – published by cybervalley systems, features very little text.

11.3   Text design basics

Designing text involves two important aspects of information that is being presented: content and display.

❑   Content covers **what** is the matter that is being presented – whether it is technical information or a sales update or news.

❑   Display covers **how** the matter is being presented – what fonts are used, what colours and backgrounds are being applied etc.

Rather than detailing what benefit a proper text design can bring in for a multimedia project - let us take another approach. Let us discuss the ill effects of poor content and display design, which, in turn, will emphasize the importance of text design in multimedia projects.

11.4   Effects of poor text content design

It is needless to over-emphasize the importance of content: poor contents fail to impress the user and result in loss of interest in the whole project. Careful attention should be paid, not only to the language, but also to ease of expressions.

A point of interest in multimedia text design is that, the display and content design should synchronise seamlessly, to produce successful results. The tone and 'effect' produced during the display can be greatly enhanced by achieving intelligent synchronisation.

For example, while discussing something that's ancient or something related to history, it's better to engage fonts that represent old manuscript characters. If the interface graphics designer is intelligent enough to give a very fine backdrop (say, that of ancient stone slabs), then naturally, the results are very impressive.

11.5   Effect of poor text display design

Poor display design affects every interface of the project. It spoils the general appeal produced by visuals and other media. This ultimately results in customer dissatisfaction and chances are high, that the user may not even explore the project well enough.

The degree of these adverse effects may vary, depending upon the immediate impression created in the mind of the user and the extent to which other media are trying to balance this failure. In the worst case, poor text display design may become the main cause of the failure of the project.

If you chance upon to see different types of multimedia projects, you can easily understand how intelligently the display parameters have been manipulated - depending upon their context, to have a lasting impact. You can also realise the consistency between various screen events and the relative texts that are being displayed.

For example, in an encyclopaedia project like Microsoft Encarta, the 'facts' box (that display texts with various facts and figures) will always open out an interface that displays the contents consistently - with similar types of fonts. Only the content changes accordingly.

Another example would be that almost all buttons would share same type of fonts and in some cases, even colours, to maintain certain degree of consistency and integrity throughout the project.

11.6   Parameters that control text design

There are three main parameters that control display designs of multimedia texts. They are

❑   Fonts

❑   Font colours

❑   Backdrop (or background)

While fonts affect the profile of the displayed texts, colours and backgrounds affect the overall appeal of the same.
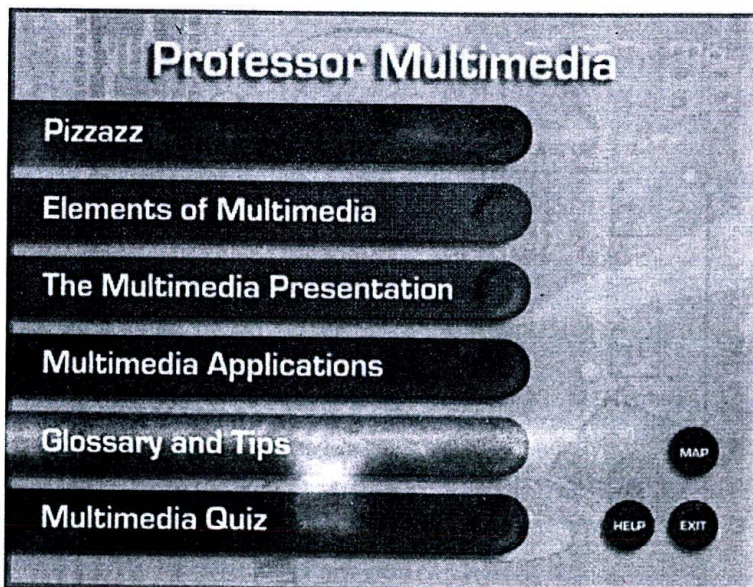
11.7   Fonts - definition

Figure 49: Notice menu texts and button texts in Individual Software's "Professor Multimedia"

Fonts can be defined as a collection of alphabetical and numeric characters, of similar or comparable profiles and which belong to a particular typeface family that's determined by a unique family name. The sizes of fonts can either be adjustable or not, depending upon the nature of the font family.

11.8   Types of font families

Two types of font families emerged as industrial standards, amidst hundreds of other proprietary standards. Apple first introduced both of these font families. They are

❑   Postscript fonts and

❑   True type fonts .

We shall take up true type fonts for our discussions, as it's the preferred choice in a standard windows environment.

11.9   True type fonts

Fonts, that are scalable i.e. whose sizes can be altered, while maintaining the basic profile design of the characters, are called true type fonts. These fonts support windows 'WYSIWYG' (What You See is What You Get) technology i.e. these fonts will be printed by your laser or inkjet printer exactly in the same way, as they appear on screen.

They may sometimes, be generated as bitmap structures - depending upon the capabilities of the printer attached. These fonts are compatible with both PC / Windows and the Apple Macintosh environments.

To have a look at all the true type fonts supported by your computer, follow this procedure:

1.   Double click on the fonts icon in the control panel. The lists of fonts that have been installed and available with your operating system are displayed.
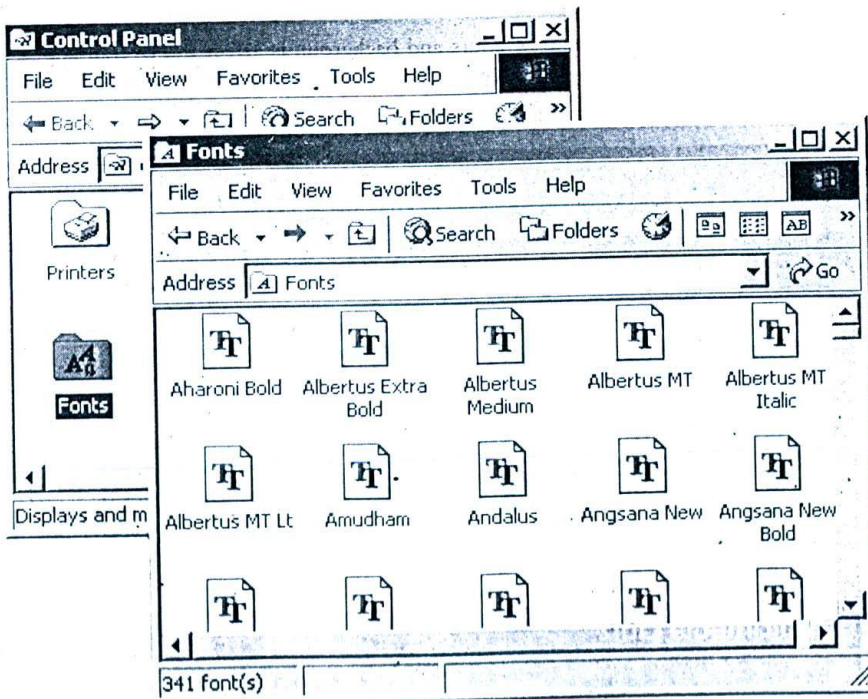
Figure 50: Various fonts installed on your computer

2.   On double clicking the font file names, the font display is available under various sizes.

3.   Options are available to add or delete the Fonts from the list. You can even customize the System to display only true type fonts.
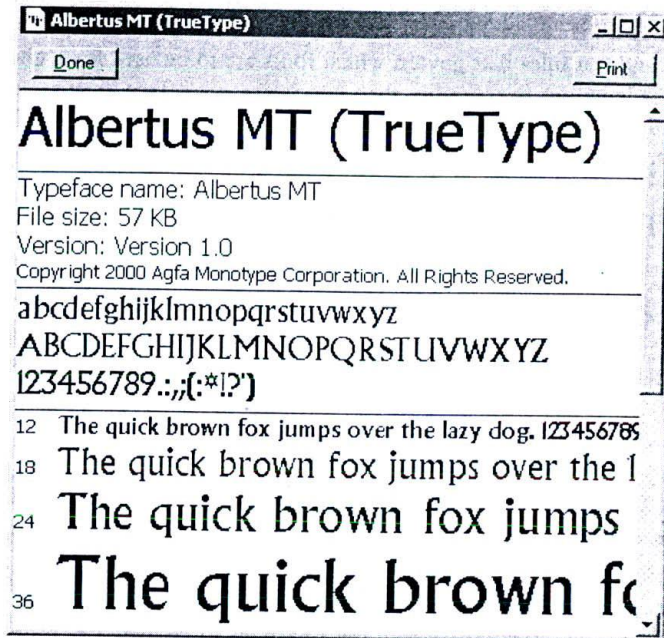

Figure 51: Details of a given font

4.   If you want, you can install new fonts using the Install fonts dialog box.
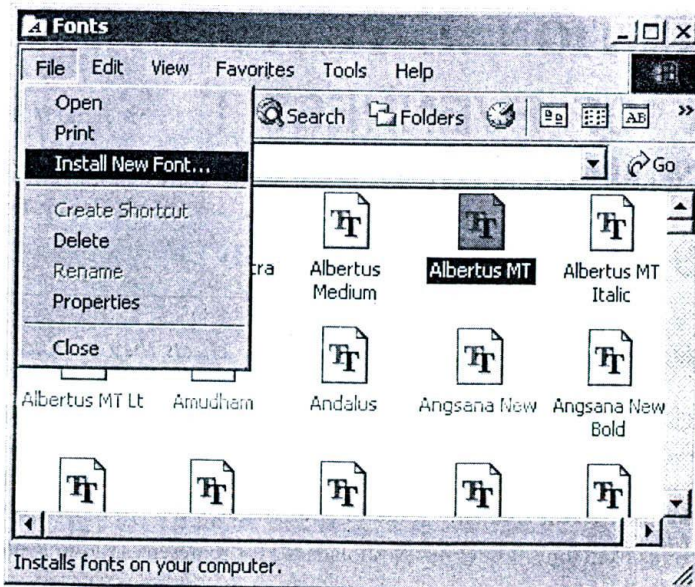

Figure 52: Installing a new font

11.10 Selecting the right font

Selecting the right type of font, for a given project at hand - may sometimes be tougher than selecting a life partner! This confusion is mainly because of thousands of varieties of fonts that are currently available for desktop applications. Worse still, a thousand more are being added every day on the Internet, thus compounding the situation.

Though there are no hard and fast rules that govern which fonts are to be used for a given situation, I am offering the following suggestions as indicative tips - rather than conclusive rules. True, they are not thumb rules...but most of them have been derived out of practical experience and you will find at least half of them relevant and readily applicable in your projects.

11.11 Designer's tips

❑   To a great extent, the actual contents decide the way, in which they must be represented.

❑   For example, to represent historical, archaeological or other related contents, the preferred choice is a font by name EmGraves or its various clones. This font's profile represents those of age-old English writings of the past. This very profile produces a feeling of olden days in the minds of the readers. Herein lies the true success of the display design - to arouse some kind of feeling in the minds of the readers, that's true to the context.

❑   'Times New Roman' (Times in the Mac) is the preferred choice for representing 'Conventional' or 'News' type of contents. It can be applied without glitches in a wide variety of situations and you can seriously consider it whenever you are confused with making choices for a particular screen in your project.

❑   'Ariel' and 'Helvetica' can produce a sense of evenness in the text and improve readability - because, these two fonts maintain the same width throughout the profile. When your situation demands packing of more information within a limited space, or where the font sizes to be used are relatively small - give these two, a quick shot! Most probably you'll be satisfied with the results.
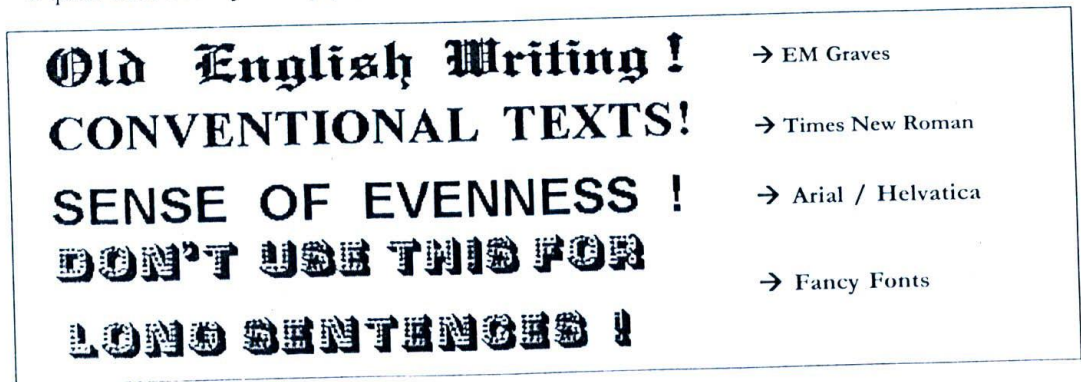
Figure 53: Various types of fonts and the effects they produce

❑   Windows OS itself contains a list of fonts, including Ariel, Times New Roman, Courier and System fonts. But, as a multimedia developer, you need to have a lot more added to the list. Check out the free stuff available via Internet. If you want to incorporate your local language (other than English) into your projects, you need to install the relevant true type fonts of your language into your system.

❑   Don't use fancy fonts like 'Tony White' or 'Weshollidays', for representing long sentences. At the most, they can be used for titling.

❑   Do not have too many font families   in your system. Limit yourself to best hundred or so, available with

you. When you are adding new items to your collection, take care to remove the older and unwanted ones, so that the total number available in your system is maintained. Removal of fonts from the display disk may not result in removal of fonts from your hard disk! You have to clearly specify your options in the message boxes. For details, refer Windows help system.

❑   Don't make use of too many varieties of fonts, within the same project. This may result in loss of integrity and fail to make an impression in the mind of the user. Particularly, maintain the inner contents with the same type of font. If you want to distinguish a particular portion of the text from others, use font attributes like *italics*, <u>underline</u>, outline and colour - instead of changing the very type of font. Also, the button bars and menu items must be consistent in their general appeal.

❑   A variety of special effects can be applied to the general texts and these are discussed under a separate topic called 'titling'.

❑   Font sizes also play a crucial role in elevating the appeal produced by a particular kind of font type. Do not use either very large or very small font sizes for representing long sentences or contents (Particularly in 'reference' type of multimedia projects like the encyclopaedias) - the optimal size would be 12 to 16 points.
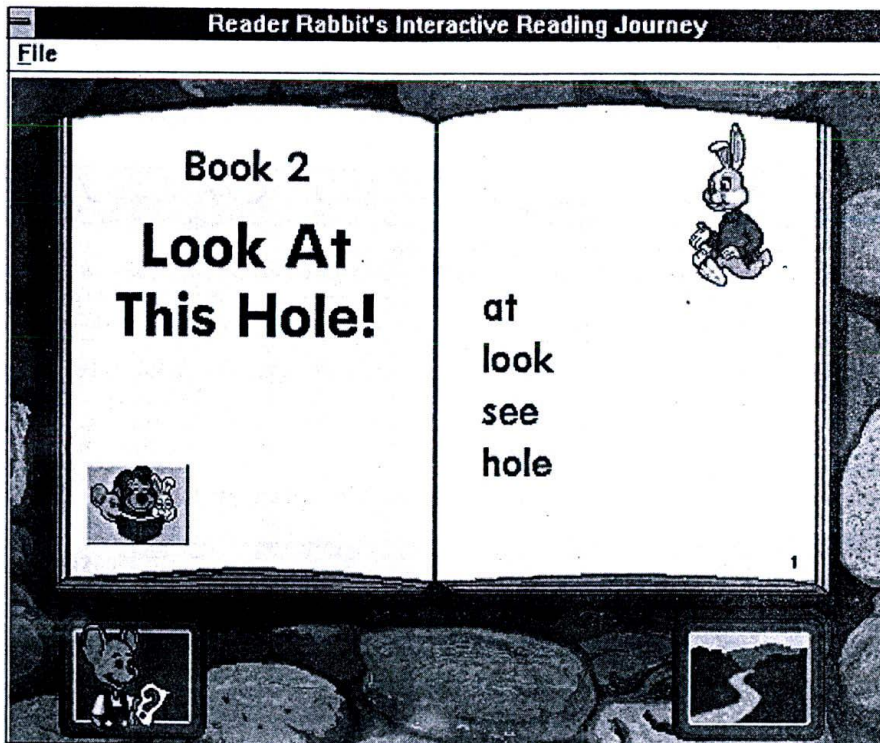
Figure 54: Children's edutainment titles – like 'Reader rabbits Interactive reading journey" from the Learning Company – makes use of large sized fonts, for effortless reading.

❑   On the other hand, edutainment projects, particularly those meant for children - usually make use of large fonts, so that the child is able to read the text without much strain. Another point, which I'd mentioned earlier, should be remembered here: 'Children titled should not be packed with too much contents.' Thus, you're usually left with lot of free space at every instance of the project, thus enabling easy usage of large sized fonts!

☐ **Last point:** The best method to find out the right font for a particular project is to take out the background separately and try out different permutations and combinations possible. The best time to make decisions on font types is during storyboarding (Storyboarding process is explained in later chapters) rather during the actual stages of production...If need be, the background environments can be roughly developed for experimentation purposes, to try out the font faces. This exercise, though seems a bit complicated, is bound to reduce lot of time wastage during the actual production.

11.12 Font installation issues

The following discussions illustrate one of the potential issues while selecting a particular font for your project – not from a design perspective, but from a programmer's viewpoint.

You can use literally any type of font for your project. No authoring environment restricts this independence. However, there is one catch:

You have to ensure that all the variety fonts you are using are available in all client systems also!

Otherwise, the Windows environment replaces your font with the best alternative possible - which may deviate far from your choice. So you may have to find out whether your fonts are supported by the client system an **install them when you don't find one!**

The installation program that you supply along with your package usually handles this task. Writing out an installation program, that'll do the above functions is not only difficult but may invite other troubles.
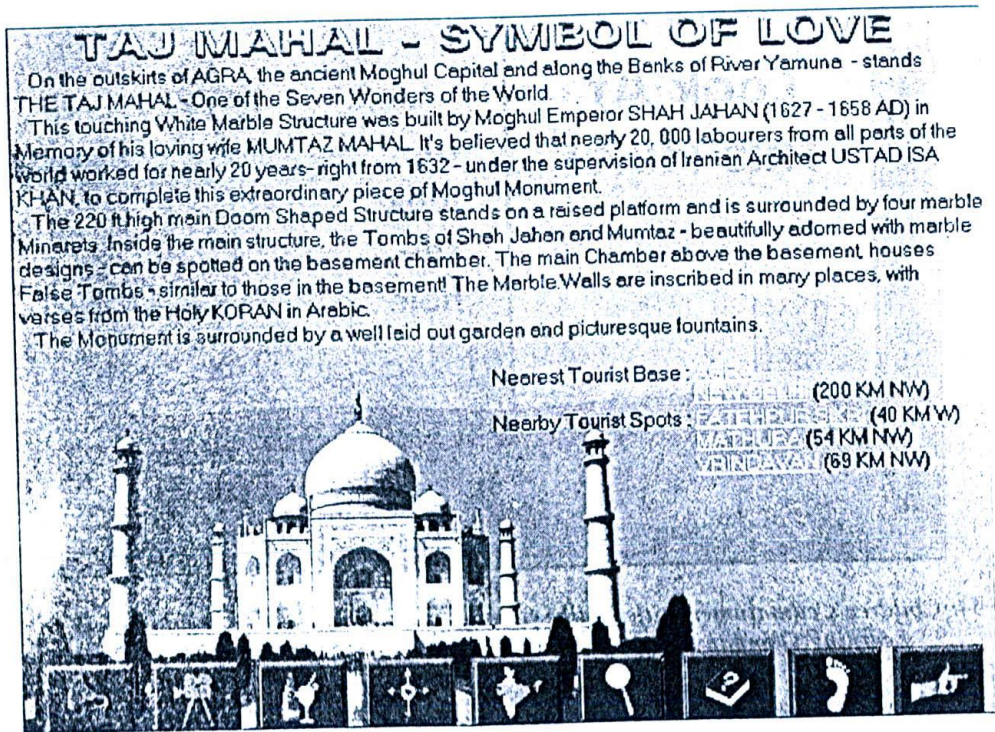

Figure 55: I ensured that I am making use of most common fonts in my CD-ROM title "Tourist's India – an Interactive Multimedia Guide" – published by cybervalley systems.

For example, chances are that you are using a particular font developed and sold by a company. If you are distributing this font with your package, you are violating the copyright of the font manufacturer! Refer the appendix titled 'IPR Laws in the Indian Context' for more details on copyright laws.

Because, the font manufacturer sold the particular fonts to you only for your usage and not for redistribution to others! Once you install the fonts in the client machines, it's available for him also and he can use the same for all of his purposes. Even if you take care to remove the fonts during un installation by painstakingly writing an uninstall program, if the client doesn't uninstall your package, then the fonts become available for his usage!

Apart from all these troubles, writing out an installation program that'll serve these purposes involves, not just adding a few files to the client's windows system directory - but also modifying certain system files in the client's operating system!

Any mistakes in such installation or un-installation programs may be very costly, because, if something goes wrong - with the system files because of our rewriting, the very system may crash down or may result in other unexpected consequences. It requires a hardcore windows system programmer to write such a program without a hitch.

So, are there any ways to get over such problems?

Well, here are a few suggestions, though not solutions - in a strict sense.

❑ As far as possible, make use of system fonts that come bundled with windows operating system, like 'Ariel or 'Times new roman'. You can expect to have the same in all client machines and need not worry about them.

❑ Make all titles and other areas –hopefully few in number - that carry other varieties of fonts, as images or bitmapped pictures. Though it's a bit difficult to handle them, (refer my note on 'Anti-aliasing' in the discussions that follow) you need not worry about installing the font files, to maintain the display design!

❑ This suggestion is a bit more complex: To 'create' your own fonts with the help of font creation tools like 'The font studio' and distribute them freely without worrying about copyright issues! Of course, as a creator of the font you have to register your stake over the creation by registering the copyright, or otherwise somebody else may do it! If you are not satisfied with the pre-installed fonts of Window, and have considerable time to spare, give it a shot!

11.13 Titling

Titling is an art by itself.

Particularly, the variety of 'supercharged special effects' can be applied only to titles and not other portions of the contents. Also, good titles often invite the readers to have a detailed look at the contents that follow...and that probably makes them more important in multimedia projects.

A variety of choices are available for designing titles - the options available are usually determined by the package you are making use of. Nevertheless, what we are going to discuss here are available in almost all successful multimedia packages and can readily be applied.

11.14 Jaggies and anti-aliasing

One of the serious problems faced by text designers in the windows based environment or equivalent, is that of 'Jaggies' - or small edge disturbances created with true type font families. These disturbances are relatively low rather, insignificant - when the font sizes are small, but assume significant importance with larger font sizes, as that in titles. To have a glimpse of what jaggies are, have a look at the figure.

Notice that the edges are cut and not very smooth
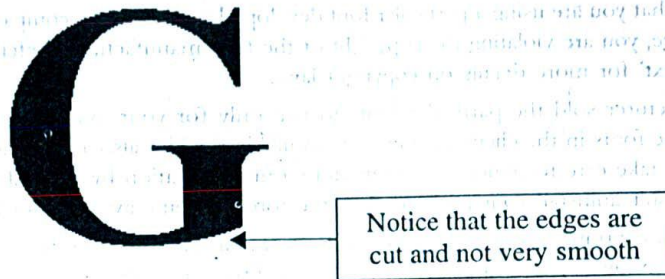
Figure 56: Jaggies – illustrated. You can actually have a better view of jaggies than the one I've shown, in your computer. Jaggies are smoothened out during laser printing.

These disturbances distort the profile of the fonts to such an extent that the beauty of the title totally stands spoiled because of them!

The serious victims are those alphabets and numbers that have some sort of curvature, like 'S' or 'C'. Those made up of relatively straight lines, like the letter 'L' often manage to present a decent look, even with jaggies.

This problem can be seen in most of the word processing packages like MS Word or Word perfect - but, since these disturbances are barely visible after laser printing at 600*600 dpi resolution, the problem is barely conceivable.

So, how do we get over the problem?

Shall we all try to restrict our contents to make use of only straight lined alphabets? Wow, that'd be too harsh and we may seldom succeed in trying to express what we want to! After all, we have got only 26 English alphabets at our disposal to joggle with... we may rather try to live with jaggies and restrict our font sizes to tolerable limitations!

But wait! The situation is not that worst, after all.

For the problem of jaggies, there is a very efficient solution called the 'technique of anti-aliasing'. Let us see what it is and how it can be used to get over jaggies.

11.15 Anti-aliasing texts

Anti-aliasing is the technique of tracing out the contour of the font profile using various shades of the font colour, in such a way that jaggies are reduced to the minimum and are barely noticeable even at large font sizes.

As mentioned earlier, most of the word processing programs do not have 'anti-aliasing' feature. We have to look out for some popular paint editing tools like Adobe photo shop to have a taste of how an anti-aliased text would look like. To have a glimpse of the same, look at the sample I have provided. Carefully notice the marked difference between an anti-aliased and non anti-aliased texts and the difference produced in their appeal, even when their sizes, content and colour are very much, the same.

Paint shop Pro is yet another software, surprisingly a shareware, that's supported by efficient anti-aliasing algorithms. It supports all true type fonts pre-installed in your system, and automatically traces out the profiles as and when you develop the contents. Paint shop pro also contains various other 'effects simulation' features that make the package, a highly recommended tool for designing multimedia titles.

G

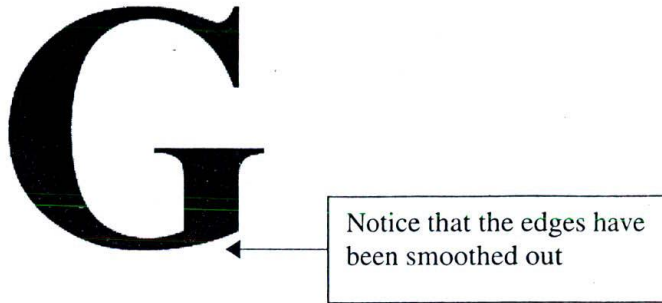Notice that the edges have been smoothed out

Figure 57: Anti aliased text – illustrated. If you cannot find any big difference between the earlier text and this one, use a magnifying glass – if you have one. These subtle edges are perceivable more in monitors than in print media.

11.16 Editing anti-aliased texts

With all it's advantage, you may most probably face one problem with all anti-aliased texts: since almost all tools meant for anti-aliasing texts store the resulting graphics only as images, there's no way to treat the contents as texts, once they are anti-aliased (unless your authoring environment supports it!).

TANJORE

This ancient capital of the Chola empire, is well known for it's BRAHADEESHWARA TEMPLE dedicated to LORD SHIVA . Built by King RAJA RAJA CHOLA (985 - 1014 AD), this temple is considered to be the crowning glory of Chola's Temple architecture.

The 65.8 M high temple tower is coped by a massive 81.3 Tonne monolithic granite dome (the shadow of which, never falls on earth due to height and angle of construction) adorned with winged niches. The inner walls and ceilings are adorned with frescos and outer walls contain carved stonework. The enormous SHIVA LINGA inside the Sanctum Sanctorum and the huge monolithic NANDI (Lord Shiva's Bull) leaves one spell bound.

Other places of interest in Tanjore are THE PALACE. ART GALLERY. SARASWATHI MAHAL LIBRARY (Containing age old palm leaf manuscripts). SANGEETHA MAHAL and SCHWARTZ CHURCH.

Nearest Tourist Base
TANJORE
TIRUCHIRAPALLI
(56 KM W)

Nearby Tourist Spots
KUMBAKONAM
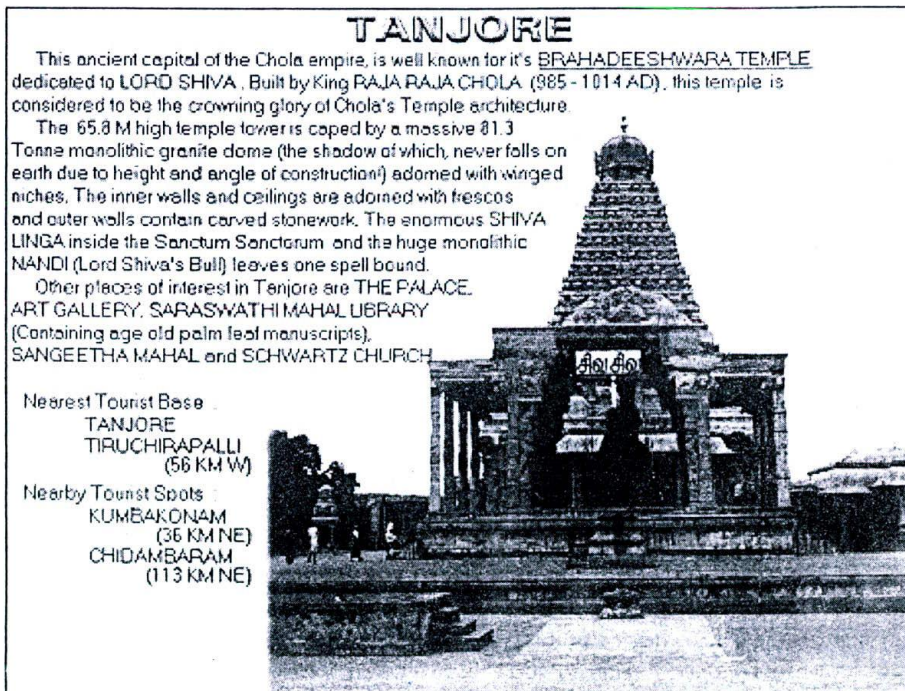(36 KM NE)
CHIDAMBARAM
(113 KM NE)

Figure 58: The titles are anti-aliased, but not the body text – in my CD-ROM title 'Tourist's India – an interactive multimedia guide', published by cybervalley systems.

That means, you can no longer open the anti-aliased texts in your standard word processors and do editing, if any. You may have to use graphic design tools such as Paint shop Pro or Adobe Photoshop – introduced earlier, to edit

the contents. This invariably consumes lot of time as well as effort, apart from the expertise required to handle the packages.

So, it is better, not only limit the usage of anti-aliased texts in a given project, but also design it in such a way that they can be placed as images – rather than texts.

Also, it is better to keep all anti-aliasing work towards the end of production, so that all alterations are made only to the normal text contents and you hardly have any need to edit anti-aliased texts!

11.17 Special effects for titles

A variety of special effects can be applied to multimedia texts; to page titles – in particular.

The software tools he or she is using to create special effects, dictate the options available to a designer. Premier photo editing software tools like Adobe Photoshop and Corel Photo paint provide lot of special effect options. Paint shop pro, for its share, does provide a number of these effects and also has an interesting feature of recognizing Adobe Photoshop special effect filters.

With the help of such software, your titles can fly high.

If the tools you are using do not support some of the effects that are in your mind, you can even write programs using Windows 16 or 32-bit API! But, for that, you should either know windows graphics programming or depend upon somebody else, who knows that.

For the current discussions, we shall take up a few common special title effects, available in most graphics tools – including Paint shop Pro.

11.18 Drop shadows

Drop shadows are the easiest to work with.

Almost all famous tools support this effect, which produces a shadow -usually blurred, under the desired text, so that it looks 'projected' out of the screen. You can hardly find any good web page that doesn't make use of this effect, in one place or another. Needless to say, these effects work best for titles and other types of headings.

Figure 59: First is a fancy effect, wherein the body colour and the background is the same – white. In the second text, drop shadows have been applied over a bevelled text.

You can usually control the colour, degree of blur and the extent of opacity of the shadow, using the dialog box options that are thrown open, once you try to add this effect over a selected text.

Here are a few useful tips, for using drop shadows:

❑   Never make use of any colours other than black, for shadows...they seldom produce good appeal. Remember that no coloured shadows exist in nature!

❑   Drop shadow effects work best in white background, although some light colours may also work out well.

❑   Never try this at dark backgrounds...the shadows may barely be visible!

❑ By maintaining similar background and font colours, some fancy effects can be achieved, as shown in the illustration.

❑ Drop shadows have best chances of working together with 3D texts or bevel effects (discussed separately). Refer the illustration, which is a typical example of such a conjunction.

11.19 Bevel effects

Next to drop shadows, bevel effects and their clones are the widely used effect on titles. When applied, they make a projection out of the title area – so that the text protrudes out with some shine, as shown in the illustration. You can control parameters like the degree of shininess, bevel size, angle of bevel etc. This effect is relatively easy to apply and is very effective in titling, when the background is particularly a photograph or bitmap.

Bevelled texts, in combination with drop shadows can produce great results, when they are applied with suitable fonts over a very light or white backgrounds.

11.20 Three dimensional texts

Normal texts, as we see on the monitor, are all two-dimensional.

If we could add a space co-ordinate along the Z - axis, then the entire environment becomes three dimensional (for detailed discussions on two dimension and three dimensional fundamentals, kindly refer the chapter on multimedia animations)

Objects placed in three-dimensional environments look more real and present a 'physical entity' kind of look. For example, look at the three dimensional (henceforth represented as 3D) text in the diagram.

2D Text
3D Text

Figure 60: Using graphic tools, it is possible to apply a variety of special effects to titles –
like the 3D text shown here.

For comparison purposes, the same text has been presented nearby, in the conventional 2D form. With 3D texts, much more effects are possible like controlling the intensity of light that's cast over the Text objects, altering the 'Surface Parameters' of the text objects etc.

In general 3D texts are employed only for representing very important texts in a project, like the project title.

11.21 How to create three-dimensional titles?

Three-dimensional texts can be created in two ways:

❑ To use advanced graphic tools with 3D text simulation capabilities

❑ To make use of 3D modelling and rendering software

The choice between these two depends upon your exact requirements and other constraints like time and budget.

All advanced graphic tools are bundled with ready made 3D simulation routines, that mostly decide the type of 3D

effect that's going to be simulated - but you do have control over a few parameters like colour, shading, light (in some cases) etc.

One great advantage with them is that they are very fast to work with. It only takes a few minutes to produce 3D effect of your choice over the given text and study the results. Thus, you can experiment with lots of permutations, until you achieve satisfactory output. If the original software is not endowed with the effects that are in your mind, you can look out for third party plug-ins (when the parent software supports such a feature) that'll provide the necessary effects you want.

Adobe Photoshop literally has thousands of such plug-ins that generate almost all conceivable effects - including a huge variety of 3D title effects. Some of them are even available free of cost or as shareware, over the Internet.

On the other hand, 3D modelling software gives you much more independence to work with - at the cost of more time and effort. Also, learning to work in 3D space is a bit more difficult than normal 2D.

So, here is the balance between these two:

When you want to create 3D effects over stationary multimedia texts, do prefer graphic tools and their plug-ins. Even if you don't find something that'll exactly match the one in your imagination, you'll at least find an equivalent - in most of the cases.

In the worst case, you may have to look out for an alternative effect!

3D Modelling tools are best choices for 'animated' texts (discussed in the following sub-heading). Some software even let you to produce 3D flying texts easily, without giving you the strain of working in 3D space. One such tool is Corel move that comes bundled with Corel Draw group of programs and is the preferred choice of many.

A number of other special effects are possible with graphic tools, but the ones discussed above - are especially applicable to multimedia titles.

In general, it can be stated that all other effects available for other photo editing and retouching, are available for texts also.

11.22 Text animations

Figure 61: A text animation featured in my CD-ROM title 'Six Sacred Temples', published by cybervalley systems.

Text animations include moving or flying texts, frequently associated with some graphics - that usually adorn the start-up sequences or the concluding titles.

Many multimedia producers make it a point to animate the first few sequences of their title, displaying their company name along with the logo, followed by the name of the title and the main screen. This initial warm up provides an immediate sense of satisfaction to the viewers and sets the tone for the rest of the project.

Text animations, along with graphics, may be difficult to create, as their development involves usage of three dimensional software platforms - supplemented by the skills and techniques demanded by such 3D environments.

If you want to animate texts alone, without much graphic effect - some software tools let you do that very easily. But, you may have to limit yourself to the animation systems supported by the package and may not enjoy the independence of working in 3D environments; the only advantage being the ease with which you can create such animations, thus saving lot of time.

Good 3D software development platforms are not so cheap and you may have to invest substantially for the same. One suggestion is that you can get this animation work done outside - through some third party developers who specialise in creating professional animations. Even reputed multimedia producers find this method economical and easy.

2D and 3D Animations have been dealt with in detail in later chapters and the basic principles remain almost the same for creating animated texts too.

11.23 Content design

Content design is, in a way, more important than display design.

Because, the initial spell produced by a good display design, is kept alive throughout the proceedings - only by the contents of the project.

Content design involves controlling both quantitative and quantitative aspects of multimedia texts. It not only demands an intelligent perception of the project - as a whole - but also the ability to present things in an interesting order.

11.24 Qualitative aspects of content

Qualitative aspects of content development, involves the following tasks:

❑ Developing the contents to be presented
❑ Deciding the language to be made use of
❑ Deciding the expected behavioural outcome on target audience
❑ Producing a sense of appeal relevant for the project, by controlling the tone of language used and the way of addressing the target audience.

The target audience of the proposed project influence nearly all of the above-mentioned aspects, either directly or indirectly. Any deviations from their viewpoint affect the degree of success of the project.

Thus a good content designer should be capable of shifting his or her paradigms to that of the general audience and proceed with the development process. This unique characteristic, not only demands a wholesome understanding of the audience thinking, but also of the society in which they dwell.

For example, all children titles should contain simple words and expressions -- as a rule. This helps the child to explore the project on its own, without the help of adults. On the other hand, adult titles may follow one style or other, based on the project under production. This is what we mean, by controlling the 'tone' of the language.

11.25 Controlling quantitative aspects

Qualitative aspects involve the following tasks:

- ❑   Deciding upon the 'length of the text' - in each screen.
- ❑   Deciding upon the total quantity of matter to be distributed through the project and
- ❑   Dividing the contents, in required proportions, between the screens – for optimal distribution of content over the complete span of the project.

Quantitative aspect of contents, ultimately decide the total duration of the project.

Packing a lot of information within a single page may affect readability and presentation. On the other hand, if a core idea is scattered across several pages, then audience get bored or do not understand the point so well.

For corporate presentation, it is better to use bare minimal texts that fill the entire screen – office people never have enough patience to go through elaborate texts. Detailed explanations, if any, should be made either by the presenter (in case of live presentation shows) or by a gentle audio background (in other cases).

For Children edutainment titles, it is better not to pack too much stuff in one screen. They may find those old DOS games more interesting than your edutainment title...and since we use the term 'edutainment', do make good use of funny strips and light jokes, that'll make the presentation lively!

Even in reference titles like encyclopaedias, do not add much, in your urge to disseminate whatever you have got. You may most probably be giving more details than that required, which often irritates the user.

An intelligent way to address this problem is to provide necessary 'links' or 'hot spots' or relevant web addresses - so that those who need more information can explore further. This concept has been elaborated in the sections that follow.

Many a times, multimedia development companies find it a lot more useful to employ copywriters, for the purpose of content development. Some famous CD ROM producers in foreign countries even have expert consultations - particularly while developing children titles.

11.26   Hypermedia

One of the most interesting characteristics of multimedia project is its interactive nature. It is this interactivity, that gives multimedia - an edge over other forms of entertainment like television and video.

Interactivity is the feature that enables the user or the observer to participate in the ongoing proceedings, in some way or other. He is not a mere spectator of what is being presented before him, but is a participant. He can exercise some control over the flow of information or take part in the events that are happening.

All these things help him to have a personalised experience about the whole exercise. This is what interactivity is all about.

No other communication medium is bestowed with this level of interactivity.

One of the techniques used for making multimedia projects interactive, is hypermedia.

Hypermedia is a well-defined structural arrangement of information in the forms of audio, video, text, animation, graphics and other elements of multimedia - pertaining to a particular topic or related to it, with relevant linkages in between them.

As an example, let us try to list out various bits and pieces of information available in Microsoft's multimedia CD-ROM titled 'Oceans':

- ❑   Various facts and figures about oceans (text)
- ❑   Underwater photographs (graphics)
- ❑   Sounds recorder underneath the ocean (audio)
- ❑   An underwater video clip (video)

Now, let us see how this project tries to make use of hypermedia, to present a seamless blend of information to the user – using hypermedia.

Let us assume that the user is exploring the page titled 'sea shells'. Here, he is presented with lot of scientific information about seashells. If he is interested, he can try out some exciting photographs and / or video clippings of seashells using the nearby hyperlinks. He may also try to listen to some actual underwater audio recordings, as he proceeds.

How does that sound?

Oh my, try it out for yourself!

And then you will know how different a multimedia experience is, from watching a documentary series on oceans - in the Discovery channel or National geographic!
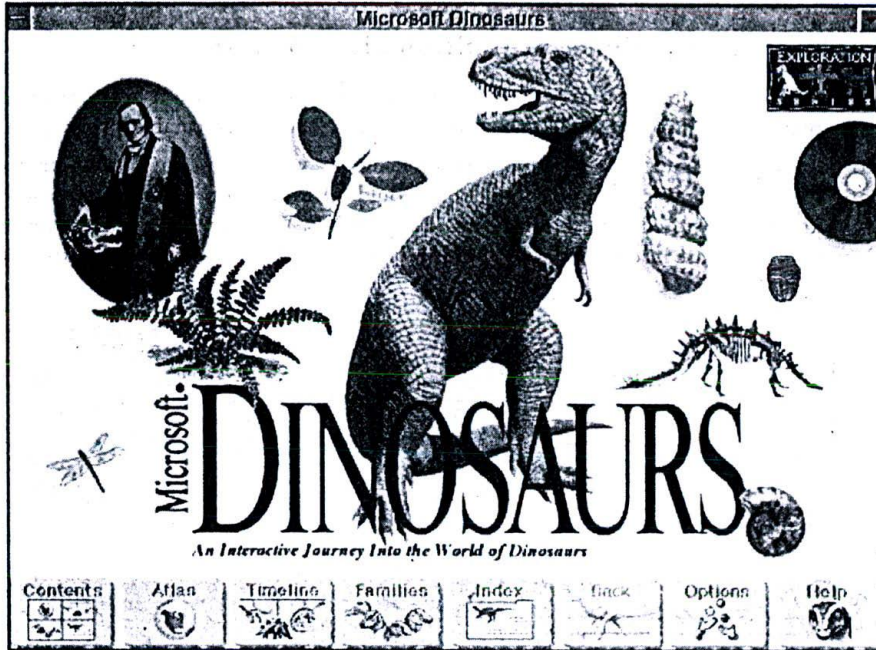
Figure 62: Microsoft Dinosaurs CD-ROM, makes the best use of hypermedia –
to present information available in various media – as a seamless blend.

Now, the linkages that exist between different forms of information are called hyperlinks. In the example that we discussed above, the following hyperlinks are present:

- Hyperlinks between information on seashells and photographs of the seashells
- Hyperlinks to seashells video clippings
- Hyperlinks to underwater audio clippings

Hypermedia can be broadly classified into hypertexts and hyper-graphics. In this chapter, we will be discussing hypertexts and reserve the latter to later chapters.

11.27 Hypertexts

Hypertexts represent all textual information in the project, interlinked to various other subtopics – by means of hyperlinks. Those words that carry hyperlinks to other sub topics are called hot words and are usually distinguished from other normal texts, either by a different font colour or by a different text style.

Almost every web page we see today on the Internet has hypertexts.

Hypertexts enable multimedia professionals to arrange their information into meaningful groups and present them easily, when the user requires it. Without proper organising, the entire project may present a chaotic look... and the best way to do it is by making use of hypertext methodology.

Hypertext feature is imperative to all titles, which contain lots of reference material - like the Microsoft Encarta or Cinemania. Children edutainment titles and those that generally contain very less text-based information, usually depend more on hyper-graphics and not hypertexts.

It can be concluded that, in general, it's very useful to adopt hypertexts in project, when the volume of information to be shared is on the higher side.

11.28 How to embed hyperlinks in multimedia projects?

It is easy to create hyperlinks in html web pages – but web pages are not our concern here. We are interested more in multimedia presentations and projects, which are not web pages, but live executable programs.

It is very easy to develop a hypertext system of your own, using any windows programming environment and use them directly into your projects. One way of doing this would be to develop a small database of hyperlinks - wherein all 'hot words' can be stored with the relevant linkage details. When the user clicks over a particular 'hot word', relevant hyperlink details are read from the database and the screen is updated with the appropriate information.
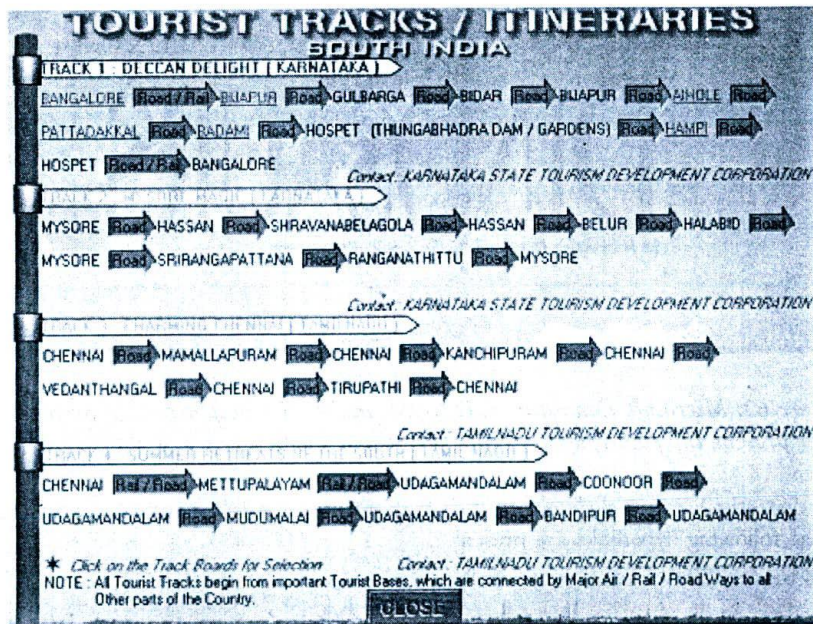

Figure 63: In 'Tourist's India Interactive Multimedia Guide' CD-ROM, I made use of an internal database to store all the hyperlink information – spread across several states and union territories!

Depending upon the requirement and your programming environment, you can try to achieve the same results, by various other methods. For advanced controls, you can look out for the appropriate Windows API routines.

Many premier multimedia-authoring environments, exclusively meant for multimedia programming, have these features built within the package. All you have to do is to inform the package regarding the hot words and the hyperlinks they connect to.

The package takes care of the rest and activates the hypertext system, on receiving relevant mouse clicks over the hot words.

11.29 Designing a hypermedia system

Designing the proper hypermedia system is a very important stage in multimedia project development. In fact, much of the time spent during story- boarding, is for organizing the contents into various meaningful groupings and designing the relevant hyperlinks between them. Improper hyperlink design leads either to several modifications during the course of project development or to improper distribution of contents throughout the title.

Hypertexts, in proportionate combination with hyper-graphics, make out a very successful hypermedia system that fills the users with thrill and contempt - as he proceeds to explore the project, stage after stage.

Here are a few thumb rules to adopt, in designing a hypermedia system:

❑ Divide the contents into meaningful groupings. A better way to organise the contents, is to adopt a 'Top Down Tree' approach - as illustrated in fig.11- 2. The top most level usually contains an index (or Titles) of all sub-topics, branching out to lower levels. As the levels come down, the depth of information also descends to more intricate details. The greatest advantage of this methodology is that it allows only those who are interested in a particular topic to explore further, and others to bypass them. Thus, the interest the user develops as the title proceeds is kept alive throughout the proceedings.

❑ For some titles, it's better to integrate Hypertexts and Hyper graphics and design the project just as an integrated Hypermedia system. In such a system, the 'Hot words' are usually linked to some graphic images and photographs and vice versa. In fact, it's this methodology that's currently being adopted in most of the titles, as the producers fell that giving more and more text based information, tends to reduce the tempo of the multimedia experience...But enough care should be taken to design a proper mix between these two powerful indexing systems.

❑ Enough care should be taken to provide an easy and unambiguous navigation system. Otherwise, the user may be caught at some point of the title and may not be able to return to the screen of his choice. This problem becomes compounded particularly with respect to Hypertext systems with lot of hyper linkages descending down to several levels of intricacy. To cope up with this problem, all multimedia titles provide you with the option of reaching the Main screen or Main menu from any sub-level - so that the user feels confident, even if he's unable to trace back his old navigation path.

❑ Another useful feature will be to provide a 'Back' option, at any point of time, so that the user can go back to previous levels of his navigation path, from the current screen. Of course, to achieve this - you may have to keep track of all the movements of the user carefully... the levels up to which the user can go back in the title being decided by *the number of levels you can keep track of!*

11.30 Text editing software tools

A variety of Software tools are available for creating texts for multimedia projects - the choice depends upon the requirement and usage.

❑ For content creation and development, any standard Word processing tools like Microsoft's Word and Corel's Word Perfect can be used. These tools even allow you to check up the spellings and grammar of your language, so that more time can be spent on developing the contents.

❑ For creating Title special effects, any Image editing Software can be made use of. Adobe Photoshop, as I had mentioned earlier, is the undisputed leader for PC platforms and the Mac, though Corel's Photo Paint and host of other software are not noticeably lagging in their features. Paint Shop Pro from is available free of cost, for the first 30 days usage, as a shareware.

❑ For 3D Texts and Text animations, packages like DOS based 3D Studio from AutoDesk or Windows based Light wave 3D from Newtek can be made use of. But, advanced 3D Modelling and Animation software are available only on Windows NT and Silicon Graphic's Irix platforms.

❏   For designing Hypertext Systems automatically, look out for multimedia specific authoring platforms like Multimedia Tool book from Asymetrix, which support built in Hypermedia interfaces.

11.31 Summary

Texts play an important role in many multimedia projects. These texts are different from the conventional texts in many respects and are called multimedia texts.

Designing texts for multimedia projects involve display and content design. Display design involves the correct choice of font style, font colour and also font size. Designing title texts involve other considerations like anti-aliasing and special effects like drop shadows, cutouts, 3D texts and text animations. Content design involves controlling both quantitative and quantitative aspects of multimedia texts.

Hypermedia methodology enhances multimedia projects. Hypertext feature is provided in titles with lot of text-based information. Hypertexts can be created either by proprietary programming or other supporting authoring environments.

Many text editing software tools are available for content development, title development and font design, under PC and Mac environments.

11.32 Keywords

❏   **Fonts:** A collection of alphabetical and numeric characters of similar or comparable profiles that belong to a particular typeface family.

❏   **True type fonts:** Fonts, whose sizes can be altered while maintaining the basic profile design of the characters.

❏   **Anti-aliasing:** The technique of tracing out the contour of the font profile using various shades of the font colour, in such a way that jaggies are reduced to the minimum.

❏   **Hypermedia:** A well defined structural arrangement of information in the forms of audio, video, text, animation and graphics- pertaining to a particular topic, with relevant linkages in between them.

❏   **Hyperlinks:** The linkages that exists between different forms of information in a hypermedia system.

❏   **Hypertexts:** Text based information, interlinked by means of relevant hyperlinks between various sub topics.