
ERwin

Features Guide

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ERwin Version 3.0

Features Guide

Logic Works, Inc.

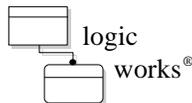
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ERwin

Preface

This guide provides four levels of information:

- ◆ An introduction to ERwin and the ERwin product family, and how you can use ERwin to design data models.
- ◆ How you can install ERwin on your computer, and how you can receive technical and customer support.
- ◆ How you can find help using ERwin Online Help and context-sensitive help.
- ◆ An introduction to the new features in ERwin version 3.0 and ModelMart version 2.1.

If you want to find out more information about the new features that are mentioned in this guide, there are references to ERwin Online Help, which points you to other topics of related information.

About this Guide

This guide is organized as follows:

- ◆ **Chapter 1 - Getting Started with ERwin** Provides basic information about ERwin and how ERwin interacts with other LogicWorks products.
- ◆ **Chapter 2 - Installing ERwin** Provides guidelines for installing, starting, exiting, and uninstalling ERwin. There is also information on how to receive technical and customer support.
- ◆ **Chapter 3 - ERwin Documentation** Provides a description for each ERwin manual, includes basic information about how you can view online documentation files, and contains information about accessing online and context-sensitive help.
- ◆ **Chapter 4 - New ERwin Features** Provides information about the new features in ERwin version 3.0.
- ◆ **Chapter 5 - New ModelMart Features** Provides information about the new features in ModelMart version 2.1.

Related Documentation

The ERwin documentation set includes the following printed manuals and online help:

- ◆ ***ERwin Online Help***
- ◆ ***ERwin Features Guide (this guide)***
- ◆ ***ERwin Reference Guide***
- ◆ ***ERwin Methods Guide***
- ◆ ***ERwin Workgroup Modeling Guide***
- ◆ ***RPTwin User's Guide***
- ◆ ***ERwin/Navigator User's Guide***

ERwin

1

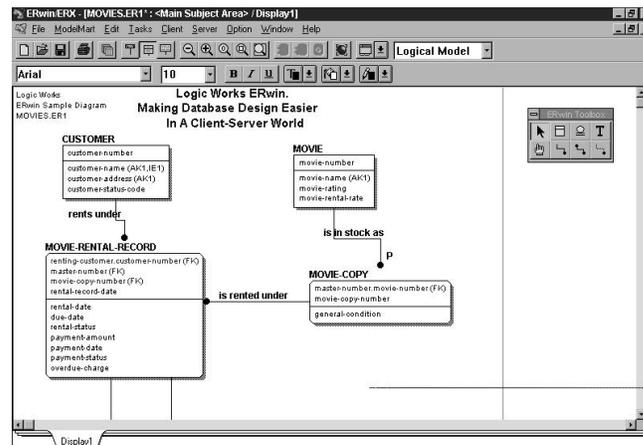
Getting Started with ERwin

Welcome to ERwin Data Modeling

Welcome to ERwin, the database design tool for client/server development. ERwin combines a Windows-based graphical user interface with powerful entity-relationship (ER) diagramming tools, custom editors to define physical database objects, and support for the leading SQL and desktop databases. Using these features, you can easily create and maintain your relational database and the logical and physical models that describe it.

What is ERwin?

ERwin is a database design tool that helps you create a visual blueprint (called a *data model*) for your organization's data management needs. You can use this blueprint for detailed analysis, refine it over time, and distribute it as part of the documentation required throughout the development cycle.



Sample Database Model in IDEF1X Notation

ERwin supports both the standard IDEF1X diagramming method developed by the US Air Force and the popular Information Engineering (IE) notation.

Using ERwin, you can create comprehensive data models that document even the most complex data environments using easy-to-understand graphics and full support for Windows fonts and colors.

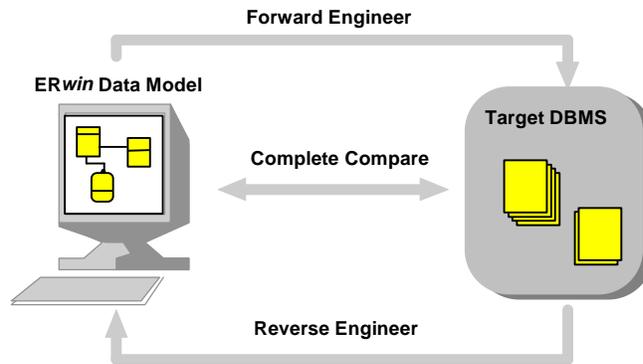
 Search on **IDEF1X, overview** or **IE, overview** in ERwin Online Help for more information.

How Do I Use ERwin?

Although you use ERwin to draw entity-relationship (ER) diagrams, it is much more than a drawing tool. ERwin not only helps you design a logical data model, it also supports the design of a corresponding DBMS model. You can use the completed physical data model to automatically generate physical database structures directly to your system catalog, or indirectly, via a data definition language (DDL) script file.

ERwin automatically builds the schema based on the information in your model and the objects you choose to generate, including all the tables, views, indexes, stored procedures, referential integrity triggers, and other components you need to successfully manage the data used in your organization.

ERwin also supports reverse engineering of existing databases and provides both a logical and physical data model in the resulting diagram. So you can maintain an existing database, or migrate from your current target server to a different one. Maintenance is simplified by ERwin's complete compare feature that lets you synchronize your data model with your physical database.



ERwin Automates the Creation and Maintenance of Your Target DBMS

 Search on **Complete compare, overview** in ERwin Online Help for more information.

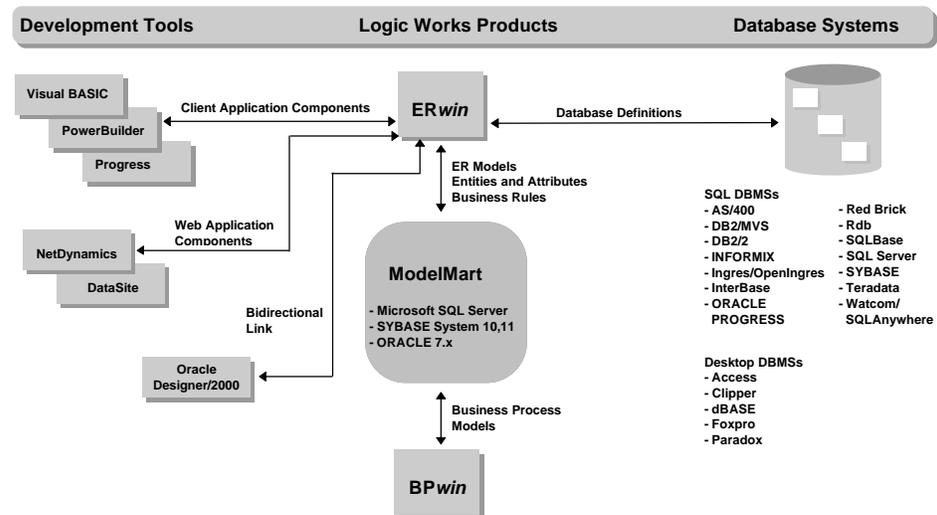
ERwin Product Family

ERwin version 3.0 is available in two versions, customized for the distinct needs of different users :

- ◆ **ERwin/ERX**– Logic Works flagship product, ERwin/ERX is enabled for use with Logic Works ModelMart and includes additional features to support PowerBuilder, Progress, and Visual Basic client development tools. This product unifies the ERwin/ERX and ERwin/Open product lines.
- ◆ **ERwin/Navigator**– A version of ERwin that is customized for application developers, programmers, or other users who need to refer to ERwin models. ERwin/Navigator lets you open, print, and report on ERwin diagrams stored in a ModelMart or as an ER1 file . You can also browse client-side (PowerBuilder or Visual Basic) properties, but you cannot save any diagram changes.

Note: Future versions of ERwin will let you use web application components.

The following figure shows how you can integrate ERwin and other Logic Works products into a complete DBMS development environment.



Logic Works Product Integration

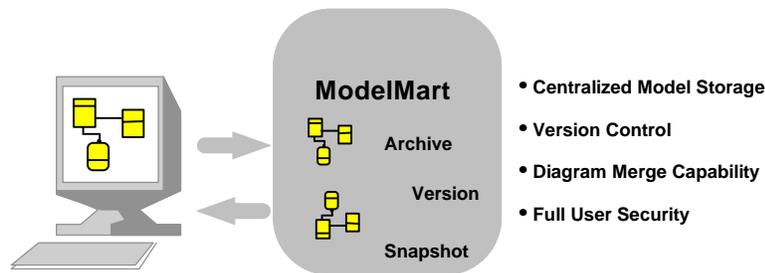
The remainder of this chapter outlines each product component in the diagram, as well as the support provided for each by ERwin.

ERwin ModelMart

Logic Works ModelMart is a sophisticated model management tool that is used to store model object definitions for the ERwin and BPwin modeling tools. ModelMart currently runs on an Oracle, Sybase, or Microsoft SQL Server RDBMS and fully supports all ERwin features including the PowerBuilder and Visual Basic application development features .

Providing multi-user security, versioning, archiving, and sophisticated model synchronization features, ModelMart supports concurrent team modeling for today's large client/server development projects. On-site, or at a remote location, multiple modelers can work on local copies of a data model or submodels simultaneously, then selectively merge their changes to the master version stored in ModelMart. Using multiple permission levels and customizable user profiles, the ModelMart administrator can easily control access and regulate changes to model objects.

If you have ModelMart installed at your site, you can use ERwin/ERX or ERwin/Navigator to easily connect to and take advantage of the ModelMart features. ModelMart support for other Logic Works tools will be announced as new versions of those tools are released.



ModelMart Manages Diagram Sharing and Security in a Multiuser Environment

 Search on **ModelMart**, **overview** in ERwin Online Help for more information.

ERwin Server Support

If you want to migrate an existing database from one target server to another, ERwin can reverse engineer the existing database, create a data model, let you modify or add new elements as necessary, and then create the physical database in any of the following target server environments :

SQL Databases		Desktop Databases
AS/400	Red Brick	Microsoft Access
DB2/MVS	Rdb	Paradox
DB2/2	SQLBase	dBASE III
Informix	SQL Server	dBASE IV
Ingres/OpenIngres	SYBASE	Microsoft FoxPro
InterBase	Teradata	Clipper
Oracle	Watcom/SQL Anywhere	
Progress		

When ERwin creates the physical database schema, it generates a custom DDL script using the correct SQL syntax for your selected target server. You can view the code ERwin generates, and you can modify it before the physical database is created .

If your target server supports advanced features such as stored procedures and referential integrity triggers, ERwin can automatically generate the trigger code needed to implement referential integrity, and provides special template editors to automate the process of manually implementing triggers and stored procedures.

On several servers, you can even create physical storage objects, such as tablespaces and rollback segments, from within ERwin as well as specify the location and storage parameters for the database tables, columns, and indexes ERwin generates on the server. See the ***ERwin Reference Guide*** for more information.

 Search on **Target server**, selecting in ERwin Online Help for more information.

ERwin Client Support

In addition to building databases on SQL and PC back-end database engines, ERwin/ERX is designed to work with the leading front-end client application development tools. ERwin/ERX combines integrated database design features and built-in support for Sybase's PowerBuilder, Microsoft's Visual Basic, and Progress client development tools in a single package .

Using ERwin/ERX, you can manage both client-oriented information like PowerBuilder or Visual Basic extended attributes and server-oriented information like triggers, stored procedures, and physical storage objects.

For Progress databases, ERwin automatically generates accurate .df code to build the physical database and .p file trigger code to enforce referential integrity. In addition, the ERwin macro language can be used to generate PROGRESS 4GL code to build reusable SmartObject components. Using the ERwin macro language and the physical database information stored in the ERwin data model, ERwin can automatically generate PROGRESS SmartQueries that supply data for PROGRESS UIB components like the SmartViewer and SmartBrowser objects.

 Search on **PowerBuilder, overview**, **Visual Basic, overview** and **Progress, overview** in ERwin Online Help for more information.

ERwin Web Development Support

ERwin has been combined with two of today's leading Web development tools in program suites that support the design of next generation applications that deliver data to Web browser clients on both the Web and corporate Intranets.

- ◆ **ERwin/NetDynamics Suite** This suite combines ERwin visual database design with NetDynamics Java-based application development and delivery environment allowing professional developers to rapidly build high-performance Web transaction systems.
- ◆ **ERwin/DataSite Suite** This suite provides a fast, no-programming solution that combines ERwin with NetScheme DataSite, a model-based database publishing tool that instantly converts a database into a dynamic Web data access site.

ERwin Bidirectional Links

ERwin supports bidirectional links to:

- ◆ **Oracle Designer/2000** ERwin version 3.0 supports Oracle Designer/2000 by providing a powerful bidirectional link to a Designer/2000 repository. A Designer/2000 repository is a special dictionary database that is used to store system and data definition information for applications that access Oracle production databases. Based on the Oracle API for updating the repository, ERwin includes custom stored procedures that provide fast import and export capabilities so you can use ERwin's state-of-the-art data modeling tools to design applications stored in the Designer/2000 repository.
- ◆ **Logic Works BPwin** BPwin is a business process modeling tool that supports IDEF0, data flow diagram, and IDEF3 work flow methodologies. You can use ERwin and BPwin together to model both process and data, and you can exchange entity and attribute names between the two products. This feature is particularly useful to users who develop their business process models and data models simultaneously. Any changes that you make to the entity and attribute names in either model can be merged into the other. You can also create a two-way link between an ERwin model and a related BPwin model that executes automatically each time you open one of the linked diagrams to ensure that the models are synchronized.

Other Logic Works Products

Logic Works provides several products that are used to expand or enhance specific capabilities in ERwin. Each of these products is described below:

- ◆ **RPTwin** RPTwin is the easy-to-use, graphical, banded report writer that is a companion to Logic Works ERwin/ERX, the industry-leading data modeling tool, and BPwin, the business process modeling tool. Enhancing the native reporting capabilities in both of these products, RPTwin provides a true graphical design environment with pre-defined and custom reporting options that give you complete control over the appearance and content of your reports.
- ◆ **Universal Directory** Logic Works Universal Directory is an information directory that lets you inventory, publish, and manage your data warehouse metadata. It provides extensive context and content search capabilities, allowing business users, developers, and other users to explore and navigate the vast resources of your data warehouse. Using Logic Works ERwin, you can reverse-engineer your legacy systems into models that describe all of the potential sources of your data warehouse data. A star schema dimensional model can be designed in ERwin for implementation in your data warehouse database engine of choice, such as Red Brick, Teradata, Oracle, INFORMIX, DB2, or Sybase.
- ◆ **TESTBytes** TESTBytes is an exceptionally easy-to-use test data generation tool that connects to your database to create test data for your relational databases. Just point-and-click to specify the type of data that you need. TESTBytes automatically generates up to millions of rows of meaningful test data, eliminating days or weeks of time-consuming effort and reducing costs.

2

Installing ERwin

Before You Begin

This chapter explains how to install ERwin/ERX or ERwin/Navigator in a Microsoft Windows environment, and also describes how you can receive technical and customer support. Each product in the ERwin family is available in 16-bit and 32-bit editions. Before you begin, you need to determine which edition to install.

- ◆ If you are using Windows 3.x or Windows for Workgroups, install the 16-bit edition.
- ◆ If you are using Windows 95 or Windows NT, install the 32-bit edition.

The Setup program for the 16-bit and 32-bit editions are similar.

If you want to use the built-in ModelMart features (for example, opening an ERwin diagram that is stored in the ModelMart), contact your ModelMart administrator. The ModelMart administrator must create a ModelMart on a DBMS (Sybase, Microsoft SQL Server, or Oracle), and a security profile for each user. Your PC must have the appropriate DBMS client connection software before you can access ModelMart diagrams and you must have the appropriate security permissions to access information saved in the ModelMart. See the ***ModelMart Administrator's Guide*** for more information.

ERwin System Requirements

ERwin is designed to run on IBM-compatible Intel 386, 486 and Pentium machines. Before you install ERwin, be sure your computer meets the minimum requirements needed to run ERwin :

System Element	Requirement
Hard disk space	40 megabytes.
RAM	16 megabytes (32 megabytes if you are using large models).
Mouse	Microsoft mouse or other compatible pointing device.
Display	VGA, SVGA, or compatible display.
16-bit edition of ERwin	MS-DOS version 3.1 or later and Microsoft Windows version 3.x, or Microsoft Windows for Workgroups. If you want to use ModelMart, you also need the appropriate 16-bit edition of the client connection software that lets you connect to the database server on which ModelMart is stored.
32-bit edition of ERwin	Windows 95 or Windows NT version 3.51 or higher. If you want to use ModelMart, you also need the appropriate 32-bit edition of the client connection software that lets you connect to the database server on which ModelMart is stored.

ERwin Product Components

The following table shows the components that are shipped with each ERwin product.

Product Component	ERwin/ERX	ERwin/Navigator
CD program disk	•	•
ERwin OnlineHelp	•	•
ERwin Frequently Asked Question File	•	•
Software license agreement	•	•
ERwin user registration card	•	•
ERwin Features Guide	•	N/A
ERwin Reference Guide	•	N/A
ERwin Methods Guide	•	N/A
RPTwin User's Guide	•	•
ERwin/Navigator User's Guide	N/A	•
ERwin Workgroup Modeling Guide	•	N/A

If any of the product components are missing when you receive your copy of ERwin, please contact Logic Works Customer Support. See "Customer Support," later in this chapter for more information.

Installing ERwin

The ERwin Setup program (SETUP.EXE) guides you through the installation process and installs the ERwin files on your computer. When the installation is complete you are ready to begin using ERwin.

To install ERwin

1. Insert the ERwin CD in the CD-ROM drive.
2. Start Windows if it is not already running.
3. Open the Run dialog:
 - ◆ In Windows or Windows for Workgroups, open the Windows Program Manager, and choose **Run** from the **File** menu. Then, type the following in the Run dialog text box:
d:\ERX (16)\disk1\setup
where d: identifies the CD-ROM drive
 - ◆ In Windows NT version 3.51, Windows 95, or Windows NT version 4.0, click the **Start** button, then click **Run**. Type the following in the Run dialog text box:
d:\ERX (32)\disk1\setup
where d: identifies the CD-ROM drive
4. Click **OK**. The ERwin installation program starts and guides you through the installation process. Follow the instructions on the screen.

Files Installed by the Setup Program

The Setup program installs the following file types on your computer :

File Type	Description
Program Files	The program executable files (*.EXE) and the associated dynamic link libraries (*.DLL).
Client Application Files	Files that ERwin uses to generate client application components such as Visual Basic forms or PowerBuilder Data Windows.
Sample Files	Examples of files generated using ERwin, including the MOVIES.ER1 file referenced throughout the documentation.
RPTwin Report Definition Files for ERwin and BPwin	RPTwin Report Definition Files (*.LWR) for ERwin and BPwin predefined reports. These files include layout specifications used to create the report (for example, placement of headings, data and other report objects).
Report Browser File	The standard REPORTS.ERP file which contains report definitions and their associated names.
Help Files	The ERwin help file and RPTwin help file (*.HLP), their associated contents files (*.CNT), and their associated dynamic link libraries (*.DLL).
PDF Files	Online versions (*.PDF) of the ERwin manuals that can be read using the Adobe Acrobat Reader which is automatically installed when you install ERwin.
Frequently Asked Questions (FAQ) Document	A Frequently Asked Questions (FAQ) document is installed with ERwin and has it's own icon.
Uninstall Files	The Uninstall program and the DEISL1.ISU file it uses to remove program files from your computer.
Initialization File	When you install ERwin, the ERWIN.INI and the RPTWIN.INI files are created in the Windows root directory.

Note: By default, ERwin files are installed in the default installation directory C:\ER3MM. RPTwin files are installed in the default directory C:\RPTWIN3.

Starting ERwin

The procedure for starting ERwin is slightly different depending on whether you have the 16-bit edition or the 32-bit edition installed on your computer .

Note: *If you have registered ERwin with Windows, or if you have associated the .ER1 file type with the ERwin program in File Manager, you can start ERwin and open a .ER1 file simply by double-clicking on it.*

To start ERwin in Windows 95 or Windows NT 4.0

1. Click the **Start** button .
2. Click **Programs**
3. Click the ERwin program folder.
4. Click the ERwin program icon. The ERwin window opens.

To start ERwin in Windows 3.x or Windows NT 3.5.1

1. Open the Program Manager .
2. Double-click on the ERwin program group.
3. Double-click on the ERwin program icon. The ERwin window opens.

Note: *To run RPTwin as an independent application, double-click on the RPTwin program icon, which is created during installation.*

Exiting ERwin

You can exit ERwin using the Exit option on the File menu. If you have any ER1 or ModelMart diagrams open, ERwin displays the Close Diagram dialog so that you can save your changes before exiting .

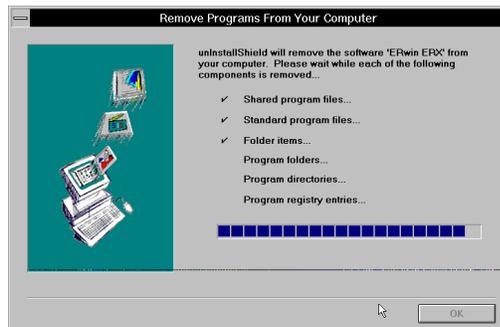
To exit ERwin

1. Choose **Exit** on the **File** menu.
 - ◆ If you do not have any diagrams open, ERwin closes immediately.
 - ◆ If you have one or more .ER1 diagrams open, ERwin displays the Close Diagram dialog for each open diagram so that you can save your changes before exiting ERwin.
 - ◆ If you are connected to ModelMart and you have one or more ModelMart diagrams open, ERwin displays the Close Diagram dialog for each open ModelMart diagram. You can review your changes and save them to the ModelMart before exiting ERwin.

Uninstalling ERwin

When you install ERwin, the Setup program creates an Uninstall ERwin icon in the ERwin program folder or group. When you double-click the Uninstall ERwin icon, the Uninstall program displays a dialog that lets you remove all of the program files from your computer that were installed during the installation process.

Note: If the uninstall program finds any shared files, you are prompted to remove each shared file individually.



Remove Programs from Your Computer Dialog

To uninstall ERwin

1. If you are using Windows 3.x, Windows for Workgroups, or Windows NT version 3.51, open the Program Manager, open the ERwin program group, and double-click the Uninstall ERwin icon.

OR

If you are using Windows 95 or Windows NT version 4.0, click the **Start** button, click **Programs**, click the **ERwin program folder**, then click the **Uninstall ERwin** option.

ERwin displays a dialog asking you to confirm that you want to remove ERwin from your computer.

2. Click **OK**. The Uninstall program removes the files from your computer. When the Uninstall program completes the file removal process, it displays a message indicating that the uninstall is complete.

Note: The Uninstall program does not delete any .ER1 files that you create.

Technical Support

If you encounter any problems while using Logic Works software products, there are several options available to you.

- ◆ All Logic Works products include context-sensitive help, which you can open by pressing F1 for the feature you are currently using. The help text may provide the answer to your problem.
- ◆ Your product includes a Frequently Asked Questions (FAQ) document which is installed with ERwin and has its own icon. FAQ documents are also posted in the Logic Works forum library on CompuServe and on our internet web site.

If you cannot find the solution to your problem using the methods described above, or if you would like personal help, please contact Logic Works Technical Support.

Logic Works offers the following forms of electronic support to all customers:

Contact Method	Address
CompuServe E-mail:	70262,1135
CompuServe Forum:	GO LOGICWORKS
Internet:	http://www.logicworks.com
Internet E-mail:	support@logicworks.com

Customers in the US, Canada, and Europe can get technical support by telephone or fax using the contact numbers in the table below.

Contact Method	US and Canada	Europe
Telephone:	(609) 514-2020	011-44-171-412-2150
Fax:	(609) 514-2868	011-44-171-412-0130

Technical support is available between the hours of 9 A.M. and 7 P.M. Eastern Time, and is free of charge for the first forty-five (45) days after purchase. It is also available after the warranty expires, as long as you have a maintenance plan. Please refer to your license agreement for further information about technical support.

When you contact Logic Works Technical Support, please have the following information ready for the support analyst including the:

- ◆ Serial number of the product you are using.
- ◆ Version number and the build number of the product (available from the About ERwin menu option on the Help menu).
- ◆ Operating system or platform (Windows 95 or Windows NT).
- ◆ Target database (e.g., Oracle, SQLServer, Sybase).
- ◆ Description of the problem, the steps that led to the problem, and any error messages.

Note: *If your location is outside the US, Canada, or Europe, contact the distributor from which you purchased your copy of ERwin to obtain technical support by telephone or fax.*

Customer Support

If you need any information about Logic Works products, software upgrades, or maintenance plans, or if there is any problem with your product when you received it, please contact Logic Works at the number shown below and ask for Customer Support :

 : 1-800-78ERWIN

Maintenance Plan

Your product package should include information about Logic Works comprehensive maintenance plans which provide many benefits, but most important are:

- ◆ While your maintenance plan is in effect, you receive free product upgrades as they become available. Logic Works guarantees a minimum of one maintenance upgrade per year. As a maintenance plan subscriber, you can opt for automatic renewal of the plan or you will be notified 30 to 60 days in advance of the expiration date of your maintenance plan.
- ◆ Your maintenance plan entitles you to additional support on the Logic Works Technical Support line. See “Technical Support,” earlier in this chapter for more information.



3

ERwin Documentation

Introduction

This chapter provides information about the printed and online documentation that you receive when you purchase ERwin version 3.0, including:

- ◆ **Printed manuals** ERwin includes a set of printed manuals that cover topics such as ERwin methods, reference information on ERwin macros, schema generation options, and the multi-user features supported by ModelMart.
- ◆ **Online manuals** The printed manuals are also available as .PDF files that can be viewed using the Adobe Acrobat Reader version 3.0.
- ◆ **ERwin Online help** The ERwin Online Help system provides information about the concepts, windows, fields, procedures, and dialogs in the ERwin products. Context-sensitive help on dialogs or tabs is available by pressing the F1 key.

ERwin Printed Manuals

Each of the printed documents provided with ERwin are described below:

- ◆ **ERwin Reference Guide** Provides information on the ERwin metamodel, datatype mapping, schema generation options, ERwin macros, and important terms.
- ◆ **ERwin Methods Guide** Explains the basic concepts of data modeling and the IDEF1X and IE modeling languages supported by ERwin. If you have no previous experience with data modeling software, or if you are not familiar with the IDEF1X or IE conventions, you should read this manual before using ERwin.
- ◆ **ERwin Workgroup Modeling Guide** Explains how to use ERwin to support team modeling projects. The ERwin/ModelMart extension lets project team members work concurrently on the same data model and provides sophisticated facilities for managing the modeling process in a modern, multi-user database development environment .
- ◆ **RPTwin User's Guide** Describes how to use RPTwin's LogicWorks banded-reporting tool to generate meaningful and attractive reports about ERwin diagrams.

If you are using ERwin/Navigator, you receive the **RPTwin User's Guide** and the following printed manual:

- ◆ **ERwin/Navigator User's Guide** Describes how to use ERwin/Navigator, a read-only version of ERwin.

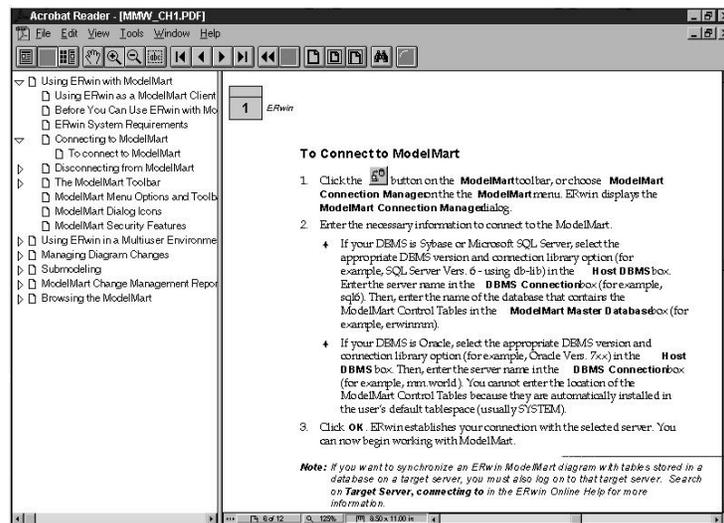
If you are using Logic Works ModelMart, you receive two printed manuals:

- ◆ **ModelMart Administrator's Guide** Describes how to install and maintain the ModelMart on an Oracle, Sybase, or Microsoft SQL server.
- ◆ **ModelMart RDBMS Tuning Guide** Provides guidelines for setting up, operating, and maintaining a ModelMart on an Oracle, Sybase, or Microsoft SQL Server.

Note: *ERwin/ERX, ERwin/Navigator, and the Logic Works ModelMart are shipped with online help.*

ERwin Online Manuals

ERwin/ERX and ERwin/Navigator include all ERwin printed documentation in .PDF format. PDF files can be viewed using the Adobe Acrobat Reader version 3.0, which is automatically installed when you install ERwin. The following sections explain briefly how to view the .PDF files online .



Viewing Online Manuals Using Acrobat Reader

Viewing Online Manuals

When you install ERwin, the ERwin program group or folder contains the Adobe Acrobat Reader icon that you use to start the Acrobat Reader. The following sections explain how to use the basic features of the Acrobat Reader. For more detailed information, choose **Acrobat Reader Help** on that product's **Help** menu.

To start the Acrobat Reader

- ◆ In Windows or Windows NT version 3.51, open the **Program Manager** open the **ERwin** program group, then double-click on the **Acrobat Reader 3.0** icon.
OR
- ◆ In Windows 95 or Windows NT version 4.0, click **Start**, point to **Programs**, point to **ERwin**, then click **Acrobat Reader 3.0**

To open an ERwin manual

1. Choose **Open** on the **Acrobat Reader File** menu .
2. Click on the directory in which you installed the ERwin documentation during installation. A list of the available .PDF files is displayed in the list box on the left of the dialog.
3. Double-click on the PDF file of the ERwin manual you want to open (for example, ERUG.PDF).

To navigate in an online ERwin manual

- ◆ Click  to move the page image on your screen .
- ◆ Click  to increase or  to decrease the magnification level.
- ◆ Click on a right arrow opposite a topic in the outline pane on the left side of the Acrobat Reader window to expand the list of subtopics. Click the down arrow opposite an expanded topic in the outline pane to collapse the list of subtopics.
- ◆ Click on the box marking a hotspot reference to jump to the topic being referenced.

To search an online ERwin manual

1. Choose **Find** on the **Acrobat Reader Tools** menu.
2. Type the word or phrase that you want to find in the **Find What** text box.
3. Optionally, choose one or more of the following options:
 - ◆ **Match Whole Word Only** Select this check box if you want to find only complete words that match the word in the **Find What** text box. Clear this check box to have the Acrobat Reader find every occurrence of the word in the **Find What** text box regardless of whether it is a full word or part of a word.
 - ◆ **Match Case** Select this check box if you want to find only words or phrases that exactly match the case of the search string in the **Find What** text box. Clear this check box to have the Acrobat Reader ignore the case of characters when searching for a word or phrase.
 - ◆ **Find Backwards** Select this check box if you want to search for words or phrases on pages before the currently displayed page. Clear this check box to have the Acrobat Reader search forward from the current page to the end of the document.
4. Click the **Find** button. Acrobat Reader searches the .PDF file for the first occurrence of the word or phrase in the **Find What** text box. After Acrobat Reader finds the first occurrence, you can choose **Find Again** from the **Tools** menu to find the next occurrence or you can type a new search word or phrase.

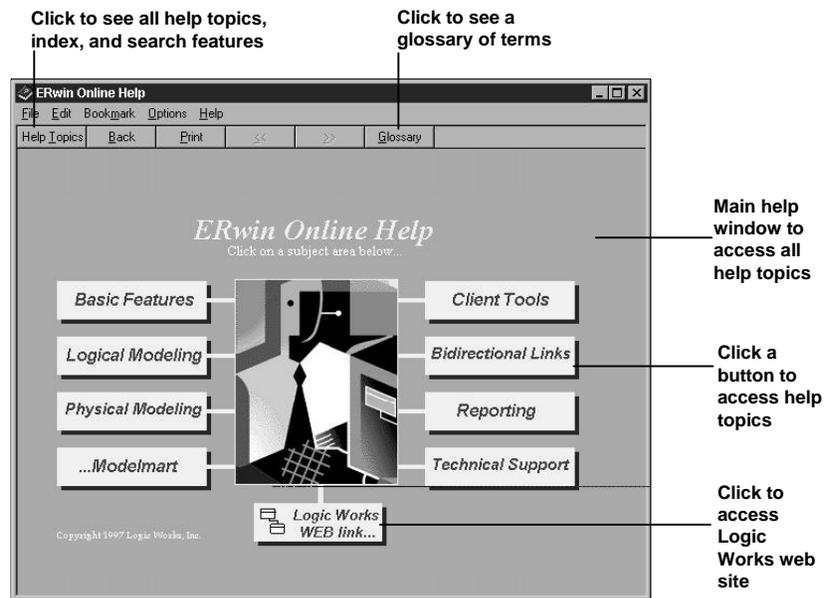
To print one or more pages from an ERwin manual

1. Choose **Print** on the **Acrobat Reader File** menu.
2. Select the pages that you want to print.
3. Click **OK**.

ERwin Online Help

The ERwin Online Help system provides information about the concepts, windows, fields, procedures, and dialogs in the ERwin products. You can use buttons to move among the topics, or the index and search features to locate specific topics.

The ERwin Online Help system is organized by topic. When you access the help system by selecting the **ERwin Online Help** option on the **Help** menu, the main ERwin Online Help window appears.



ERwin Online Help window

You can select a button in the main help window to move to a particular topic, or you can press the Help Topics button to see the contents of the help system, use the index features, or use the search capabilities.

ERwin Online Help includes many new features that enable you to find information quickly, including:

- ◆ An improved user interface to logically organize the help topics.
- ◆ An improved index feature for better search results.
- ◆ Server-specific help topics.
- ◆ Tab-specific help topics.

To access ERwin online help

Choose one of the following options:

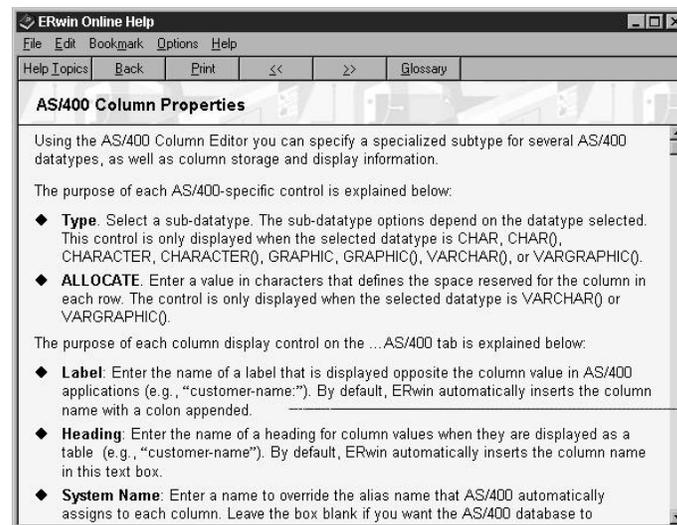
- ◆ Choose **ERwin Online Help** on the **Help** menu.
- ◆ Choose **Topic Index** on the **Help** menu to select from a list of keywords and use the search capabilities.
- ◆ Press **F1**.

Tip: If you need some tips and instructions on how to use help systems, choose **How to Use Help** on the **Help** menu.

Context-Sensitive Help

You can access context-sensitive help on ERwin dialogs by pressing the F1 key. When you press the F1 key, the help system displays a description for all of the fields in the dialog, and where appropriate, server-specific information. If the dialog contains tabs, ERwin Online Help displays a topic relevant to the selected tab.

In addition, if a dialog or tab contains information relative to the selected target server, the ERwin Online Help displays a server-specific help topic. You also get context-sensitive help on each menu option, toolbar button, and other components in the ERwin user interface.



Context-Sensitive Help Window



To access context-sensitive help on a dialog or tab

1. Press **F1** to display a description of each field in the dialog or tab.
2. Choose **Exit** on the **File** menu to return to the dialog.

To access context-sensitive help on diagram window components

1. Press **SHIFT+F1** to display the context-sensitive help cursor, which is a question mark with an arrow.
2. Click the mouse button to choose the menu option, toolbar button, or component on which you want help.
3. Choose **Exit** on the **File** menu to return to the diagram.

4

New ERwin Features

Enhanced Data Modeling Features

ERwin version 3.0 provides many new features that enhance your data model development. These new features are listed below and are explained in more detail in the following sections:

- ◆ **Separation of the Logical Model and Physical Model** Enables a data modeler to focus on the business rules in the model, and the database administrator to focus on the physical implementation information in the model. See “Logical Model and Physical Model,” later in this chapter for more information.
- ◆ **View Support** Enables you to define and maintain database views in your data models. ERwin’s Forward Engineer/Schema Generation, Reverse Engineer, Update Model, Alter Database, and Complete Compare features now include support for views. See “View Support,” later in this chapter for more information.
- ◆ **User Interface Enhancements** Provides a more intuitive interface with reorganized, redesigned, and new ERwin components. See “Enhanced User Interface,” later in this chapter for more information.
- ◆ **Editor Enhancements** Many of the ERwin editors have been enhanced to logically group sets of controls and give the interface a more consistent look and feel. See “Enhanced Editors,” later in this chapter for more information.
- ◆ **Report Browser** A new reporting module that provides an extensive range of features for browsing and reporting on ERwin diagrams and ModelMart information. See “Report Browser,” later in this chapter for more information.
- ◆ **ERwin Templates** Enable you to store diagram settings and ERwin objects in a template. New diagrams based on a template automatically inherit diagram settings and ERwin objects from the template. See “ERwin Templates,” later in this chapter for more information.

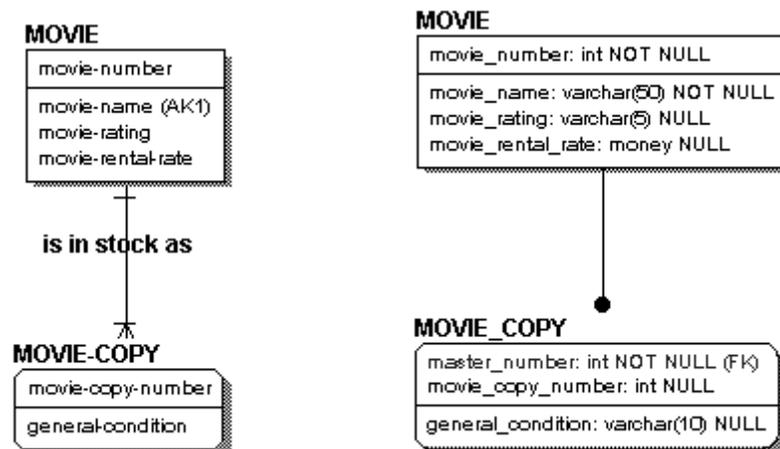
- ◆ **Many-to-Many Transform** Enables you to automatically resolve many-to-many relationships created in the logical model using an association table in the physical model. See “Many-to-Many Transform,” later in this chapter for more information.
- ◆ **Save As ERwin Version 2.6 .ER1 File** Enables you to save a diagram as an ERwin 2.6 .ER1 file. See “Save As ERwin Version 2.6 .ER1 File,” later in this chapter for more information.
- ◆ **Default Delete Option** A default option in the Delete Confirmation dialog lets you choose to remove an ERwin object from a subject area. See “Default Delete Option,” later in this chapter for more information.
- ◆ **Foreign Key Display Option in the Logical Model** New display options let you show the migrated foreign keys and the FK designator for the foreign key attributes in the logical model. See “Foreign Key Display Option in the Logical Model,” later in this chapter for more information.
- ◆ **Logical Properties Migration Option** Enables you to control which logical properties of a primary key attribute migrate to foreign key attributes. See “Logical Properties Migration Option,” later in this chapter for more information.
- ◆ **Default Index Naming** A new option in the Target Server dialog lets you define a default index naming convention for your indexes. See “Default Index Naming Option,” later in this chapter for more information.
- ◆ **Server Support Enhancements** Extended to include new options and features for supported target servers. See “Server Support Enhancements,” later in this chapter for more information.

Logical and Physical Models

In ERwin version 3.0, you can include both a logical and a physical model in a single ERwin diagram. The logical model supports the needs of the data modeler who must represent business information and define business rules. The physical model supports the needs of the database administrator, who focuses on the physical implementation of the model in a database.

By default, the logical model is closely related to the physical model. If you make a change in the logical model, the change is automatically reflected in the physical model and vice-versa.

However, the logical and physical models can look very different, depending on the notation selected (IDEF1X or IE), the display options selected, and the modeling decisions to mark diagram items “logical only” or “physical only”. In the example below, the logical model (on the left) is in IE notation and display preferences are set to hide migrated attributes. In contrast, the corresponding physical model (on the right) is in IDEF1X notation and display preferences are set to show datatype and null option, migrated attributes, and rolenames.



Sample Logical Model (left) and Corresponding Physical Model (right)

Although previous versions of ERwin supported logical and physical constructs, this version lets you create a logical model that is different from, but related to a physical model. For example, you can flag certain objects in the logical model as “logical only” so that they do not appear in a corresponding physical model, and vice-versa.



Other items are available for one modeling environment but not the other. For example, you can create many-to-many relationships and subtype relationships in the logical model only (these constructs must be resolved in the physical model). Similarly, you can include views and view relationships in the physical model only.

ERwin's support for the separation of the logical model from the physical model also includes features and options in the user interface and ERwin editors, including:

- ◆ Separate editors for the logical and physical model.
- ◆ Optionally, using separate modeling notation for the logical and physical model.
- ◆ Different display levels and options for the logical and physical model.
- ◆ Different tools in the ERwin toolbox.

Switching Between the Logical and Physical Models

You can easily switch from the logical model to the physical model and back to the logical model simply by selecting the Logical/Physical Model option list on the ERwin toolbar.



Logical Model/Physical Model Option on the ERwin Toolbar

You can also choose the Logical Model or Physical Model option on the Edit menu to change which model is displayed. Both options are available regardless of the diagram, subject area, or stored display that is selected.

 Search on **Switching Between the Logical and Physical Models** ERwin Online Help for more information.

Logical and Physical Model Notation

Just as in earlier versions of ERwin, most of the objects in the logical model correspond to a related object in the physical data model. For example, the logical model contains entities, attributes and key groups, which are represented in the physical model as tables, columns, and indexes. The following table compares the logical and physical objects in an ERwin model.

Logical Model	Physical Model
Entity	Table
Dependent entity	FK is part of child table's PK
Independent entity	Parent table or, if child table, FK is NOT part of child table's PK
Attribute	Column
Logical datatype (text, number, datetime, blob)	Physical datatype (such as char(18), int, or varchar)
Domain (logical)	Domain (physical)
Primary key	Primary key in the diagram and PK Index in the schema
Foreign key	Foreign key in the diagram and FK Index in the schema
Alternate key (AK)	A unique, non-primary index
Inversion entry (IE)	A non-unique index
Key group	Index
Business rule	Trigger or stored procedure
Validation rule	Constraint
Relationship	Relationship implemented using FKs
Identifying	FK is part of child table's PK (above the line)
Non-Identifying	FK is NOT part of child table's PK (below the line)
Subtype	Denormalized tables
Many-to-many	Associative table
Referential Integrity (cascade, restrict, set null, set default)	INSERT, UPDATE, and DELETE Triggers
Cardinality	INSERT, UPDATE, and DELETE Triggers
N/A	View or view relationship
N/A	Pre- and post-script

Note: You can specify whether an object is included in the logical or physical model, or both using the "Logical Only" and "Physical Only" check boxes in the corresponding ERwin editor.

 Search on **Logical model, modeling object** and **Physical model, modeling objects** in ERwin Online Help for more information.

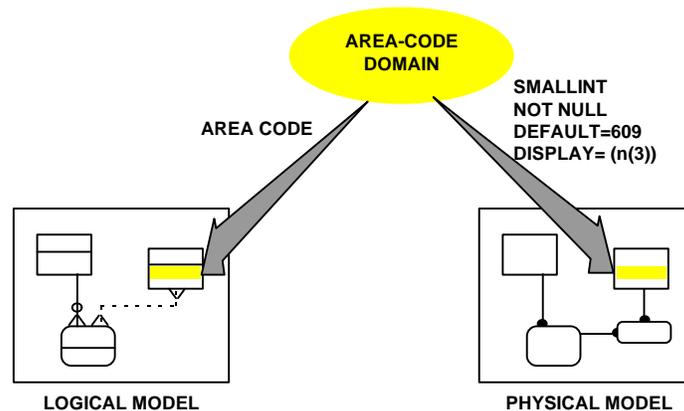
ERwin Domains in the Logical and Physical Models

ERwin domains can be created, assigned, and maintained in both the logical and physical models. This overlap between the physical and logical model for

domains means that both modelers and DBAs can benefit from the time-saving and automatically enforced data integrity benefits of domains.

If you have separate logical and physical models, a new model can be updated before modeling begins to include a full range of domains developed by data administrators or programmers. These domains are available to the logical modeler, who can then assign a domain to an attribute in the logical model by name, without regard to the physical column properties that it defines. Once logical modeling is complete, the model can be quickly developed into a physical model that includes complete definition of a variety of column properties, all based on the domains assigned by the logical modeler.

For example, a DBA could create a US Area Code domain and specify the datatype, edit mask, default value, validation rule, and other properties. A data modeler can then assign the domain in the logical model, as the logical datatype for one or more attributes in that model.



Predefined Domains

ERwin now ships with five predefined domains that are available in every model. The default domain is automatically assigned to all columns or attributes that have not been assigned a true domain. The default domain is different in the logical and physical model.

- ◆ In the logical model, the default domain is called **<unknown>** and specifies that logical datatype for the attribute is either unknown or unassigned.
- ◆ In the physical model, the default domain is called **<default>** and specifies the default datatype and null option for the column, as specified in the Target Server dialog.

The other standard ERwin domains are children of the **<default>** or **<unknown>** domains in the domain hierarchy. Each of these child domains represents a single logical datatype in the logical model. In the physical model, each of the child domains is assigned a single default datatype, as listed below:

- ◆ **Blob.** Assigns the default graphic datatype (for example, GRAPHIC) to the selected column in the physical model.
- ◆ **Number.** Assigns the default number datatype (for example, INTEGER) to the selected column in the physical model.
- ◆ **Datetime.** Assigns the default date/time datatype (for example, DATE) to the selected column in the physical model.
- ◆ **String.** Assigns the default character datatype (for example, VARCHAR) to the selected column in the physical model.

The default datatype assigned by the Text, Number, Datetime, and Byte domains is assigned automatically by ERwin, and varies depending on the target server selected. You can override the default datatype for these domains using the Domain Editor.

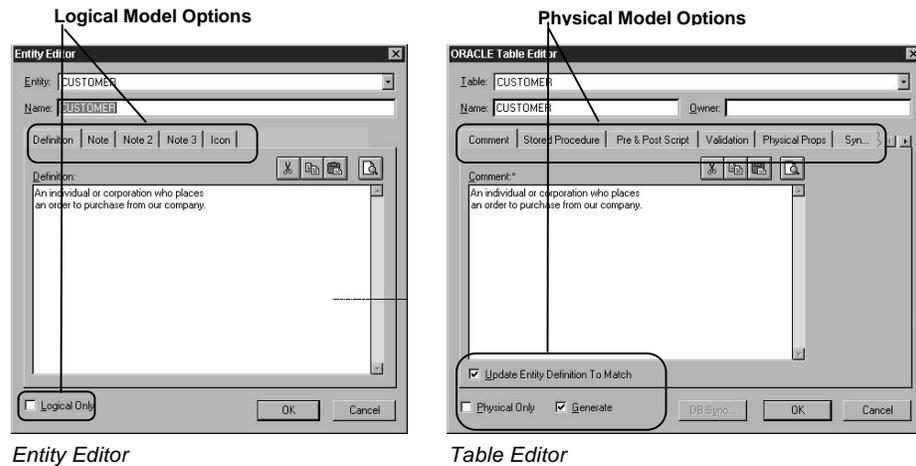
 Search on **Domain (logical)** or **Domain (physical)** in ERwin Online Help for more information.

ERwin Editors

To support logical and physical model separation, many of the ERwin editors have been replaced or extensively redesigned. In some cases, new editors are available to help you define the logical and physical objects. The following table summarizes the corresponding editors that you can use in both the logical and physical model.

Logical Model Editor	Physical Model Editor
Entity Editor	Table Editor
Attribute Editor	Column Editor
Domain Editor (logical)	Domain Editor (physical)
Relationship Editor	Relationship Editor
Key Group Editor	Index Editor
N/A	View Editor
N/A	Trigger Editor
Stored Display Editor	Stored Display Editor
Subject Area Editor	Subject Area Editor

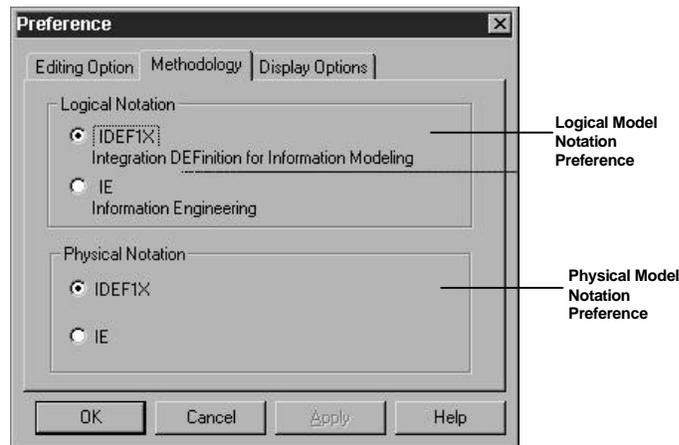
The Entity and Table Editors are shown below as examples of the redesigned editors to support logical and physical modeling.



 Search on **Logical model, editors** and **Physical model, editors** in ERwin Online Help for more information.

Choosing IDEF1X or IE Notation

In the Methodology tab of the Preference dialog, you can specify whether ERwin uses IDEF1X or IE notation in both the logical and physical data model. If you prefer, you can use a different notation to help you distinguish between the logical and physical model.



Logical and Physical Model Notation Preference

 Search on **Methodology preference** in ERwin Online Help for more information.

Logical and Physical Modeling Display Levels

ERwin version 3.0 provides two sets of display levels, one for the logical model and one for the physical model as follows:

Logical Display Levels	Physical Display Levels
<ul style="list-style-type: none"> Stored Display... Display Level ▶ Zoom ▶ Print Scaling ▶ Display Options/ Entities ▶ Display Options/ Relationships ▶ ✓ Display Entity Shadow Diagram Fonts/Color... 	<ul style="list-style-type: none"> Stored Display... Display Level ▶ Zoom ▶ Print Scaling ▶ Display Options/ Tables ▶ Display Options/ Views ▶ Display Options/ Relationships ▶ ✓ Display Entity Shadow Diagram Fonts/Color... Diagram Editors ▶
<ul style="list-style-type: none"> Entity ✓ Attribute Primary Key Definition Icon 	<ul style="list-style-type: none"> Table ✓ Column Primary Key Comment Physical Order

Right-click on a blank area in your diagram to open the Diagram shortcut menu, then choose the appropriate display level. The display levels shown above are also available on the Logical and Physical tabs in the Stored Display Editor. See “Stored Display Editor Enhancement,” later in this chapter for more information.

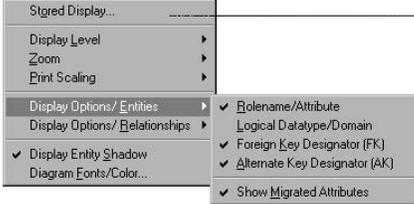
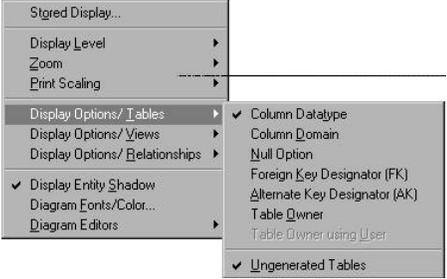
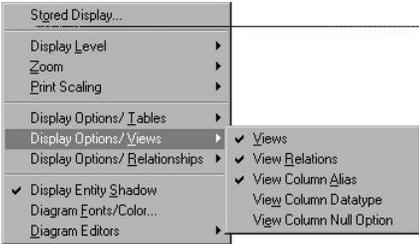
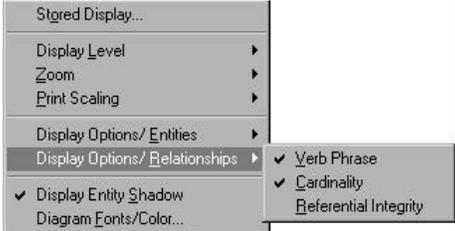
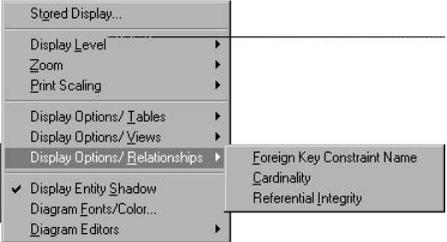
Each option on the Display Level menu is explained below:

Logical Display Level	Physical Display Level	Description
Entity	Table (new)	Displays the entity or table names in the diagram in a box, and hides all other information except relationships and relationship options. This option is identical to the Entity Level option in previous ERwin versions.
Attribute	Column (new)	Displays the entities or tables in the diagram, including their entity or table names and all related attribute or column names. This option is identical to the Attribute Level option in previous ERwin versions.
Primary Key	Primary Key	Displays the entities or tables in the diagram, including only their primary key attributes or columns. This option is identical to the Primary Key option in previous ERwin versions.
Definition	Comment	Displays the entities or tables in the diagram, including only the name and corresponding definition for each entity or table. This option is identical to the Definition Level option in previous ERwin versions.
Icon	N/A	Displays the assigned bitmap icon and entity name for each entity in the logical model. This option is identical to the Icon Level option in previous ERwin versions.
N/A	Physical Order	Displays the columns in each table in the physical order in which they appear in the database. This option is identical to the Physical Order option in previous ERwin versions.

 Search on **Display level, logical** and **Display level, physical** in ERwin Online Help for more information.

Logical and Physical Model Display Options

ERwin version 3.0 provides two sets of corresponding display options, one for the logical model and one for the physical model as follows:

Logical Display Options	Physical Display Options
 <ul style="list-style-type: none"> Stored Display... Display Level Zoom Print Scaling Display Options/ Entities <ul style="list-style-type: none"> ✓ Rolename/Attribute Display Options/ Relationships <ul style="list-style-type: none"> ✓ Logical Datatype/Domain ✓ Foreign Key Designator (FK) ✓ Alternate Key Designator (AK) ✓ Show Migrated Attributes ✓ Display Entity Shadow Diagram Fonts/Color... 	 <ul style="list-style-type: none"> Stored Display... Display Level Zoom Print Scaling Display Options/ Tables <ul style="list-style-type: none"> ✓ Column Datatype Display Options/ Views <ul style="list-style-type: none"> Column Domain Display Options/ Relationships <ul style="list-style-type: none"> Null Option Foreign Key Designator (FK) Alternate Key Designator (AK) Table Owner Table Owner using User ✓ Display Entity Shadow Diagram Fonts/Color... Diagram Editors <ul style="list-style-type: none"> ✓ Ugenerated Tables
N/A	 <ul style="list-style-type: none"> Stored Display... Display Level Zoom Print Scaling Display Options/ Tables Display Options/ Views <ul style="list-style-type: none"> ✓ Views Display Options/ Relationships <ul style="list-style-type: none"> ✓ View Relations ✓ View Column Alias View Column Datatype View Column Null Option ✓ Display Entity Shadow Diagram Fonts/Color... Diagram Editors
 <ul style="list-style-type: none"> Stored Display... Display Level Zoom Print Scaling Display Options/ Entities Display Options/ Relationships <ul style="list-style-type: none"> ✓ Verb Phrase ✓ Cardinality Referential Integrity ✓ Display Entity Shadow Diagram Fonts/Color... 	 <ul style="list-style-type: none"> Stored Display... Display Level Zoom Print Scaling Display Options/ Tables Display Options/ Views Display Options/ Relationships <ul style="list-style-type: none"> Foreign Key Constraint Name Cardinality Referential Integrity ✓ Display Entity Shadow Diagram Fonts/Color... Diagram Editors

Right-click on a blank area in your diagram to open the Diagram shortcut menu, then choose the appropriate display option. The display options shown above are also available on the Logical and Physical tabs in the Stored Display Editor. See “Stored Display Editor Enhancement,” later in this chapter for more information.

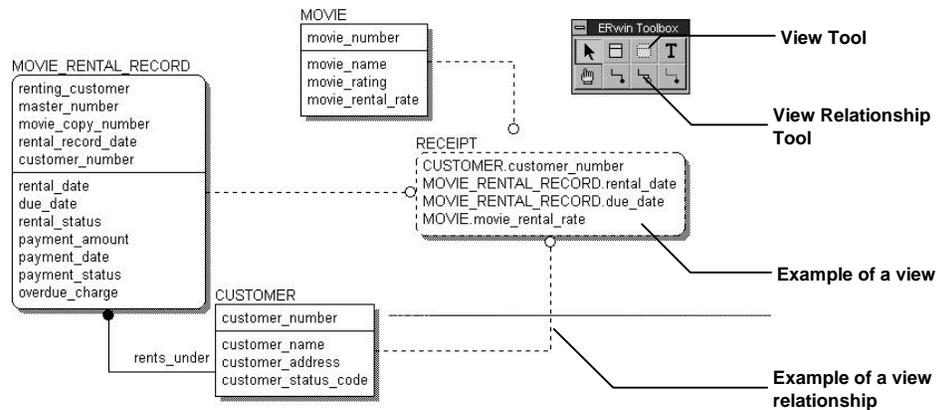
 Search on **Display option, logical** and **Display option, physical** in ERwin Online Help for more information.

View Support

In ERwin version 3.0, you can create and maintain database views. A view is an SQL query that is permanently stored in the database under an assigned name. The result of the view query is a virtual table. Views are an important part of SQL for several reasons:

- ◆ Views let you create your own customized presentation of the data stored in a database.
- ◆ Views let you restrict access to data, allowing different users access to only certain rows or columns of a table.
- ◆ Views simplify database access by letting you create customized structures tailored to the needs of individual users. A user can write a simple query on a view rather than a complex query on several database tables.

You can use ERwin's on-diagram editing features to create a database view in your physical model.



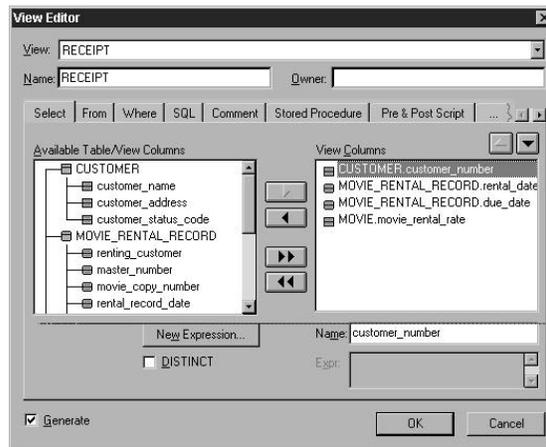
An Example of a View in the Movies Model

Note: ERwin represents a view as a box with a dashed outline and a view relationship as a dashed line with a hollow circle.

Once you create the view, you can use the following view editors to modify the properties of the view:

- ◆ View Editor
- ◆ View Column Editor
- ◆ View Relationship Editor

Using the View Editor, shown below, you can edit the properties of a view. Similarly, you can use the View Column Editor and the View Relationship Editor to edit the properties of view columns and view relationships, respectively.



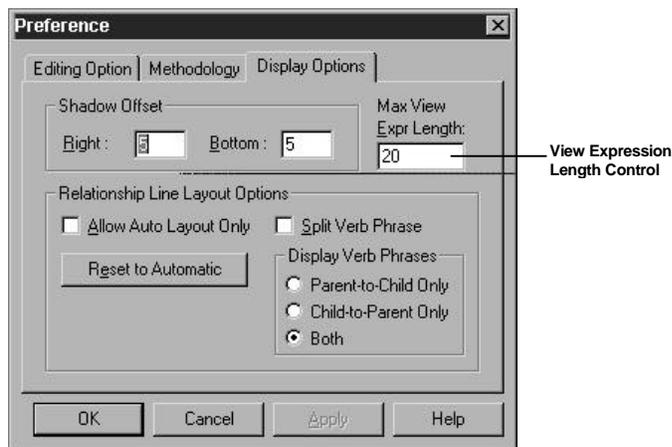
View Editor

 Search on **View, overview** in ERwin Online Help for more information.

View Column Expression Preference

A view column expression is a user-defined expression stored in a view column. In ERwin, a view column expression is denoted by the identifier $f(n)$.

In the Display Options tab of the Preference dialog, you can specify the maximum length, that is, the maximum number of characters displayed for view column expressions.



Preference Dialog Support for Views

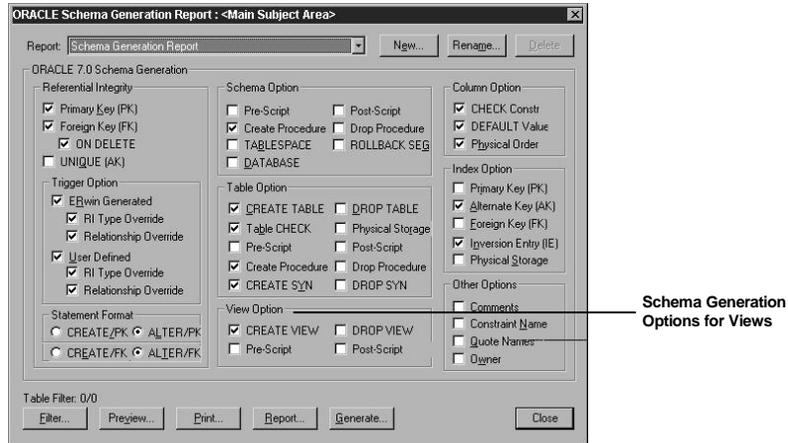
 Search on **Display option preference** and **View, column expression** in ERwin Online Help for more information.

Task Menu Options and View Support

The options on the Tasks menu now include support for views, as follows:

Tasks Menu Option	View Support
Forward Engineer/Schema Generation	ERwin automatically generates the SQL code defining the view and stores it in the database.
Reverse Engineer	ERwin imports each view, parses the view syntax, and where possible creates view relationships to the tables referenced by the view.
Update Model	You can easily keep your data model view specification in sync with your database view specification.
Alter Database	You can easily keep your data model view specification in sync with your database view specification.
Complete Compare	<p>You can synchronize view specifications in your model with view specifications in your database or vice-versa.</p> <p>If a view is an integrated component of the model, that is, it has relationships to its source tables also in the model, you can synchronize the individual components of the view, including the view name, the distinct option, and so on.</p> <p>If a view is maintained as user-defined SQL in ERwin, you can only synchronize the view SQL code in ERwin with the corresponding view SQL code in your database.</p>

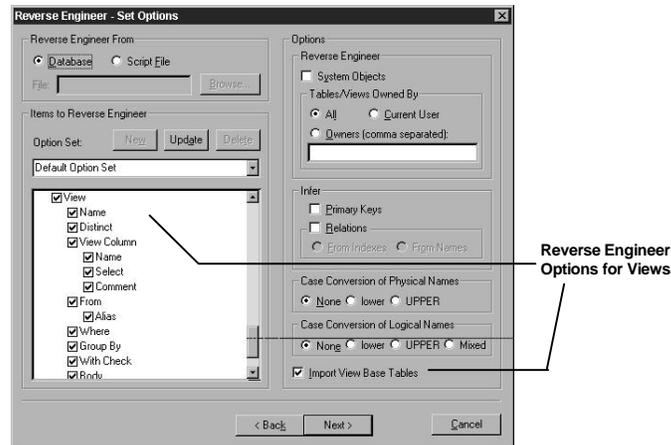
The following illustration shows the new Schema Generation Report options dialog for views when Oracle is the target server.



Schema Generation Support for Views

 Search on **Forward engineering, overview** in ERwin Online Help for more information.

The following illustration shows the new Reverse Engineering options for views. The Set Options dialog contains the same view options for the Update Model, Alter Database, and Complete Compare features.



Reverse Engineer Support for Views

 Search on **Reverse engineering, overview, Synchronization, overview, and Complete Compare, overview** in ERwin Online Help for more information.

Enhanced User Interface

The user interface in ERwin version 3.0 has been revised and improved to speed access to model properties, diagram display settings, and objects in the logical and physical model. Enhancements to the user interface include:

- ◆ Reorganized menus
- ◆ Redesigned toolbar
- ◆ Redesigned toolbox
- ◆ Improved New, Rename, and Delete functionality
- ◆ Improved text handling capabilities
- ◆ Reorganized display levels and options
- ◆ Reorganized shortcut menus
- ◆ Name tips on list boxes

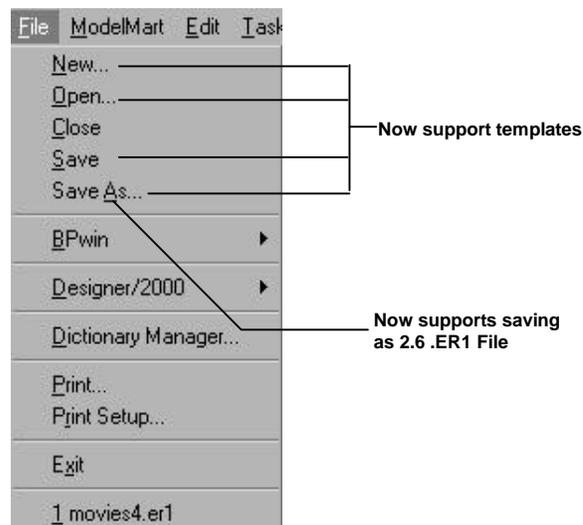
Each of these new features is described in more detail in the following sections.

Reorganized Menus

Many of the menus have been reorganized and modified to support the new ERwin features. For example, ERwin no longer has a Reports menu. You use the Report Browser to define reports and run them against your ERwin model. See “Report Browser,” later in this chapter for more information.

File Menu

The New, Open, Save, and Save As menu options now support the use of templates with new ERwin diagrams. In addition, you can use the Save As menu option to save a diagram as an ERwin version 2.6 .ER1 file. See “ERwin Templates” and “Save as ERwin Version 2.6 .ER1 File,” later in this chapter for more information.

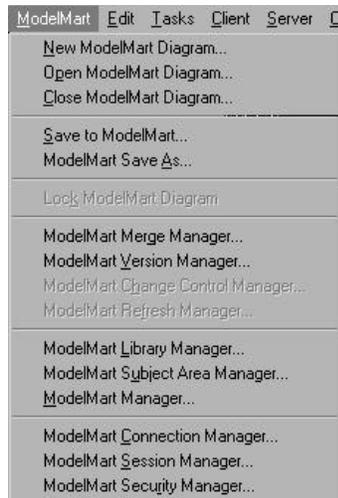


File Menu

 Search on **Menu, file** in ERwin Online Help for more information.

ModelMart Menu

The options on the ModelMart menu are shown below.



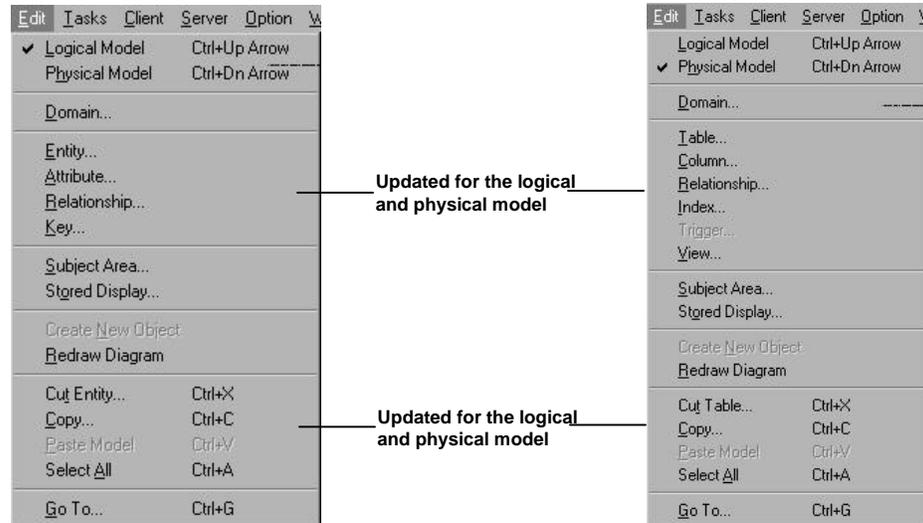
ModelMart Menu

Note: Click the  button in the ERwin Toolbar to access the Report Browser option that was available in previous ERwin versions. The “ModelMart Report Browser” option has been removed from this menu.

 Search on **Menu, ModelMart** in ERwin Online Help for more information.

Edit Menu

The Edit menu combines the options that were previously available on both the Edit and Editor menus.



Edit Menu in the Logical Model

Edit Menu in the Physical Model

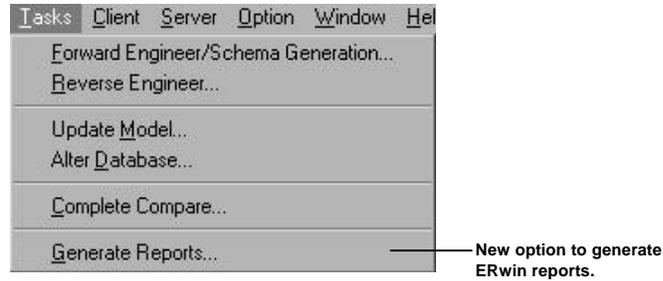
The Logical Model and Physical Model toggle options let you easily switch between the logical and physical model. When you switch to the logical model or the physical model, the Edit menu changes to show the appropriate editors. If you want to open an editor, you simply choose the option on the Edit menu, or you can double-click on an object in a diagram to display the last selected editor.

The Edit menu also includes the Select All option that selects all the components in your diagram.

 Search on **Menu, edit** in ERwin Online Help for more information.

Tasks Menu

The Tasks menu includes the Generate Reports option, which opens the Report Browser so that you can browse and report on ERwin diagrams.

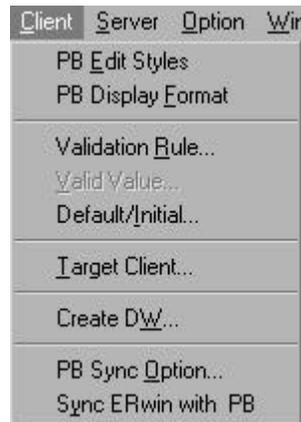


Tasks Menu

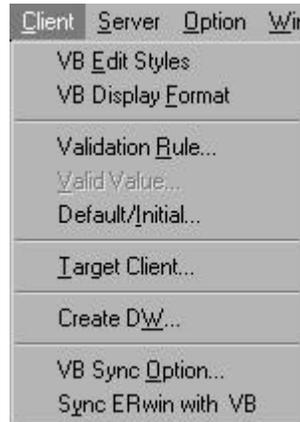
Search on **Menu, tasks** in ERwin Online Help for more information.

Client Menu

The options on the Client menu for PowerBuilder and Visual Basic are shown below. These options are available in the physical model only.



Client Menu for PowerBuilder

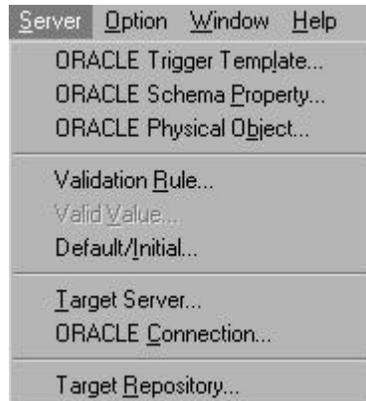


Client Menu for Visual Basic

Search on **Menu, client** in ERwin Online Help for more information.

Server Menu

The options on the Server menu are shown below. The options are only available in the physical model.

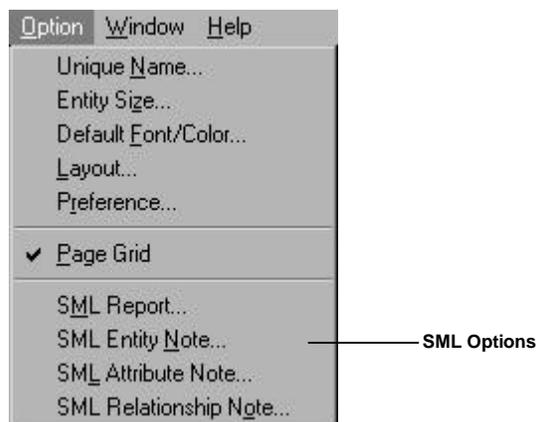


Server Menu

 Search on **Menu, server** in ERwin Online Help for more information.

Option Menu

If you select the Show SML check box in the Preference dialog, the Option menu shows the Structured Modeling Language (SML) menu options, otherwise the SML options are hidden.

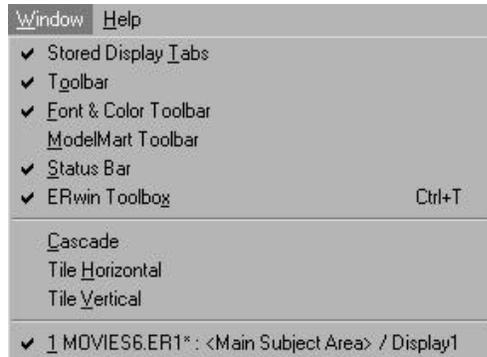


Option Menu

 Search on **Menu, option** in ERwin Online Help for more information.

Window Menu

The options on the Window menu are shown below.

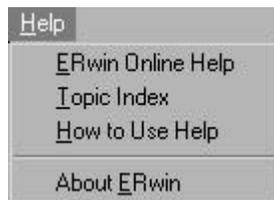


Window Menu

 Search on **Menu, windowin** ERwin Online Help for more information.

Help Menu

The Help Menu lets you access ERwin Online Help, quickly find a particular help topic using the index or search feature, display information about how to use help, and display ERwin version and copyright information.



Help Menu

 Search on **Menu, helpin** ERwin Online Help for more information.

Redesigned ERwin Toolbar

The ERwin toolbar has been modified to support the new ERwin features.

- ◆ The Report Browser button opens the Report Browser.
- ◆ The Select Subject Area button opens the Subject Area Editor, or switches to a subject area in the current diagram.
- ◆ The Logical/Physical Model option list switches between the logical model and the physical model.



Redesigned ERwin Toolbar

Note: The Report Browser button no longer appears on the ModelMart toolbar.

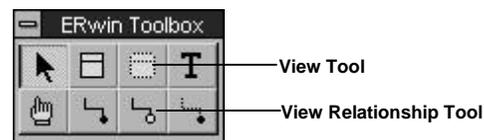
[?](#) Search on **Toolbar**, **ERwin** in ERwin Online Help for more information.

Redesigned Toolbox

The ERwin toolbox has been modified to support the separation of the logical model and the physical model. When you switch to the logical or physical model, ERwin automatically changes the tools in the toolbox. Most tools are the same, but the physical toolbox includes two tools to help you create view tables and view relationships, and no longer supports the creation of subtype and many-to-many relationships.



ERwin Toolbox in the Logical Model



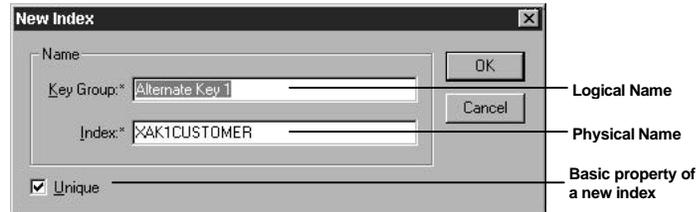
ERwin Toolbox in the Physical Model

[?](#) Search on **Toolbox**, **ERwin** in ERwin Online Help for more information.

New, Rename, and Delete Dialog Buttons

The ERwin editors use common New, Rename, and Delete buttons and the function of these buttons is consistent throughout the user interface. The New and Rename buttons open a dialog that lets you enter or edit the logical name or the physical names of a model object when appropriate. The Delete button deletes the selected model object.

The New dialog also lets you specify some of the basic characteristics of the object you are creating. For example, when you click the New button in the Index editor, the New Index dialog lets you enter the name of the new index, the name of the corresponding key group in the logical model, and whether the new index is a unique or non-unique index.



New Index Dialog

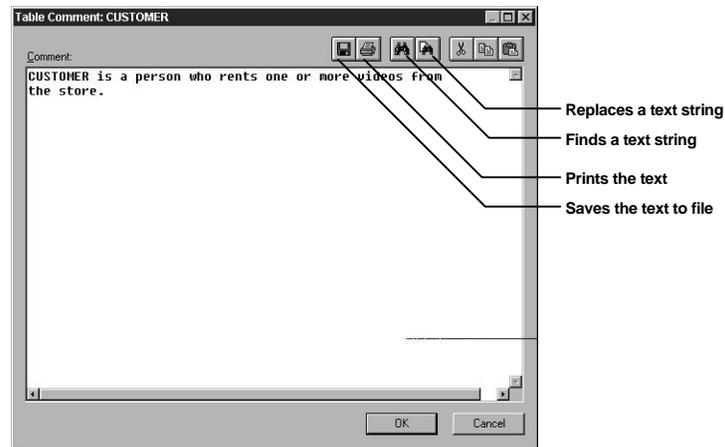
ERwin Text Editors

Many ERwin dialogs include multi-line text boxes that let you enter descriptions, comments, definitions, or sample code. For these controls, ERwin provides Cut, Copy, and Paste buttons for direct text editing, and a button to open the ERwin Text Editor.



Text Box Controls in ERwin

To open the ERwin Text Editor, click the  button.



ERwin Text Editor

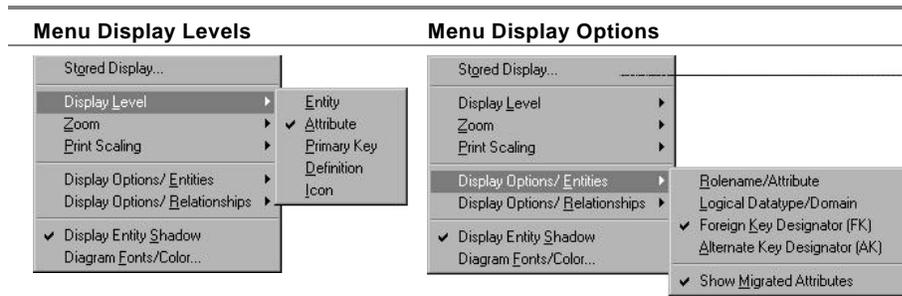
The ERwin Text Editor can be expanded to full screen and provides more comprehensive text handling capabilities in addition to cut, copy, and paste, including:

- ◆ Saving the text to a file.
- ◆ Printing the text.
- ◆ Finding a text string.
- ◆ Replacing a text string.

 Search on **ERwin Text Editor** in ERwin Online Help for more information.

Reorganized Display Level and Display Options

ERwin version 3.0 provides two sets of display levels and display options, one for the logical model and one for the physical model. Right-click on a blank area in your diagram to open the Diagram shortcut menu, then choose the appropriate display level or display option.



You can choose the appropriate display information that you want to see in your diagram, such as:

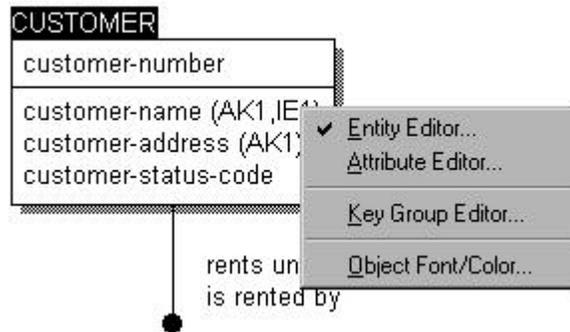
- ◆ Display levels
- ◆ Display options
- ◆ Zoom
- ◆ Print scaling
- ◆ Shadows
- ◆ Diagram font and color

Each of these options is also available on the Logical and Physical tabs in the Stored Display Editor. See “Stored Display Editor Enhancement,” later in this chapter for more information.

 Search on **Display level, logical** and **Display level, physical** in ERwin Online Help for more information.

Reorganized Shortcut Menus

ERwin provides an easier way to access most of the diagram object editors, display options, and display levels using shortcut menus. When you right-click on an object in the diagram window, or on the diagram background, ERwin displays a menu that contains options only for the selected object.



Entity Shortcut Menu

When you click on an object, you can use shortcut menus to access:

- ◆ Editors
- ◆ Diagram fonts and colors
- ◆ Proceed directly to a specific parent and child entity or table

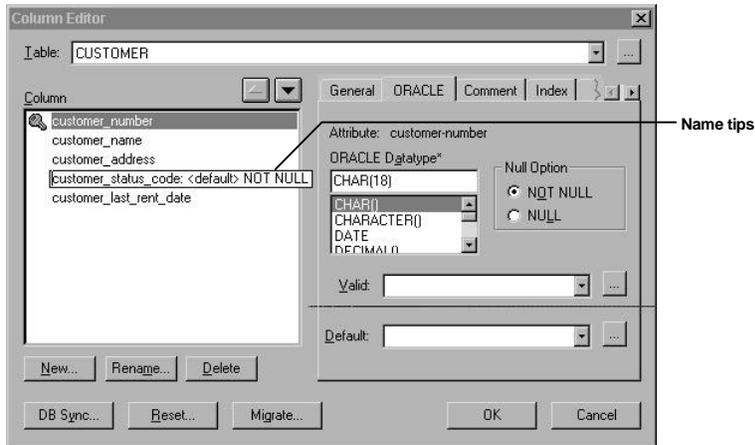
When you click on the diagram background, you can use shortcut menus to access:

- ◆ Display levels
- ◆ Display options
- ◆ Zoom
- ◆ Print scaling
- ◆ Shadows

Tip: Hold down the **SHIFT** key and double-click on a relationship line to display the Parent/Child Edit Selector. You can open the active editor for the parent or child entity or table.

Name Tips

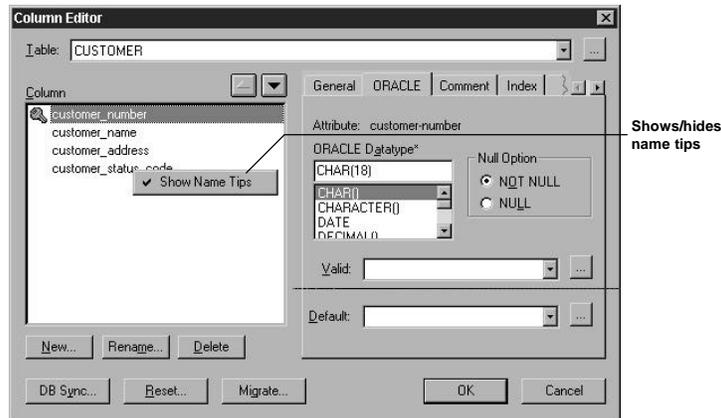
When ERwin displays the name of a diagram object, such as a table or view column name, in an editor, the full name may not be visible in the editor list box. However, you can use name tips to display the complete name in the editor. Simply place your cursor on the text, wait briefly, and the complete name appears.



Column Editor Attribute with Name Tips

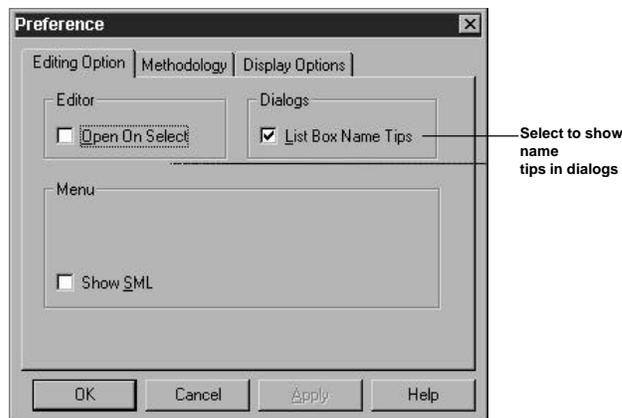
In the Column Editor, ERwin also displays the domain, datatype (if assigned), and null option in the name tip.

You can globally choose to display or hide name tips for all list boxes in ERwin. Right-click on the text in any editor and choose to either display or hide the name tips. This setting applies to all list boxes, regardless of the dialog from which the name tips are enabled or disabled.



Column Editor with Global Name Tips Option

The Preference dialog also includes a check box option to either display or hide name tips. When you select the List Box Name Tips check box, name tips appear in all dialog list boxes. This check box has the same effect as when you right-click on the text in any editor and choose to either display or hide the name tips.



Name Tips Preference

 Search on **Editing option preferences** in ERwin Online Help for more information.

Enhanced Editors

Tab controls and other features have been added to many of the ERwin editors. Tabs are used to logically group sets of controls and give the user interface a more consistent look and feel.

ERwin version 3.0 provides enhanced versions of the following logical modeling editors:

- ◆ Entity Editor
- ◆ Attribute Editor
- ◆ Key Group Editor
- ◆ Relationship Editor
- ◆ Domain Editor

ERwin version 3.0 provides enhanced versions of the following physical modeling editors:

- ◆ Table Editor
- ◆ Column Editor
- ◆ Index Editor
- ◆ Relationship Editor
- ◆ Domain Editor

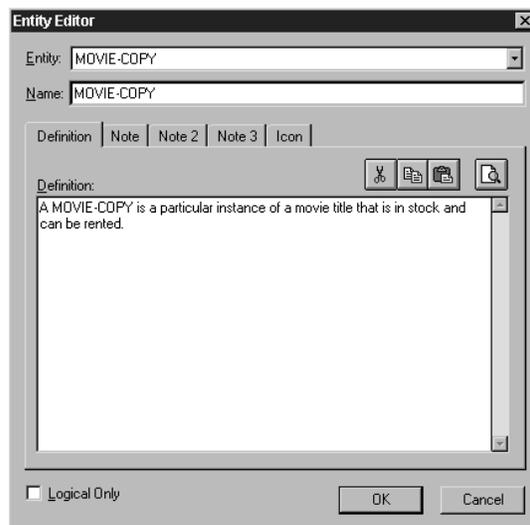
ERwin version 3.0 provides enhanced versions of the following editors that are used in both the logical and physical model:

- ◆ Stored Display Editor
- ◆ Subject Area Editor

Each of these editors is described in more detail in the following sections.

Entity Editor Enhancement

ERwin version 3.0 includes a new Entity Editor that lets you create and maintain entity properties, including name, definition, icon, and notes. The Entity Editor is available from the logical model only.



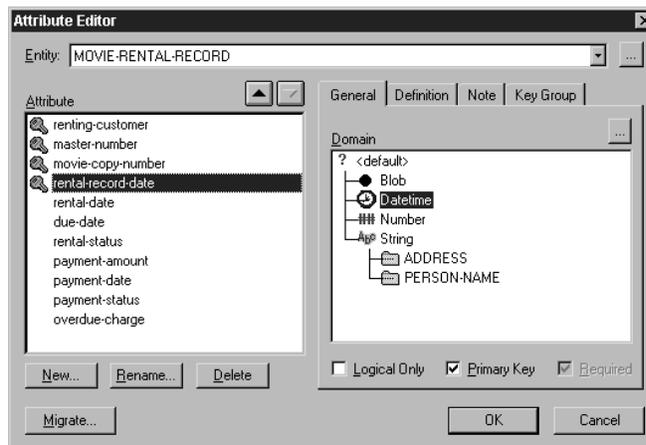
Entity Editor

The Note tabs support backwards compatibility with ERwin 2.6 models, which may have included additional notes and definitions for each entity in the Entity Note/Query/Sample Editor. When you open an ERwin 2.6 model in ERwin 3.0, any entity query information will appear on the Note 2 tab, and any entity sample information on the Note 3 tab.

 Search on **Entity editor, overview** in ERwin Online Help for more information.

Attribute Editor Enhancement

ERwin's new Attribute Editor unifies the location of controls and data for all attributes in a logical model, so that you can maintain information such as key group membership, assigned domain, and attribute name and definition from a single editor.



Attribute Editor

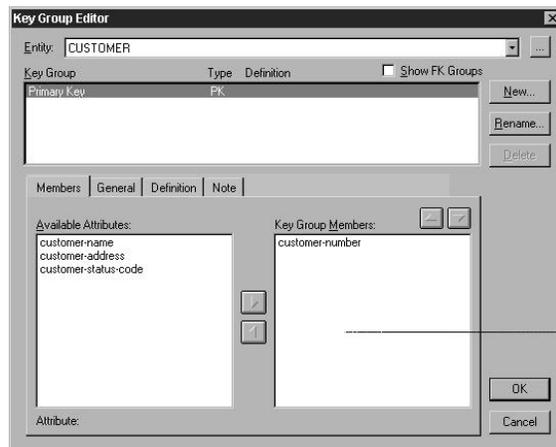
New features supported by the Attribute Editor include:

- ◆ “Logical only” property that prevents an attribute from appearing as a column in the physical model.
- ◆ Definition and note information maintained separately from column data.
- ◆ Control over migration of logical properties through foreign keys.
- ◆ Support for assignment of logical datatypes, using ERwin domains. See “Domain Editor Enhancement in the Logical Model,” later in this chapter for more information.

 Search on **Attribute editor, overview** in ERwin Online Help for more information.

Key Group Editor Enhancement

The Key Group Editor is a new ERwin editor that lets you create key groups and assign attributes to them. Each key group can appear in the physical model as a unique or non-unique index. In addition, the alternate key and inversion entry key groups defined in this editor can be marked “Logical Only” so that they do not appear in the physical model.



Key Group Editor

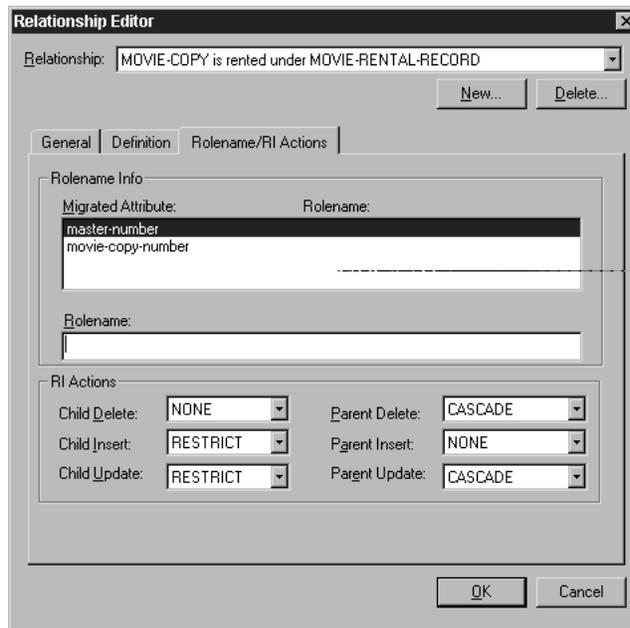
ERwin supports the viewing and/or definition of four different key groups in the Key Group Editor:

- ◆ Primary key
- ◆ Foreign key
- ◆ Alternate key
- ◆ Inversion entry

 Search on **Key Group Editor** in ERwin Online Help for more information.

Relationship Editor Enhancement in the Logical Model

The Relationship Editor lets you manage properties for each relationship in your model, including relationship name, type, cardinality, nulls, and referential integrity options.



Relationship Editor in the Logical Model

Controls that are available in the Relationship Editor in the logical model also include:

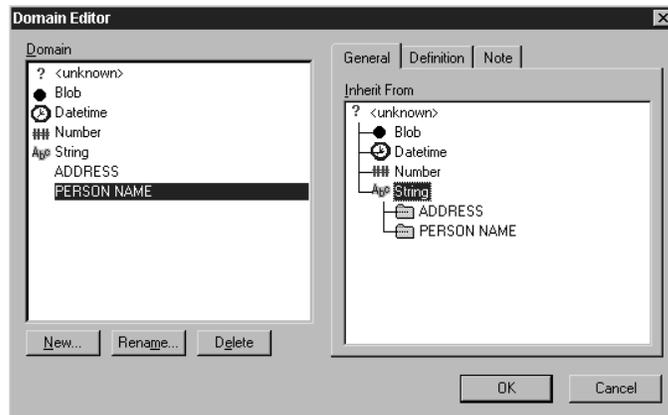
- ◆ Parent-child and child-parent verb phrases.
- ◆ Rolenames.
- ◆ Logical relationship name and definition.

Additional controls are available in the Relationship Editor when you are working in a physical model. See “Relationship Editor Enhancement in the Physical Model,” later in this chapter for more information.

 Search on **Relationship editor, overview** in ERwin Online Help for more information.

Domain Editor Enhancement in the Logical Model

In the logical model, the Domain Editor lets you create new logical datatypes that can be assigned to attributes in the logical model.



Domain Editor in the Logical Model

For example, you might want to specify additional logical datatypes for attributes in addition to the default options of <unknown>, Blob, Datetime, Number, and String. You can use the Domain Editor to create a new logical datatype, select a domain from which you want properties to be inherited by the new domain, and add definition or note information.

 Search on **Domain (logical), overview** in ERwin Online Help for more information.

Table Editor Enhancement

The Table Editor has been enhanced in ERwin version 3.0 to support the separation of the logical and physical data model.

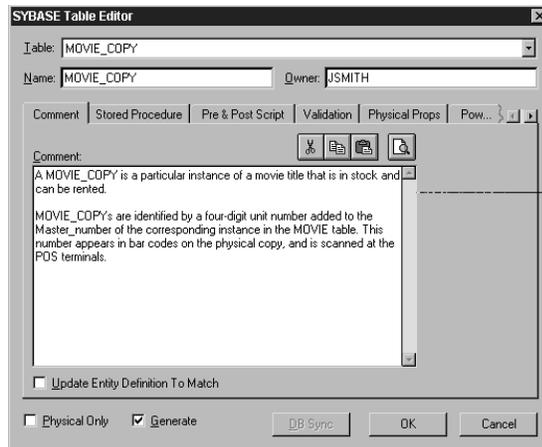


Table Editor

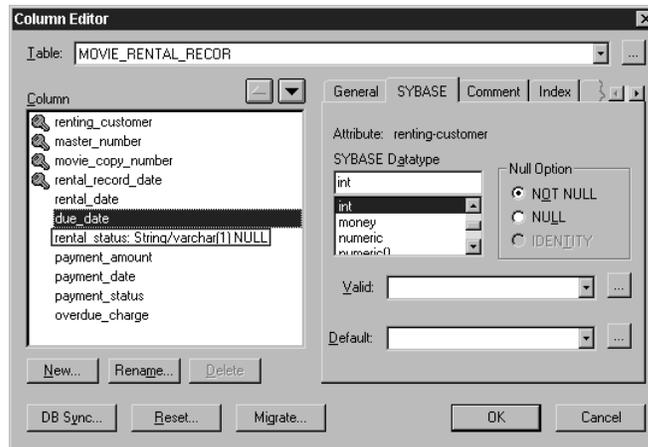
New features supported by the Table Editor include:

- ◆ “Physical only” property that lets you add a table to the physical model without affecting the corresponding logical model.
- ◆ Table comments maintained separately from or in sync with entity definitions.
- ◆ Control over the schema generation of tables for each individual table in the model.

 Search on **Table editor**, **overview** in ERwin Online Help for more information.

Column Editor Enhancement

The Column Editor provides a single location for all controls related to ERwin column properties.



Column Editor

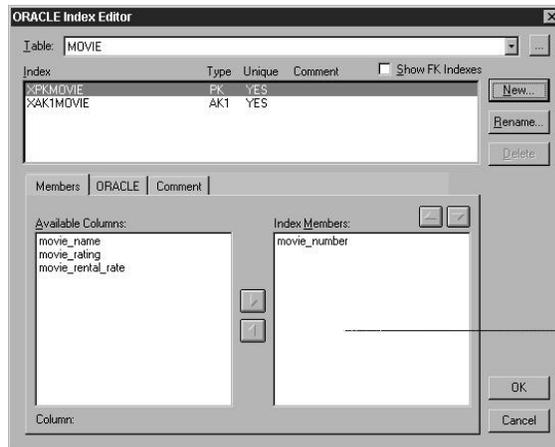
New features supported by the Column Editor include:

- ◆ “Physical only” property that lets you add a column to the physical model without affecting the corresponding logical model.
- ◆ Column comments maintained separately from or in sync with attribute definitions.
- ◆ The ability to use the “name tips” in the Column list box to view domain name, datatype, and null option for each column.

 Search on **Column editor, overview** in ERwin Online Help for more information.

Index Editor Enhancement

The Index Editor lets you create, maintain, and delete indexes for each table in the physical data model.



Index Editor

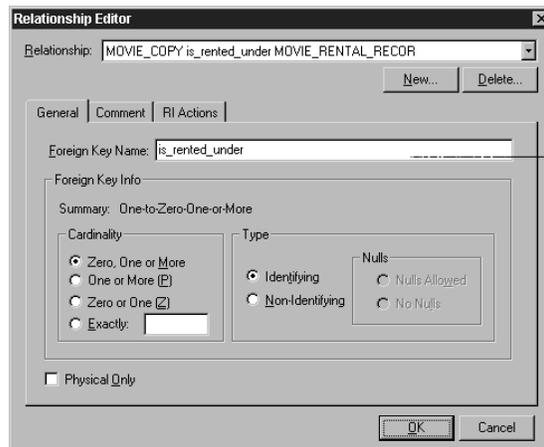
New features supported by the Index Editor include:

- ◆ “Physical Only” property, so indexes do not appear in the logical model as key groups.
- ◆ Support for index comments.
- ◆ Enhanced support for managing index membership.

 Search on **Index editor**, **overview** in ERwin Online Help for more information.

Relationship Editor Enhancement in the Physical Model

Just as in a logical model, the Relationship Editor in the physical model lets you manage properties for each relationship in your model, including relationship name, type, cardinality, nulls, and referential integrity options.



Relationship Editor in the Physical Model

Controls that are available in the Relationship Editor in the physical model also include:

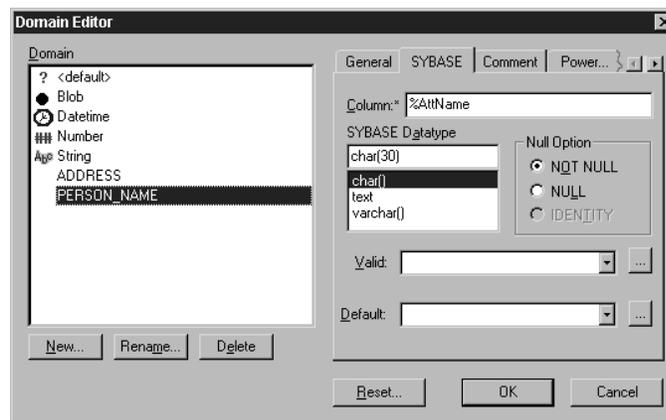
- ◆ Relationship physical name.
- ◆ “Physical Only” property.
- ◆ Relationship comment.

Additional controls are available in the Relationship Editor when you are working in a logical model. See “Relationship Editor Enhancement in the Logical Model,” earlier in this chapter for more information.

 Search on **Relationship editor, overview** in ERwin Online Help for more information.

Domain Editor Enhancement in the Physical Model

In the physical model, the Domain Editor lets you specify physical properties for an ERwin domain, including datatype, null option, validation rule or default value, and client-side properties, such as edit style or display mask.



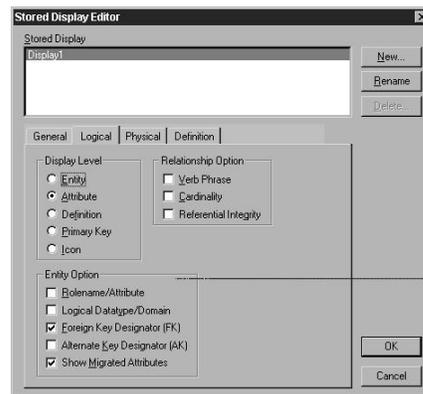
Domain Editor in the Physical Model

You can also choose to make a domain available in the physical model only, or you can allow the domain to appear in the logical model as a logical datatype.

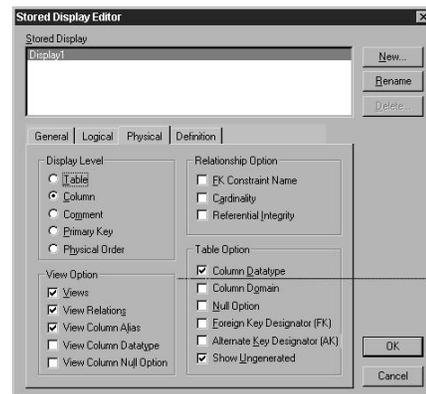
 Search on **Domain (physical)**, **overview** in ERwin Online Help for more information.

Stored Display Editor Enhancement

The Stored Display Editor lets you customize the appearance, the amount, and the type of information that is shown in a stored display. Many display levels and display options for a stored display were available on the Editor menu in previous ERwin versions.



Logical Tab in the Stored Display Editor



Physical Tab in the Stored Display Editor

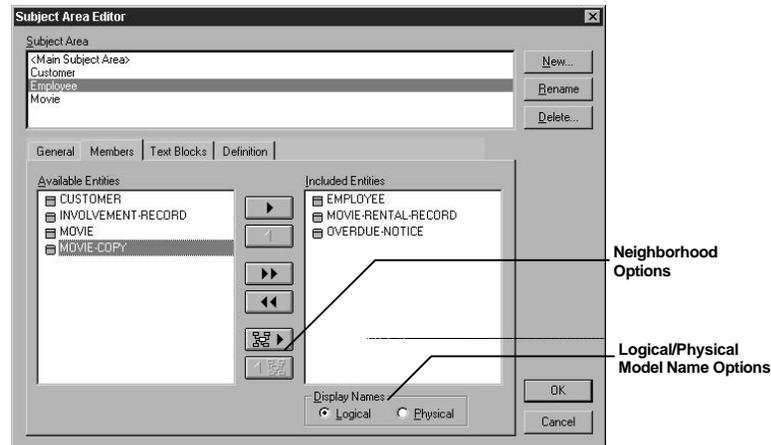
The controls on the Stored Display Editor have been placed on four tabs within the editor window. These tabs include:

- ◆ **General** Includes a text box for the stored display author name, a check box to use the stored display only in the logical model, a check box for showing dangling relationships, and a check box for displaying shadows.
- ◆ **Logical** Includes three sets of options that affect the display of the logical model, including diagram display level and display options for the entities and relationships.
- ◆ **Physical** Includes four sets of options that affect the display of the physical model, including diagram display level and display options for the views, relationships, and tables.
- ◆ **Definition** Includes a large text box for the stored display definition.

 Search on **Stored Display Editor** in ERwin Online Help for more information.

Subject Area Editor Enhancement

The Subject Area Editor has been enhanced to provide better usability and a number of new features that speed the creation of ERwin subject areas.



Subject Area Editor

The controls on the Subject Area Editor have been placed on four tabs within the editor window. These tabs include:

- ◆ **General** Includes a text box for the subject area author name and a check box for filtering dangling relationships.
- ◆ **Members** Lists the entities (or tables) that are included in the subject area on the left, and any remaining entities (or tables) on the right. Both list boxes are larger, so that you can view more of the entities (or tables) in the subject area at a glance. You can also choose whether to display entity or table names in the lists.
- ◆ **Text Blocks** Lists the text boxes that are included in the subject area on the left, and any remaining text boxes on the right.
- ◆ **Definition** Includes a large text box for the subject area definition.

Both the Members and Text Blocks tabs include several controls that let you move individual items into or out of the selected subject area.

The Members tab also includes two additional controls,  and , which move the selected entity or table and ancestor (tables from which the selected table inherits a foreign key) and descendant (tables that inherit a foreign key from the selected table) entities or tables into or out of the selected subject area. When you click one of these buttons, ERwin opens the Spanning Neighborhood dialog so you can choose the number of levels of ancestors and descendants that you want to include in the model.



Spanning Neighborhood dialog

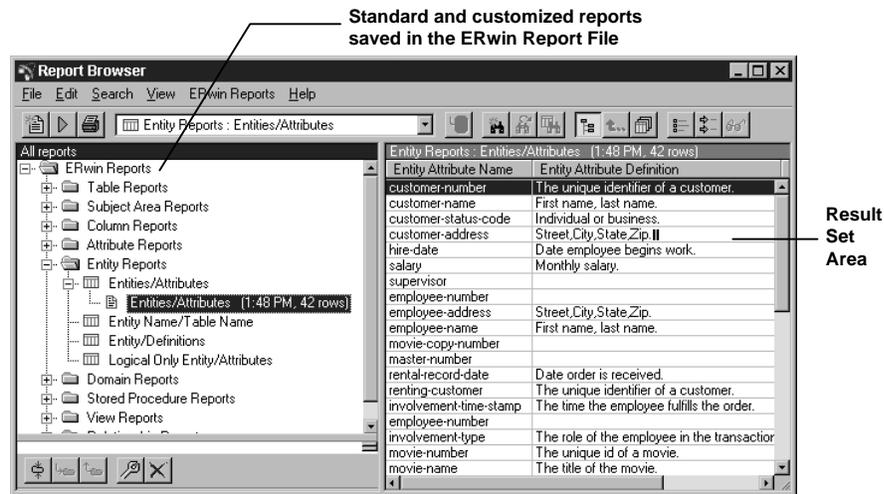
The term “Level” refers to the number of parent-child relationships between the selected entity or table and other entities and tables in the model. For example, if you include a child table in the subject area, choosing a level of “1” for Ancestors means that any parents of that table are also included. Choosing a level of “2” means that any parents of that table, and any parents of the parent table(s) are also included, and so on, for each number of levels selected. Likewise, for Descendants, a level of “1” includes the selected table and any child tables; a level of “2” includes any children, and any children of those children, and so on.

 Search on **Subject Area Editor** in ERwin Online Help for more information.

Report Browser

ERwin version 3.0 includes a new Report Browser that replaces the Report Editors and Browsers in previous ERwin versions. This versatile and highly-customizable tool provides an easy way to define reports and run them against your ERwin model. You can also send reports to RPTwin for further customization.

To open the Report Browser, you click the  button on the ERwin toolbar.



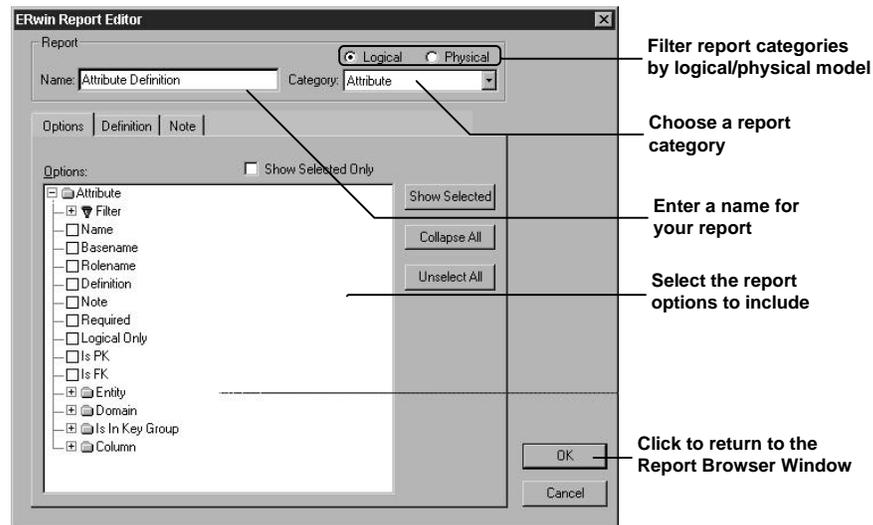
ERwin Report Browser Showing Contents of the Report File

To run one of the standard reports in the ERwin Reports folder, double-click on the report name. ERwin generates a report based on the active diagram, and returns the results set to the Results Set Area on the right side of the Browser.

Unlike previous versions, ERwin version 3.0 saves standard and customized report formats as a separate file, rather than as a part of the ERwin diagram. As a result, the same set of standard reports and any customized reports that you have created are available for any diagram open in ERwin.

Creating a Customized Report

To create a new report in the Browser, choose New ERwin Report on the Browser's File menu. ERwin opens a dialog that lets you specify the name and category of the report. Some examples of the report categories are: Attribute, Column, Diagram, Domain, Entity, Relationship, Subject Area, Table, Validation, and View.



Selecting the Report Type and Options

Choosing a report category is like choosing a report template. You can filter the display of report categories for the logical and physical model. Each report category has a predefined set of options which you use to include or exclude model components in your report. In some reports, there are also options for filtering and sorting.

Once you have defined the content of your report, click OK to return to the Report Browser. The report you just defined is automatically added to the tree control showing all of the reports available in the Report Browser. When you create a new report, or modify or delete an existing report, the changes are also saved to the ERwin report file.

When you double-click on your report, or select the report and click the Execute Report button , the Report Browser runs the report against your diagram and displays the report in the Results Set Area.

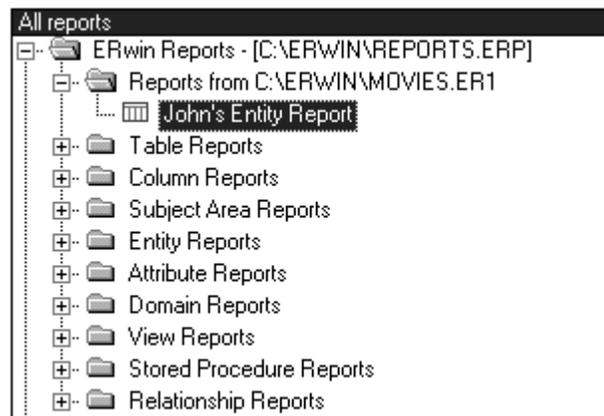


Once you generate a results set, you can use the Report Browser's extensive range of features to:

- ◆ Print the result set.
 - ◆ Customize the appearance of the report.
 - ◆ Change the order of the columns.
 - ◆ Sort the results set on one or more columns.
 - ◆ Find a change in value.
 - ◆ Find text in the results set.
 - ◆ Hide results set rows that do not match a specific search criteria.
-  Search on **Report, on ERwin diagram** in ERwin Online Help for more information.

Accessing Customized Reports in ERwin 2.6 .ER1 Files

Previous versions of ERwin saved customized reports with the ERwin diagram in which they were created. These reports were saved as a part of the .ER1 file. When you open a 2.6 .ER1 file in ERwin version 3.0, ERwin automatically saves any customized reports from the file in the ERwin Reports folder in the Report Browser.



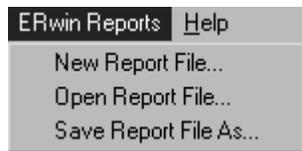
Customized Reports from an ERwin 2.6 .ER1 File

You can run the report or rename, modify, delete, or move these new reports to a different folder using the standard ERwin Report Browser features.

Sharing ERwin Reports

During installation, the setup program saves a standard REPORTS.ERP file in the same directory as the ERwin program. This file includes standard ERwin reports and folders. By default, ERwin saves any customized reports and report folders that you create in the Report Browser in this file, as well.

ERwin creates the ERwin Reports list in the Report Browser based on the contents of the .ERP file. In addition, the Report Browser provides controls that let you manage your .ERP files on the ERwin Reports menu.



Each of the options on this menu are explained below:

- ◆ **New Report File** Lets you create a new .ERP file.
- ◆ **Open Report File** Lets you select and open a different .ERP file than the one that is currently active.
- ◆ **Save Report File As** Lets you save the active .ERP file under a different name.

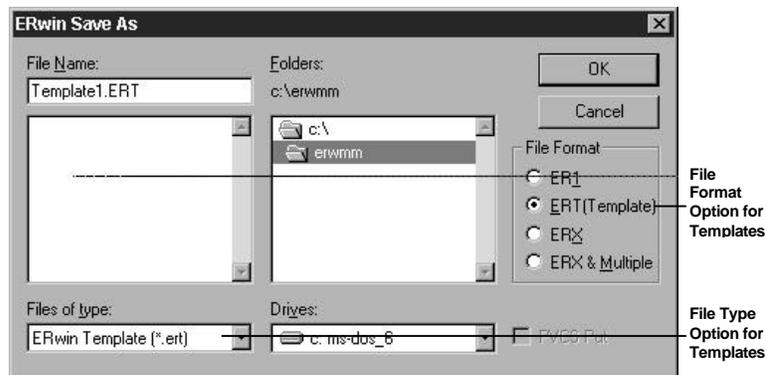
If you want to open and run customized reports created by another user, you can click the Open Report File option and select the user's .ERP file. These files are then available for your use. Any changes you make to the report files are automatically saved to the active .ERP file, unless you do not have write-permission for the selected drive or file.

ERwin displays the name of the active .ERP file with the ERwin Reports folder in the Browser report tree.

ERwin Templates

A template stores diagram settings and ERwin objects such as background color, foreign-key color, and shadow offset, that are automatically applied to each diagram based on the template. Templates provide the ideal way of maintaining a consistent look and feel across models.

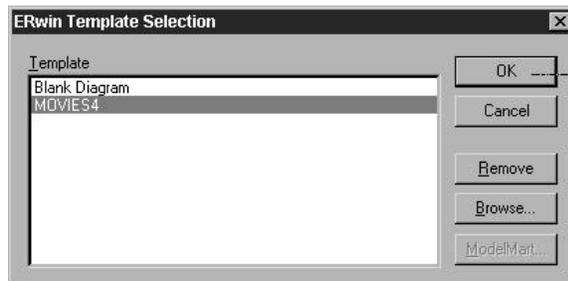
You can create a new template simply by using the Save As dialog to save an .ER1 file as an .ERT template file. All of the settings and objects in the .ER1 file become part of the .ERT template.



ERwin Save As dialog

After you define a template, you can use it as the basis for creating new diagrams. When you choose **New** on the File menu, click the **New Diagram** button on the ERwin Toolbar, or choose **Reverse Engineer** on the Tasks menu, ERwin displays a list of the available templates and prompts you to choose an option:

- ◆ If you choose **Blank Diagram** and click **OK**, ERwin opens a new diagram and uses ERwin default settings from the ERWIN.INI file.
- ◆ If you choose a template and click **OK**, ERwin opens a new model and applies the diagram settings and ERwin objects from the selected template.



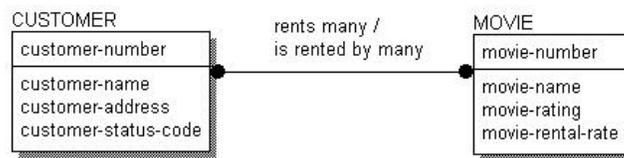
New Diagram Support for Templates

Note: You can also save diagram templates in the ModelMart. See “Saving Templates in ModelMart,” Chapter 5, *New ModelMart Features* for more information.

 Search on **Template, overview** in ERwin Online Help for more information.

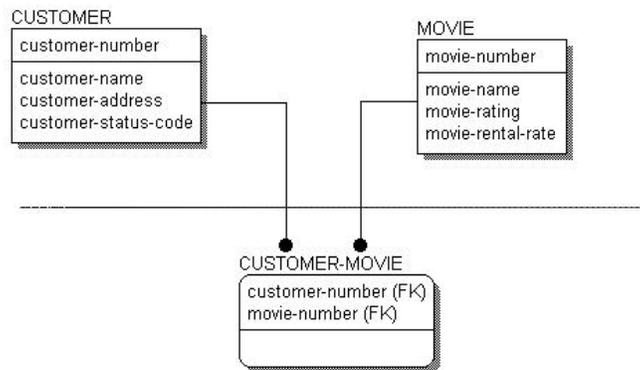
Many-to-Many Transform

When you design a logical model, you may choose to include many-to-many relationships. For example, the video store has a many-to-many relationship between the CUSTOMER and MOVIE entity. This relationship represents the fact that each customer can rent many movies, and many movies can be rented by many customers.



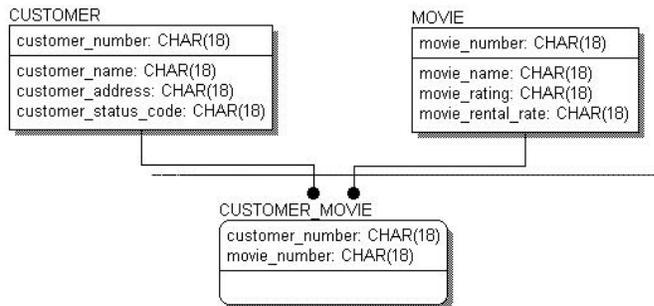
Many-to-Many Relationship in the Logical Model

In the logical model, ERwin can automatically resolve many-to-many relationships. Right-click on the many-to-many relationship and choose **Resolve Many to Many** on the shortcut menu. ERwin displays the associative entity in the logical model and also eliminates the many-to-many relationship.



Resolved Many-to-Many Relationship

ERwin version 3.0 does not support, and therefore does not display, many-to-many relationships in the physical model. If you create a many-to-many relationship in the logical model and switch to the physical model, ERwin automatically displays an association table to eliminate the many-to-many relationship.



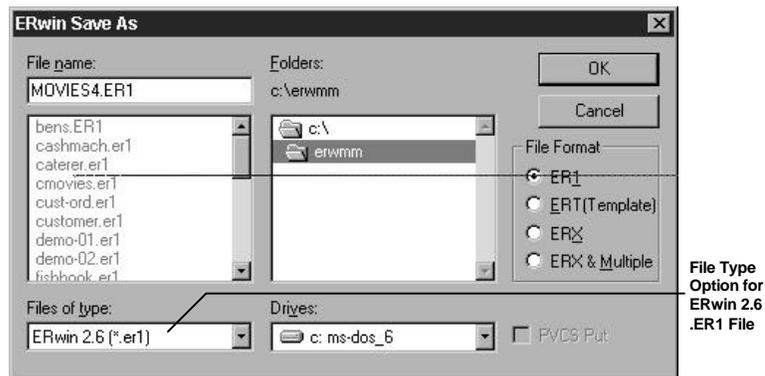
Many-to-Many Relationship Represented using an Association Table

If you then switch back to the logical model, ERwin continues to display the original two entities involved in the many-to-many relationship.

 Search on **Relationship, resolving many-to-many** in ERwin Online Help for more information.

Save As ERwin Version 2.6 .ER1 File

To support compatibility with previous versions, ERwin version 3.0 lets you open and save ERwin version 2.6 .ER1 files. When you choose the Save or Save As option on the File menu, ERwin displays the Save As dialog, which includes the option ERwin 2.6 (*.er1) in the Files of Type list box.



Save As Support for ERwin 2.6 .ER1 File

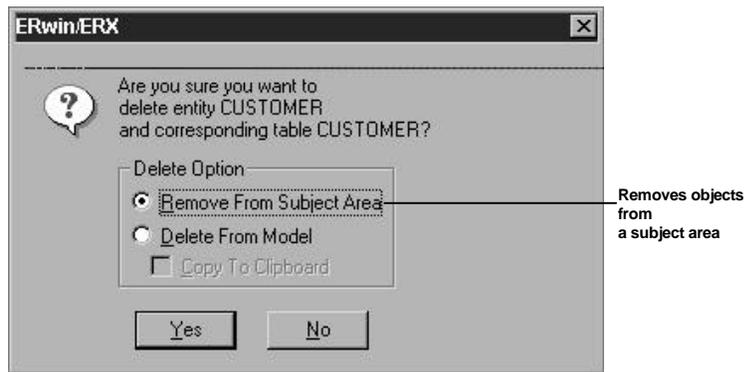
Note: If you save an ERwin version 3.0 file in ERwin version 2.6 format, some of the information will not be saved. For example, view information is not supported by ERwin version 2.6 file format, and therefore is not saved.

Files saved in ERX format using previous versions of ERwin/ERX are not compatible with newer ERwin versions. You must use your old version of ERwin to save your .ERX files as .ER1 files before you can open them with your new version of ERwin

 Search on **File, saving a diagram** in ERwin Online Help for more information.

Default Delete Option

If you delete one or more entities, tables, textblocks, or views from a subject area, ERwin version 3.0 provides an option in the Delete Confirmation dialog that lets you choose to remove the object from a subject area without deleting it from the model.



Delete Dialog

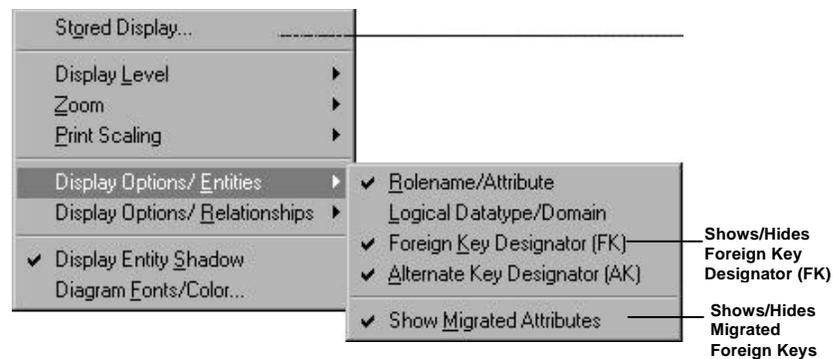
This option is unavailable if you are in the Main Subject Area.

 Search on **Deleting ERwin Model Objects** in ERwin Online Help for more information.

Foreign Key Display Options in the Logical Model

Foreign keys are primarily physical implementation details. However, in ERwin version 3.0, there are two display options that let you show the migrated foreign keys or the foreign key designator (FK) in the logical model for the attributes in an entity.

Right-click on a blank area in your diagram to open the Diagram shortcut menu, then choose the appropriate display option.

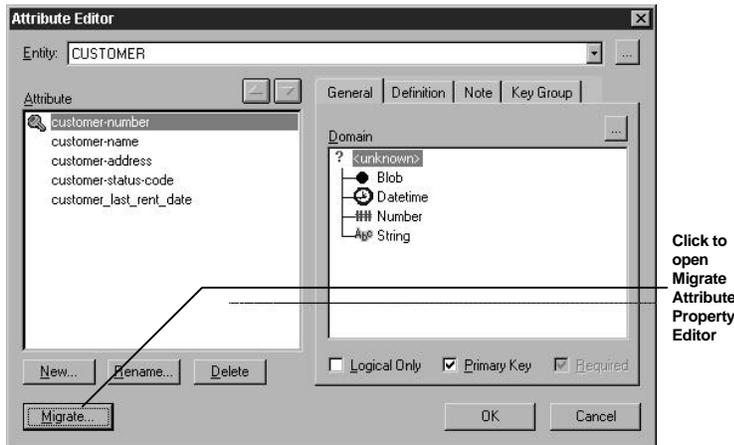


Display Option to Show Foreign Keys

 Search on **Display option, foreign key designator in logical model** in ERwin Online Help for more information.

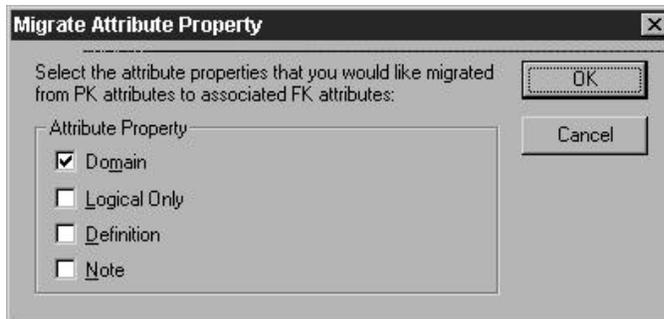
Logical Property Migration Options

ERwin version 3.0 provides a Migrate Attribute Properties dialog, available from the Attribute Editor, that lets you control which properties of a primary key attribute are automatically migrated to foreign keys based on that attribute.



Attribute Editor with Migrate Button

When you click the Migrate button, you can choose to migrate the domain, “logical only” property, definition, and/or note.



Migrate Attribute Properties Dialog

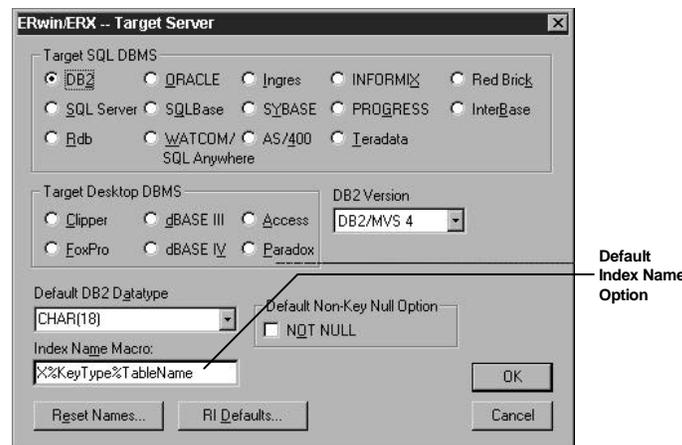
 Search on **Attribute, migrating** in ERwin Online Help for more information.

Default Index Naming Option

The Target Server dialog includes one new option. The Index Name Macro box lets you define a default index naming convention for your indexes. The default is **X%KeyType%TableName** which returns index names such as XPKMOVIE_COPY and XIF1MOVIE_COPY. You can customize your default index names by including additional text or ERwin macros.

%KeyType and **%TableName** are ERwin macros that provide a value based on the current context in the model.

Macro	Explanation
%KeyType	PK, AKn, IEn, IFn
%TableName	Name of the selected table



Target Server Dialog

 Search on **Customizing the Default Index Naming Convention** for more information.

Server Support Enhancements

ERwin version 3.0 supports new options for the following target servers:

DBMS	Supported Version
DB2/MVS	4
INFORMIX	5, 7.2
Microsoft Access	7, 97
Open Ingres	1.2
Oracle	7.2, 7.3
Progress	8
Rdb	7
Red Brick	5
SQL Anywhere	5.5
SQL Server	6.5
Sybase	11
Teradata	2

Note: Target servers in previous versions of ERwin are still supported in ERwin version 3.0.

 Search on **<Database>** in ERwin Online Help for more information.

5

New ModelMart Features

Enhanced Workgroup Modeling Features

ERwin Version 3.0 includes several new features that enhance the use of ERwin with ModelMart. These new features are listed below and are explained in more detail in the following sections:

- ◆ **Diagram Versions** At any time, you can create a diagram version that represents the state of the active ModelMart diagram at that moment in time. Later, you can use the diagram version to revert back to the earlier state of the ModelMart diagram if required. You can also create a diagram version from any archive of a ModelMart diagram.
- ◆ **Archive Purging** When the Auto Archive option for a ModelMart library is enabled, each time a user saves a diagram to that library, ERwin saves an archive of the diagram that includes only the changes made to the diagram since the previous save operation. If the number of archives for a diagram becomes unmanageable, you can use the purge options to delete a selected archive and all earlier archives for that diagram.
- ◆ **Merge Destination Option** When merging two diagrams, you can choose a destination for the result of a merge operation in the Merge Options dialog. The destination can be a new ModelMart diagram or the target diagram.
- ◆ **Saving Templates in ModelMart** You can save any ERwin or ModelMart diagram as a template in the ModelMart. A template stores all the preference settings and ERwin objects in the diagram. When you create a new diagram based on a template, the new diagram inherits all the preference settings and ERwin objects from the template.
- ◆ **Undo/Redo Multiple Change List Items** In the Change Control Manager dialogs, you can use SHIFT-click and CTRL-click to highlight multiple items in a change list, then click the Toggle button to undo or redo the highlighted changes.

- ◆ **ModelMart Library Manager Enhancements**In the ModelMart Library Manager dialog, the tree control is wider to accommodate longer object names and lock symbols always appear in the left margin so that they are always in view regardless of the name length.
- ◆ **Connection Manager Enhancements**The ModelMart Connection Manager dialog contains two new controls, a Disconnect button that lets you disconnect from the ModelMart without closing ERwin, and a History list from which you can choose a ModelMart connection that you have used previously.
- ◆ **Creating Shared ERwin Reports in ModelMart**Using the Report Browser, a ModelMart user with an Administrator profile can save a report developed for an ERwin diagram in the ModelMart so that it can be shared by all ModelMart users.
- ◆ **Using Shared ERwin Reports**Any ModelMart user can run a shared ERwin report, or save the report file locally so it can be updated.

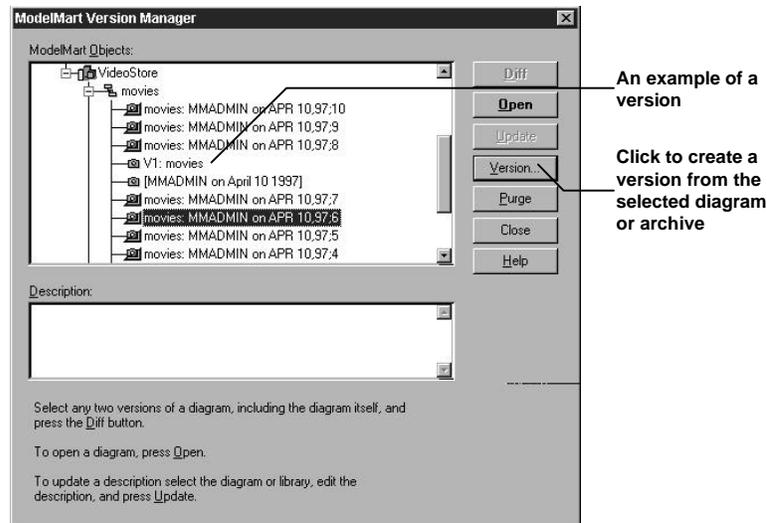
Diagram Versions

The Version Control Manager dialog now includes a Version button. You can select a diagram or archive from the ModelMart objects tree, then click the Version button to generate a diagram version. In ModelMart dialogs, a diagram version is identified as follows:

 Vn: <diagram name>

where,

- ◆  is the icon for a version.
- ◆ V stands for version, and n is a unique number.
- ◆ <diagram name> is the name of the selected diagram or archive from which the version was generated.



Creating a Version of a ModelMart Diagram

 Search on **ModelMart diagram, creating a version** in ERwin Online Help for more information.

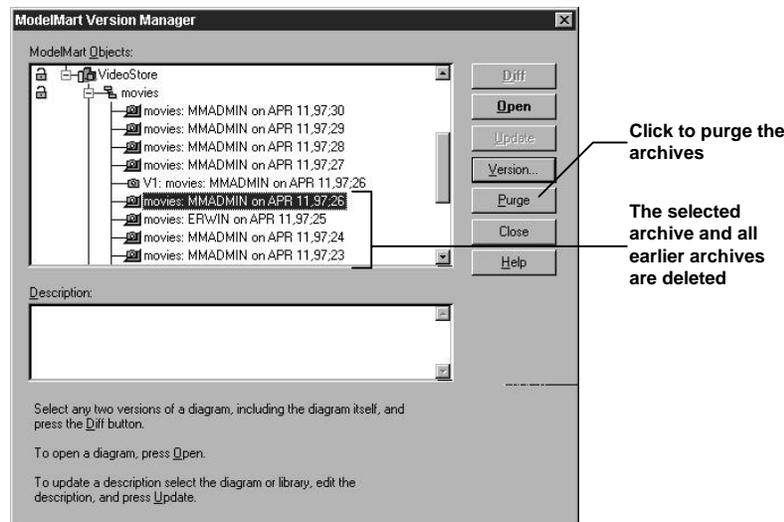
Archive Purging

The Version Control Manager dialog now includes a Purge button. You can select an archive then click the Purge button to delete the selected archive and all earlier archives. This feature is very useful when combined with the diagram versions feature described earlier in this section. You can create a diagram version from an archive to roll up all the changes recorded in multiple archives into a single version, then purge the archives. In ModelMart dialogs, a diagram archive is identified as follows:

 <diagram name>:<user name> on <date>;<archive number>

where,

- ◆  is the icon for an archive.
- ◆ <diagram name> is the name of the diagram from which the archive was generated.
- ◆ <user name> is the name of the user that generated the archive.
- ◆ <date> is the date on which the archive was generated.
- ◆ <archive number> is a unique number for the archive.



Purging Archives of a ModelMart Diagram

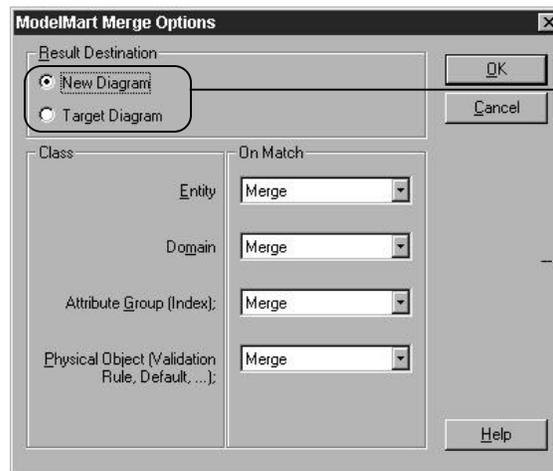
 Search on **ModelMart diagram, purging archives** in ERwin Online Help for more information.

Merge Destination Option

The Merge Options dialog includes the Merge Result Destination group box in which you can choose the destination for the merge results.

The options are:

- ◆ **New Diagram** Choose this option to direct the result of the merge to a new diagram.
- ◆ **Target Diagram** Choose this option to direct the result of the merge to the target diagram. Using this option, you can iteratively merge changes from several independent diagrams into the selected target diagram.



Choose a destination for the result of the merge

Results Destination Options in the Merge Options Dialog

 Search on **ModelMart diagram, merging** in ERwin Online Help for more information.

Saving Templates in ModelMart

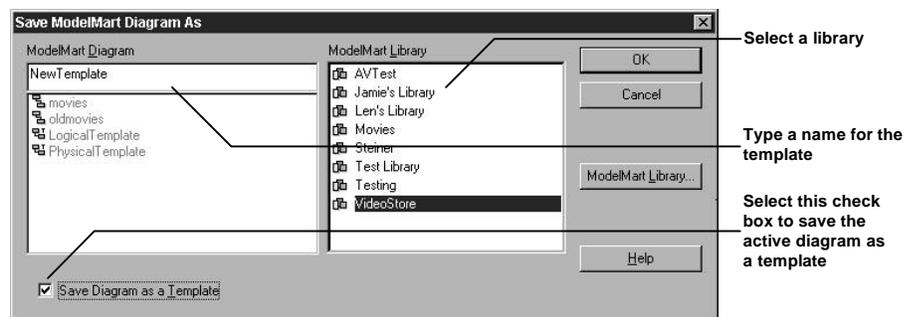
A template lets you store diagram settings and ERwin objects, and then apply them automatically to a new diagram.

You can use ERwin to save a template locally, or you can use the Save ModelMart Diagram As dialog to save the active ERwin or ModelMart diagram as a template in the ModelMart. In ModelMart dialogs, a template is identified as follows:

 <template name>

where,

- ◆  is the icon for a ModelMart template.
- ◆ <template name> is the name of the ModelMart template.



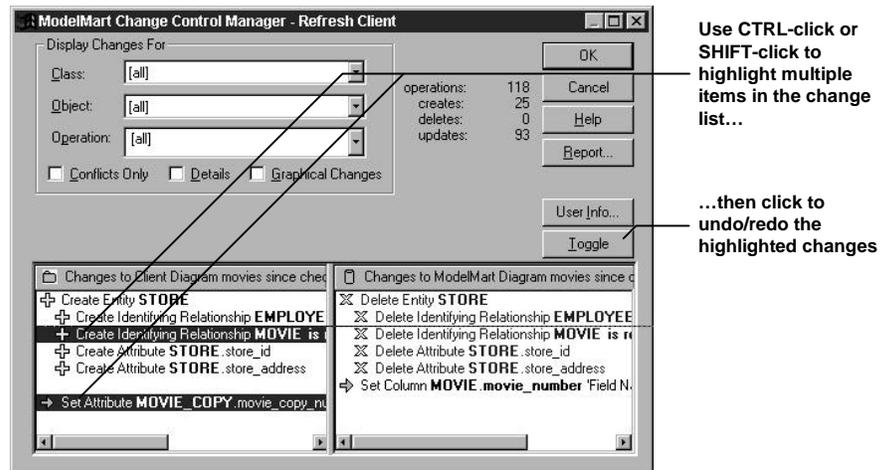
Saving a ModelMart Diagram as a ModelMart Template

After you save the template in ModelMart, you can use it as the basis for creating new ModelMart diagrams. A new diagram based on a ModelMart template inherits all the settings and ERwin objects in the template.

 Search on **Template, creating in ModelMart** in ERwin Online Help for more information.

Undo/Redo Multiple Change List Items

The Change Control Manager dialog now includes a Toggle button. You can now use SHIFT-click and CTRL-click to highlight multiple items in the change list then click the Toggle button to undo or redo the highlighted items.



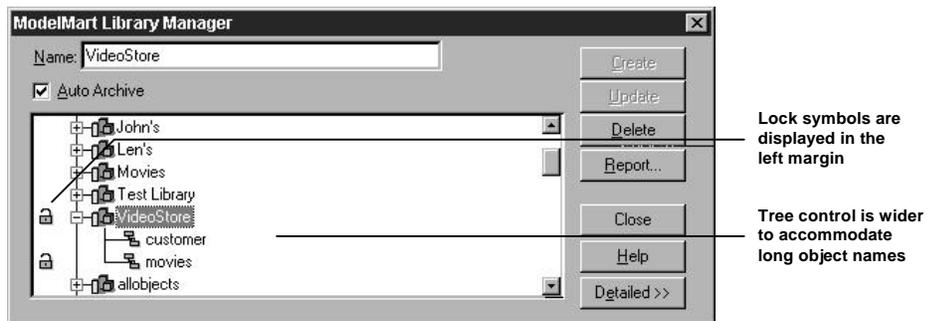
Undo/Redo Multiple Changes Collectively

 Search on **ModelMart diagram, canceling changes** in ERwin Online Help for more information.

Library Manager Enhancements

In the ModelMart Library Manager, the tree control is wider to accommodate long ModelMart object names. Also, the lock symbols, which indicate if an open ModelMart diagram or subject area is locked or unlocked, appear in the left margin of the dialog so that they are never hidden as a result of the name being truncated by the width of the tree control.

The tree control in the Library manager now shows only the ModelMart libraries, diagrams, and subject areas. Archives and versions of ModelMart diagrams are not shown.



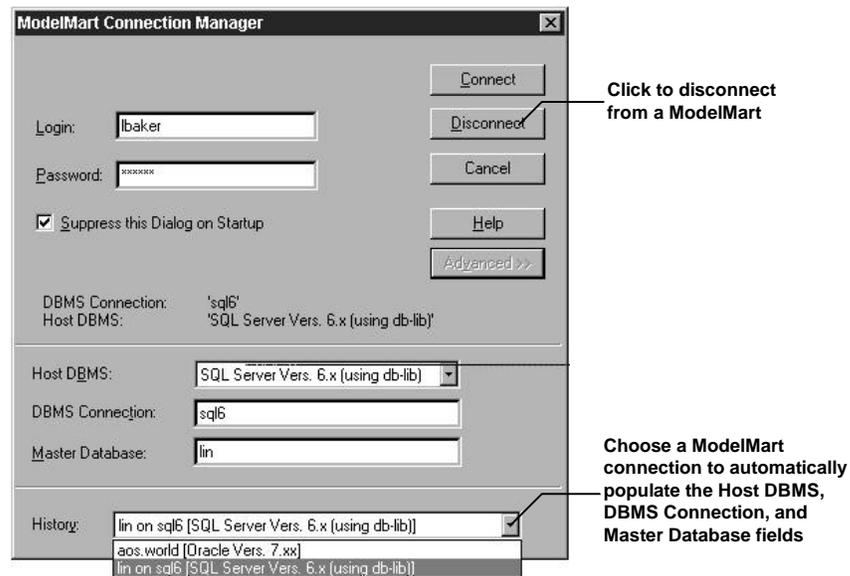
ModelMart Library Manager

To work with archives or versions of ModelMart diagrams, use the ModelMart Version Manager.

 Search on **ModelMart diagram, maintaining archives** and **ModelMart diagram, creating a version** in ERwin Online Help for more information.

Connection Manager Enhancements

The ModelMart Connection Manager dialog contains two new time-saving features. You can disconnect from the ModelMart without closing ERwin, and you can quickly connect to any one of the ModelMarts that you used previously without having to reenter host DBMS connection information.



ModelMart Connection Manager

The meaning of the new controls are as follows:

- ◆ **Disconnect** Click this button to disconnect from the ModelMart to which you are currently connected. This button is dimmed if you do not currently have a connection to ModelMart.
- ◆ **History.** Displays sets of connection parameters previously used to connect to different ModelMarts. You can select a connection set to automatically populate the Host DBMS, DBMS Connection, and ModelMart Master fields in the connection dialog.

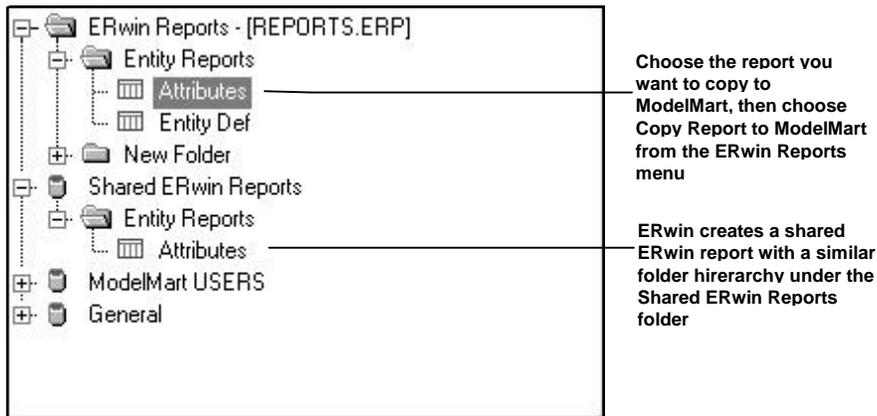
 Search on **ModelMart, connecting to** and **ModelMart, disconnecting from** in ERwin Online Help for more information.

Creating Shared ERwin Reports in ModelMart

A ModelMart user with an Administrator security profile can save a report developed for an ERwin diagram to the ModelMart so that it can be shared among all ModelMart users.

To save an ERwin report in the ModelMart, the Administrator selects the ERwin report, for example, ERwin Reports/Entity Reports/Attributes and chooses the Copy Report to ModelMart option on the ERwin Reports menu in the Report Browser.

The first time an administrator saves an ERwin report in the ModelMart, the Report Browser creates a new top level folder called Shared ERwin Reports. The Report Browser keeps the folder structure associated with a report when it creates the shared ERwin report under the Shared ERwin Reports folder. For example, when the ERwin Reports/Entity Reports/Attributes report is saved to the ModelMart, it becomes the Shared ERwin Reports/Entity Reports/Attributes shared ERwin report.



Shared ERwin Reports in the Report Browser Tree Control

Only a ModelMart user with an Administrator security profile can:

- ◆ **Create a shared ERwin report**
- ◆ **Edit a shared ERwin report** The changes are applied to the report are stored in ModelMart. The edited report is not immediately available to users that currently have the Report Browser open. These users must close the Report Browser and reopen it to get the updated version of the report.
- ◆ **Delete a shared ERwin report** The deleted report is still available to users that currently have the Report Browser open. Once these users close the Report Browser, the deleted report is no longer available.

Note: ModelMart does not currently provide versioning and merging features for reports. If multiple administrators are editing and saving shared ERwin reports to the ModelMart, changes may be overwritten.

Using Shared ERwin Reports

A ModelMart user can run a shared ERwin report on any open ModelMart or ERwin diagram regardless of the security profile of that user.

A ModelMart user can also select a shared ERwin report and choose Copy Report to Report File to copy the report to a report file, where it becomes a standard ERwin report that can be customized. Only a ModelMart user with an Administrator security profile can move, edit, or delete a shared ERwin report.

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