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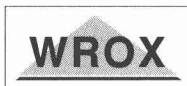
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Beginning Delphi 2.0

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Peter Wright

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Index

Simon Gilks

Beta Tester

Melanie Orgee

Cover Design

Third Wave

For more information on Third Wave, contact Ross Alderson on 44-121 236 6616
Cover photograph: Greg Powell

Dedication

A long time ago in a galaxy far, far away...

When this book was originally spec'd, Delphi 1 had just hit the shelves, Visual Basic still reigned supreme, various royals remained married and Delphi 2.0 was but a twinkle in Borland's eye. However, as time went by, it soon became evident that a 32-bit version of what was rapidly becoming the leading rapid application development tool would soon hit the market.

The result was a book spec turned on its head, a flurry of new research, numerous late nights, far too many cans of Doctor Pepper to be healthy for a single person and a near series of mass nervous breakdowns as deadline after deadline were slipped in a frantic effort to bring you the best of the best, the creme de la creme of Delphi books.

I think we succeeded.

Along the way, though, numerous people helped, advised, supported and generally supplied a steady stream of encouragement. This book, like any other, was definitely NOT written by one person locked in a closet for a few months, so time for the others to stand up and grab their 15 minutes.

First, the Wrox team. If you can picture in your mind a group of the most talented, dedicated, driven and patient people in the industry then you can picture the Wrox editorial team. Gordy and Tim, despite having to cope with a somewhat temperamental author, displayed dedication above and beyond the call of duty. It is their insight and talent which turned my incessant ramblings into something readable. Greg and his team also deserve heaps of credit for their hard work in laying it all out. Above all the others though, my thanks to Dave, the guy who had the vision to commission the book and the pen which authorized the checks.

At Psynet too, a cast of heroes sits in the background. Richard Bass contributed oodles of advice and also the first drafts of the final application, as well as numerous opportunities to be my moving target in the odd game of Doom. My thanks also to Kees for pushing this work ahead and for encouraging me all the way.

On the Internet, the guys who spend their lives floating around in **comp.lang.pascal.delphi.misc**, and **comp.lang.pascal.delphi.database** helped me get over many technical hurdles. The breadth of knowledge that they hold between them is really quite staggering and always incredibly valuable.

Away from the lights and the action, though, my thanks to Sharon for copious amounts of coffee, Simon for showing me that there really is life away from a keyboard, to Dagwin for just being Dagwin (see, I really, really was working - I wasn't just being bad tempered <G>).

Finally, my deepest gratitude and love for Gail. More than anyone else your drive, energy and faith in what I could accomplish put this book on the shelves.

Special Dedication

This book is especially dedicated, though, to two little people, with giant personalities. Through the tempers, the laughter, the fun and the games, my children, Chris and Eloise, remain my constant source of inspiration and energy. I love you both guys!

About the Author

Peter Wright is the managing director of Psynet Ltd. and Psynet Interactive, two software houses specializing in the development of Windows multimedia, relational database and Internet applications. He has just finished work on STALKER, the world's first group-enabled, Windows 95 off-line web browser, a product designed to complement his previous online Internet client, HAMSTER.

Peter has been developing Windows applications for five years, prior to which he wasted a great deal of time on various home computer formats, as well as one or two deathly dull operating systems derived from Unix.

When he isn't developing earth shattering Windows 95 applications, he can be found frequenting Efnet IRC on #TheCafe where he is known as the AlphaFrog, generally running up huge phone bills surfing the Internet, or out re-enacting Easy Rider on his motorcycle.

Psynet can be e-mailed via the Internet at admin@gendev.demon.co.uk, while Peter himself can be found at peter@gendev.demon.co.uk.

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Beginning **Delphi** **2.0**

Introduction

Welcome

First of all, thanks for buying this book. We hope that you'll find it useful, helping you to understand the subject of Delphi programming with the least amount of heartache and a little bit of fun along the way.

This introduction covers a few of the most important features of the whole package - how you can use the book, what other material is supplied extra to the pages you are now looking at and how you can get the most out of Borland's new 32-bit compiler-driven rapid application development tool, Delphi 2.0.

Who is the Book for?

If you are new to programming in general, new to Windows programming in particular, an old Pascal programmer or just someone who wants to get more out of the glorified calculator that sits on the desk, this book is for you. It assumes no prior knowledge of computer programming, but neither does it drag you through endless amounts of theory. This is most definitely a hands-on book.

By the end of the first chapter you will have created your first Delphi/Windows application and by the end of the third, that number will be into double figures. At every stage of the learning process, we try to guide you through the mire of computer programming, while introducing new techniques, fun diversions and interesting but not completely useless anecdotes.

If you are looking for an easy to follow, hands-on tutorial backed up by a source code disk packed with examples and a web site overflowing with even more information, you're looking at the right book. Otherwise, you'd better try the next one on the shelf!

However, before you make any rash decisions, you'd better check out what we think you need to get the most out of this book.

What Do You Need to Use this Book?

To make best use of this book, we recommend that you have several items around your person while you are reading it. You shouldn't consider these necessary to your understanding - you might be able to learn the language just by reading the text through once - but we would strongly advise you to get some, if not all, of the following.

A Computer

First of all, a computer. This book has been designed as a hands-on tutorial. You'll find yourself asking questions that can only be answered by typing in a few lines of code, compiling the small Delphi application and seeing what the computer comes up with.

According to the box, you'll need a computer with at least the following spec:

- ▶ Intel 486/25-based PC or higher
- ▶ Microsoft Windows 95 or Windows NT 3.51
- ▶ 8MB of RAM (12MB recommended)
- ▶ 50MB of hard disk space
- ▶ CD-ROM drive
- ▶ Mouse or other Windows pointing device

Of course, this is only the minimum requirement for the computer. You'll find that you can get your applications to compile a lot faster on a more high-powered machine, a task that can become very tedious on this most basic spec.

Of course, that doesn't mean that you can't read the book away from your computer - we find that you sometimes need a break away from the beast, just to get your thoughts in order - but we're sure that as you get drawn more and more into the world of Delphi programming, a computer will become to you like Shakespeare's quills were to him.

A Copy of the Software

The second most important thing to have close at hand is a copy of Delphi, hopefully already installed on your machine. If you haven't got a copy of Delphi when you buy this book, you might be a little confused when you go to get one, as Borland have released three flavors.

Delphi Desktop

The first, **Delphi Desktop**, is aimed at the basic developer who isn't particularly interested in database work, isn't too worried about OCX controls and is really focusing on quick and dirty application development - the prototyper. This flavor is essentially a stripped down version of the product aimed at the student market, so the trade-off between price and features has been made in favor of price. Don't get us wrong, this product is exactly the same as the other flavors, it's just a little restrictive for our liking, but it can still see you through 90% of the chapters in this book.

Delphi Developer

The second flavor, called **Delphi Developer**, is, as the name suggests, the option of choice for the serious Delphi developer. This version of the software comes with a lot more features aimed at easing the development of professional-looking application. Some of these features include the full source code for Delphi class library (the VCL), some powerful OCX controls and improved database access through a wider range of database drivers. This flavor is a little more expensive than Desktop, but it will grow with you throughout your Delphi programming career. It will get you through all of this book and, unless you are a real client/server database fanatic, it includes everything you'll ever need.

Delphi Client/Server

The third and final flavor is called **Delphi Client/Server**. This is the most expensive version of the software by quite some way, but it does come with a variety of extra features that you might find useful if you are in the major league database world. Some of these features include tools for monitoring database transactions, upsizing and downsizing your data and even your own high-powered server-based industry-leading database server. If you aren't in this league, save your money and head for Developer, or if you're on a budget, go for Desktop.

A Familiarity with the Operating System

One thing that we will rely on throughout this book is your familiarity with the Windows operating system. One of the prerequisites for using Delphi 2.0 is to have either Windows 95 or Windows NT installed on your computer, so we'll assume that you can use this tool. We will use a number of phrases such as *double-click*, *shift-click* and *run the executable* and we'll presume you know what they mean.

If you are a little unsure on any of these terms, we suggest that you put this book down and take a look at something to help you use your particular operating system. We have done our best to introduce Delphi terminology into examples with copious amounts of description and guidance, so if you come across terms that aren't explained, they are probably operating system commands. When this happens, get help from another book, the operating system online help or, if you are like people here, your friendly operating system guru who sits at the next desk.

An Internet Connection

The final item that we would suggest you get, although you could regard it as an optional extra, is a connection to the Internet. If you do get access, you'll find that Delphi has one of the most active and helpful support networks in computing as a whole, with everyone striving to help each other out, throw new useful tools into the freeware arena, or offer free advice and even a potential working solution to your problem, just by sending one e-mail message or strafing one forum or newsgroup.

The World Wide Web has also exploded in terms of popularity over the last few years and has become an invaluable resource to those serious Delphi developers who need to stay abreast of all the latest twists and turns in the industry. Thanks to sites such as www.yahoo.com, which offer powerful search engines, you can quickly zero in on interesting Delphi sites that might have a lot to offer a confused Delphi developer, or a programmer with a problem.

One of the WWW sites that we would advise you to check out is www.wrox.com - our site. It comes replete with extra source code, sample chapters, information on industry movements and much, much more. Well worth a visit!

Installing the Disk

This book comes complete with a disk containing all the source code discussed in the chapters, as well as a few extras that we found lying around. To install the disk onto your computer, simply run the file called **install.exe**, either by double-clicking on the file in Explorer or by typing **a:\install** at a DOS prompt.

The file will then organize the extraction of the source code onto your hard drive, installing the source code chapter-by-chapter under the **begdelf** directory.

If you have any problems with the disk or the installation program, please don't hesitate to contact us. We'll provide you with a speedy solution to your problem, whatever that may be.

Using the Disk

The source code provided on the disk is broken down into chapter directories, which are in turn broken down into example directories. To locate the source code for a particular example, say **stage4.dpr** in Chapter 6, you should first navigate to the **chap6** subdirectory, then look for a directory called **stage4**. There you'll find all the source code for the example, including the target file, **stage4.dpr**.

If at any point you get lost, take a look at the **readme.txt** file that should be in the root of the chapter directory. This file documents what each directory contains, what the files held within them are used for and, hopefully, should show you the directory you are looking for.

The database chapters are a little more complicated. The source code that they use is actually split over two directories: one for the Delphi source code and one for the database itself. We'll explain why in the chapters themselves, and tell you how you should handle this setup.

Conventions Used in this Book

We have tried to use the styles and font sizes in this book to make the text as easy as possible to understand. For example, you'll notice that all classes in the text are referred to by their full title, i.e. `TForm` and they always appear as shown here. Hopefully, this should allow you to easily pick out these references and quickly identify exactly what is happening to what.

As well as the appropriate use of headings and (perfect, we hope!) grammar, punctuation and spelling, we have also used a number of other conventions in the book to try and make the text easy to follow.

'For Your Information' note boxes pass on useful, interesting or just fun information that you might find useful to know:

FYI

The styles in this book have been added to make the text easier to read.

We have put all the filenames, directory references and other code snippets into a style so that you can quickly identify them: