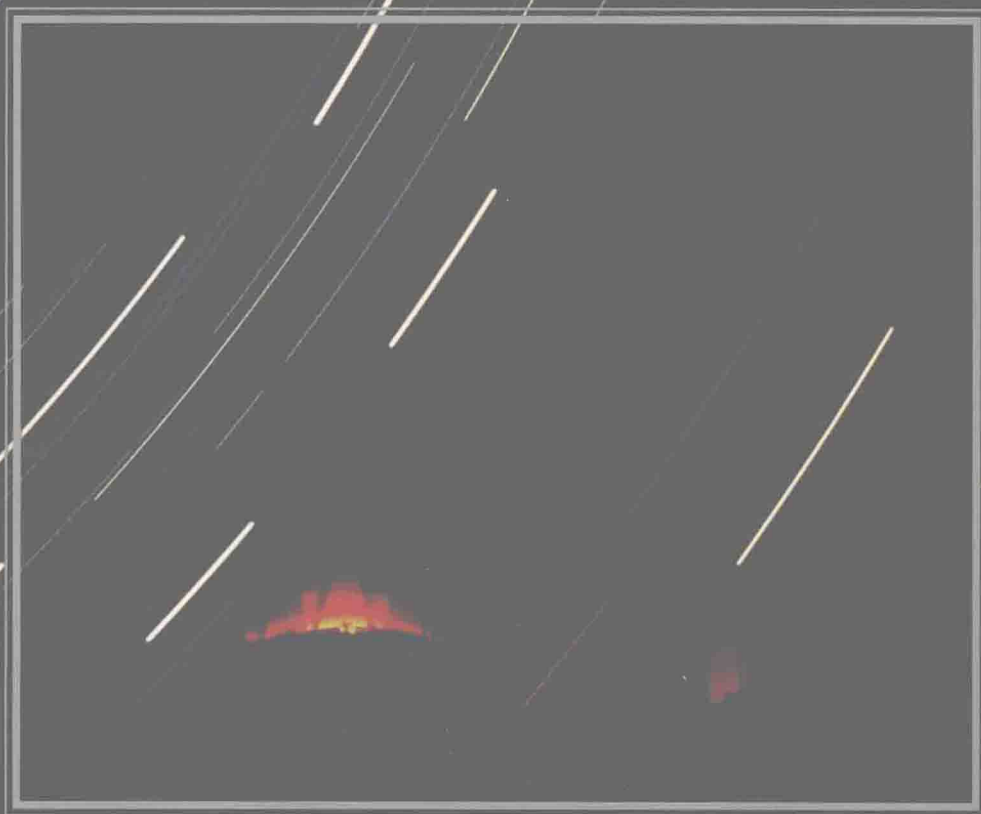


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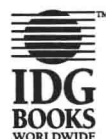
John W. Fronckowiak
and David J. Helda

Visual Basic[®] 6 Database Programming

John W. Fronckowiak and David J. Helda

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About the Authors

John W. Fronckowiak is president and founder of IDC Consulting, Inc., which specializes in Internet/intranet consulting, application development, and network consulting. He has extensive experience with database application development, client/server networking, Internet and intranet presence development, application development, and project management. John's previous writing experience includes *Java Bible*, *COBOL For Dummies – Quick Reference*, and *Building an Intranet For Dummies* from IDG Books Worldwide. John lives in East Amherst, New York, with his wife Diane and their cat Eiffel and parrot Elmo.

David J. Helda is a senior systems analyst at Frontier Science Research and Technology Foundation. He has extensive experience in application development, building distributed client/server database systems for the medical research community, and programming project management.

For Diane - J.F.

Preface

Visual Basic 6 Database Programming is a concise, professional guide for teaching experienced Visual Basic programmers how to design and build database applications using the Microsoft Visual Basic Enterprise Edition. As part of the Professional series from IDG Books Worldwide, this book explores support for database programming in Visual Basic 6, provides solutions for many of the problems that database programmers most frequently encounter, and shows how these techniques combine to create full-blown client/server and Web-based applications.

Visual Basic 6 Database Programming provides a comprehensive review of all the data access models supported by Visual Basic, including Data Access Objects (DAO), Remote Data Objects (RDO), ActiveX Data Objects (ADO), Open Database Connectivity (ODBC), and OLE DB. The purpose of this book is not to teach you the Visual Basic programming language, but rather, to leverage your existing knowledge as you create full-featured applications that provide database access.

Who Should Read This Book

Visual Basic 6 Database Programming is a one-stop reference for Visual Basic application developers who are using Visual Basic 6 to create and deploy client/server database applications. Visual Basic has become the most popular programming language used by programmers to develop client/server database applications. Visual Basic provides diverse data access methodologies: DAO, RDO, ADO, ODBC, and OLE DB; *Visual Basic 6 Database Programming* delves deep into each. Beginning with an introduction to client/server application development, you learn how to choose the data access methodology most appropriate for your applications. Whichever method you choose, you receive an in-depth, detailed review of its features.

What's Inside This Book

The book addresses eight major areas of consideration for Visual Basic 6 programmers.

Part I: Overview

Part I provides an overview of the new features in Visual Basic 6. This part also introduces concepts for the design and development of Visual Basic 6 applications. You learn about the client/server database architecture, and review each of the data access methodologies provided by Visual Basic 6.

Part II: Design of Client/Server Applications

Part II provides an overview of the design and development process for Visual Basic 6 database applications. You also learn how to set up your client and server systems for database access applications. The SQL query language is introduced, and you learn how to design your queries and databases for optimal performance.

Part III: Data Access Objects API

Part III introduces the DAO API. The DAO is a set of DLLs (Dynamic Link Libraries) that form the core of the Jet database engine. The DAO supports two different types of database environments: (1) by using the Microsoft Jet database engine, the DAO is optimized for accessing local ISAM (Index Sequential Access Method) databases such as dBASE, Paradox, FoxPro, and others; (2) by using ODBCDirect the DAO is optimized for ODBC databases with minimal overhead. Each component of the DAO is reviewed in detail, and you learn how to design database applications for optimal performance with the DAO.

Part IV: Remote Data Objects API

Part IV introduces the RDO API. The RDO provides a set of objects that assists in the development of client/server applications by addressing their unique requirements. Unlike the DAO, which provides an interface to the Jet database engine, the RDO provides an object-oriented layer of abstraction that directly interfaces with the ODBC API—as does the ODBCDirect interface. The RDO uses the ODBC API and the database server drivers to create database server connections, create queries and cursors to navigate the resulting data sets, and execute complex procedures relying on the database server for the majority of the processing requirements. Unlike the DAO, which utilizes the Jet database engine for query preprocessing and connection management, the RDO directly interfaces to the database server. This makes the RDO particularly suited to client/server application development. Each component of the RDO is reviewed in detail, and you learn how to design database applications for optimal performance with the RDO.

Part V: ActiveX Data Objects API

Part V introduces the ADO, another API for developing applications that can access OLE DB data providers. The ADO is supported in a number of different programming languages, including Visual C++, VBScript, Visual J++, Visual Basic, and Active Server Pages. While using the OLE DB directly provided a very low-level approach to accessing OLE DB providers, the ADO provides a higher level and easier-to-understand mechanism. If you are familiar with the DAO and RDO APIs for application development, the ADO will seem similar, with good reason: It combines the best aspects of DAO and RDO, without relying as heavily on the object hierarchy as do either DAO and RDO. This means it is much easier to create and manipu-

late ADO objects because they can be created and managed directly. The ADO is specifically designed for client/server application development; because the ADO can be used from VBScript, it is also well suited for server-side Web/database integration. Each component of the ADO is reviewed in detail, and you learn how to design database applications for optimal performance with the ADO.

Part VI: ODBC API and OLE DB API

Part VI introduces the Open Database Connectivity (ODBC) API. ODBC provides a fast and efficient way to access server-side databases. This part reviews the needs and requirements for developing Visual Basic applications using this foundation of Windows-based client/server programming. Part VI also introduces the OLE DB API; in addition to the ways it differs from ODBC, you learn about the basic concepts that underlie this new data access methodology.

Part VII: Controls, Wizards, and DHTML

Part VII introduces data controls and wizards, new to Visual Basic 6, which can help you speed the process of creating your applications. Dynamic HTML (DHTML) support is also new to Visual Basic 6. This part introduces this new language and shows you how to put it to work with your database access applications in Visual Basic 6.

Part VIII: Accessing Other Data Sources

Part VIII reviews the major database sources used with Visual Basic 6 database access applications: Access 97, SQL Server 7, and Oracle8. You also learn how to choose the database access model most appropriate to the database server source you are using.

Appendixes

The appendixes provide a detailed reference to the DAO, RDO, and ADO APIs. Also provided is a detailed reference of Microsoft SQL Server 7 errors.

Visual Basic 6 Database Programming also includes a Quick Reference that highlights the most-used Visual Basic and Windows database features, as well as a glossary of special terms, and a detailed index.

Keep in Touch!

I love to hear from readers! Please let me know what you liked, disliked, or would like to see more of in this book. You can contact me in care of IDG Books Worldwide, 919 E. Hillsdale Blvd, Ste. 400, Foster City, CA 94404. You can also contact me directly through electronic mail at john@idcc.net.

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– J.W.F.

Some might think the best thing about finishing a book is finishing the book. For me it's more of a moment of reflection and appreciation for all the people in my life who have provided unwavering support, understanding, and belief in my abilities. First and foremost, I'd like to thank my loving wife Carolyn for tolerating the long hours and taking care of everything while I was writing. Thanks to Justin, my wonderful two-year-old son, for providing the wisdom of enjoying life. Thanks to Greg Pavlov for pushing me to be my best in my career and writing. And special thanks to John Fronckowiak for being my mentor, confidant, and my best friend who's been there for it all. Finally, Johnny, it's time to ask the following question again: *What's so funny about Peace, Love, and Understanding?*

Thanks to one and all.

– D.J.H.

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