SYBASE®

design

Sybase® PowerDesigner® 9.0

The all-in-one modeling tool for business-driven applications

OVERVIEW

Our Vision

A modeling and design solution that will empower our customers to model software that meets the needs of the end user, fits the description of the business processes, and enables them to perform system analysis, design, and application development.

empower

Introducing PowerDesigner 9.0, featuring new business process modeling capabilities, enhanced UML-based object modeling combined with traditional database design and analysis, and a true enterprise repository. These advanced features allow business-centric as well as IT-centric personnel to communicate, collaborate, and create business applications as a single team.

What is PowerDesigner 9.0?

PowerDesigner 9.0 is a leading, truly integrated enterprise application analysis and design environment with full-featured business, data, and object modeling capabilities.

Features include:

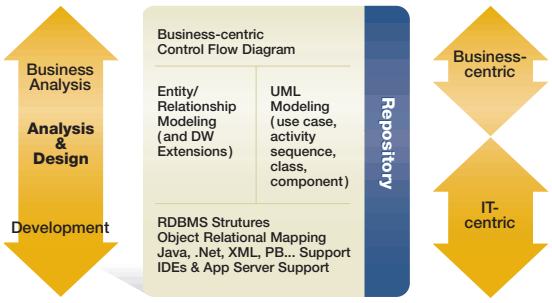
Business Process Modeling: PowerDesigner empowers non-IT users to design and model business processes in real business terms, using a simple, easy to use, and highly graphical, non-technical model. Support for generation and reverse engineering of ebXML code is included.

Data Modeling: PowerDesigner designs and generates the database schema through true bi-level (conceptual and physical) relational database modeling—based on proven methods. PowerDesigner also supports data-warehouse specific modeling techniques.

Object Modeling: PowerDesigner completes analysis and design using standard UML techniques (use case, activity, sequence, class and component diagrams). From a class diagram, PowerDesigner automatically generates and reverse engineers code for popular target environments such as Java™ (including EJB 2.0), XML, Web Services, C++, PowerBuilder®, Visual Basic® and more, through a customizable generator.

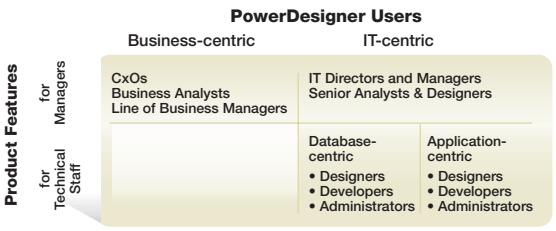
Enterprise Repository: PowerDesigner's Enterprise versions add the value of the enterprise-class repository. The repository allows easy viewing and sharing of models and other information, for all members of the team. The repository is highly scalable with support for role-based security, version control, search and reporting capabilities.

Summary of Features



Who Should Use PowerDesigner?

PowerDesigner addresses the needs of both business-centric, non-IT personnel, as well as IT-centric developers and managers, by providing capabilities that are aligned to the needs of managers and technicians.



[Diagram 1] *This matrix represents typical users of PowerDesigner by job title*

Modular Packaging
All PowerDesigner modules include the new user interface, model management, and report generation functionality:

PhysicalArchitect™ (PDM)
Physical database design and generation including data warehouse modeling. This entry-level module provides the tools necessary to create physical database models, both OLTP and OLAP, generate SQL code, and reverse engineer existing databases from heterogeneous sources.

DataArchitect™ (PDM, CDM)
Dual-level, iterative database design and database definition language (DDL) generation. Supports integrated physical and conceptual data modeling (including Data Warehouse modeling), allowing you to design and generate databases for more than 30 DBMS server and desktop platforms.

ObjectArchitect (PDM, CDM, OOM)
Object-oriented analysis and design combined with dual-level, iterative database design and database definition language (DDL). Now with stronger UML support (use case, sequence, activity, component and class diagrams) integrated with data modeling capabilities from DataArchitect, this module empowers both Database and Application Designers with maximum efficiency.

Developer (PDM, OOM)
Object modeling and physical database design. The ultimate design tool for the Developer; physical data modeling integrated with UML-based modeling (use case, sequence and class diagrams) with sophisticated code generation and reverse-engineering.

Upgrade With the Enterprise Option!
Gain access to view and share models and other information with all members of your team by upgrading any PowerDesigner module to the Enterprise version (formally known as the "with MetaWorks™ " option). The Enterprise versions of your favorite package provide a central repository for models and other files to facilitate access control, sharing, collaboration, consolidation, versioning, and model management.

Studios (BPM, PDM, CDM, OOM)
Available in both **Personal** and **Enterprise** (Personal capabilities plus Repository) versions, these packages combine Business Process Modeling techniques with enhanced UML modeling and complete data modeling. By combining all the necessary modeling techniques in one environment, these modules empower both business-centric and IT-centric managers, and their development teams, to build business-driven systems that support the enterprise.

Viewer™
A complete view of modeling information for all IT members in your organization. This read-only module provides graphical access to model information throughout your organization, and includes an enhanced report generator.

HIGHLIGHTS
Enterprise Repository:
- Enables multiple analysts and designers to work on the same model at the same time.
- Stores, manages, and versions PowerDesigner models and all other documents.
- Finds and re-uses objects.
- Effectively manages inter-model links.

Core Features:
- Business Process modeling based on a control flow diagram
- Industry-standard Entity/Relationship data modeling techniques (Conceptual and Physical Data Models), includes data warehouse modeling techniques (star schema, snow flakes, multi-dimensional modeling and data source mapping)
- Standard UML use case, activity, sequence, class, and component diagrams.
- Generates the code of popular industry languages such as Java, PowerBuilder, C++, and Visual Basic from a class diagram.
- Web Services Support: Automatically generate/reverse engineer WSDL
- EJB 2.0 Support
- Generates DDL for 30+ RDBMS
- Object/Relational mapping
- Defines complex user data types, including Java classes, and Java stored procedures residing in the database.
- Reverse engineers database information into Physical and Conceptual Data Models.
- Reverse engineers existing business logic into a class diagram (Java and PowerBuilder).
- Forward and reverse engineers XML applications into a class diagram. Supports XML-DTD, XML-schema, and XML-data.
- Integration with popular Java IDEs and leading J2EE/EJB 2.0 certified application servers
- A state-of-the-art graphical, customizable user interface with:
  - Common shell
  - Object browser
  - Editing area
  - Status area
- Improved multi-model management, including synchronization of objects, models, and databases.
- Enhanced, model-independent reporting, allowing multiple model reports in one document.

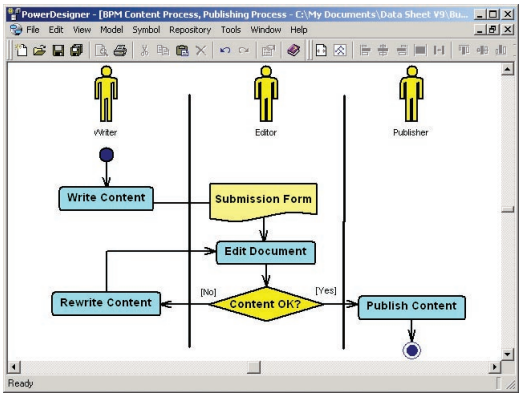
PowerDesigner 9.0 is For You if You're...

- a business analyst, line of business manager, or CxO
- an IT director or manager, a senior analyst or designer managing a team
- an application designer or developer
- a database designer

If you're a business analyst, line of business manager or CxO

PowerDesigner enables you to model business-driven applications using simple and intuitive, non-IT techniques. PowerDesigner is the easy-to-use and learn way to model and design business processes and maximize collaboration with your IT department.

As a business-centric user of PowerDesigner, you will use the Business Process Model. You will document your business processes in business terms. The documented processes can then be analyzed and optimized once they are discovered, providing not only the tool to optimize the business, but the document that communicates to IT. Your IT professionals will use the Business Process Model to create their technical object-oriented analysis and design models, drive code, and develop databases that reflect the business more accurately. This approach closes the communication gap between business owners and IT, increasing IT's impact on the business.



[Diagram 2] *Business Process Model*

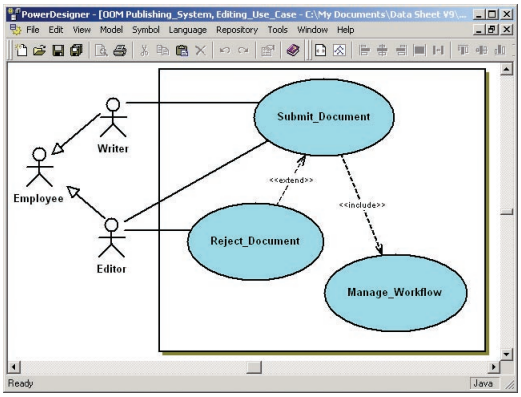
If you're an IT director or manager, senior analyst, or designer managing a team

PowerDesigner streamlines collaboration, accelerates the learning curve, and reduces time and cost of software development. PowerDesigner is a single, easy-to-use, standards-based environment to capture business needs and requirements and effectively model software.

Utilizing a Business Process Model to understand the business you may create use case, sequence, and activity diagrams that refine the business analysis with technical considerations.

These diagrams define the scope and expected behavior of the system, independent of implementation details. These UML diagrams serve as a technical view of the system, and offer a way of communicating the technical view to the business in an understandable way.

The Enterprise Repository allows all of your models to be stored in a centralized server, with role-based security. Consolidating your models into the repository gives your teams the ability to communicate, collaborate and create powerful, business-oriented IT solutions. They will be able to discover reusable work with the Find feature. Version control and branch management allow you to track the evolution of the project over time, and manage multiple development paths at once. The repository may also manage all documents in your environment, including Microsoft Word, Excel, Project, and more.

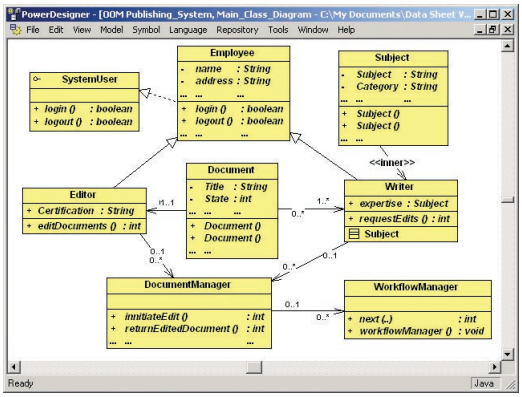


[Diagram 3] *UML use case diagram*

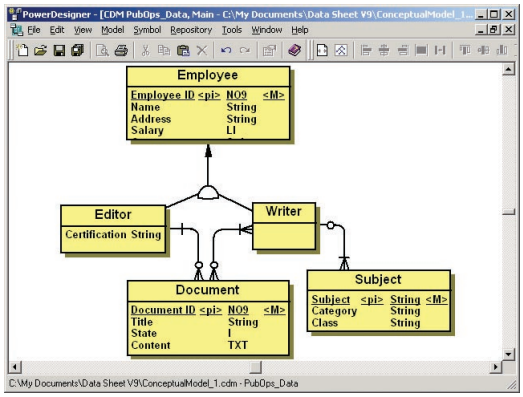
If you're an application designer or developer

PowerDesigner boosts your productivity through effective application modeling and code generation (Java & .Net): from analysis performed with UML diagrams. PowerDesigner generates and reverse engineers business logic for leading development languages such as Java, XML, PowerBuilder, and more. PowerDesigner's integration with E/R modeling speeds-up the implementation of Object/Relational mapping.

As an application developer, you may use PowerDesigner's UML class and component diagrams to document the physical static structures of the code that implements the system. The class diagram describes 100% of the object-language code, and may be used to generate and reverse engineer many leading languages like Java and XML.



[Diagram 4] *UML Class Diagram*



[Diagram 5] *Conceptual Data Model*

The component diagram assists you in defining and documenting modern, component-based systems. PowerDesigner is standards based with support for Java J2EE EJB 2.0, Microsoft .NET including C# and VB.NET, and Web Services with WSDL generation. PowerDesigner's generation templates free you from wrestling with specifications, allowing you to concentrate on developing creative solutions.

Persistence for objects may be managed through data-model generation and real, customizable Object/Relational Mapping. PowerDesigner's unique combination of UML and real relational database design allow for true complex Object/Relational mapping at design time. Mapping at design time ensures that as you code the data access elements of the system, you are working with objects and databases that are already well structured. Inconsistencies are no longer discovered at development time, where they are more difficult and costly to fix.

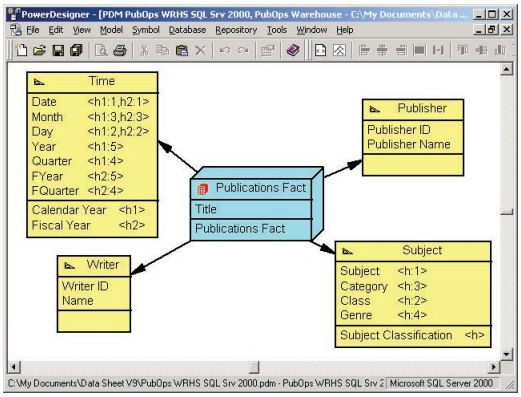
If you're a database designer

PowerDesigner will increase database manageability, facilitate maintenance, and increase your ability to manage change. PowerDesigner supports E/R modeling, and warehouse modeling diagrams, supporting over 30+ RDBMS for database structure generation, modification, documentation and reverse-engineering.

For real, bi-level data analysis and design with PowerDesigner, you will start by using the Conceptual Data Model (CDM). The CDM provides a standard Entity/Relationship model in traditional notation so you may normalize your enterprise data structures for efficient data storage. CDM may be derived from the inherent persistent model in the UML class diagram, or started from scratch as part of a data-centric methodology. PowerDesigner automatically tracks normalization work done in this model when generated from the UML class diagram, and will allow iterative generations of the CDM from the OOM without overwriting these deliberate transformations.

For Physical database and warehouse design, you use the Physical Data Model (PDM). In the PDM, you will focus on denormalization and optimization for the schema, with a specific RDBMS target in mind. PowerDesigner provides specialized support for all leading RDBMS, using customizable templates and detailed knowledge of the capabilities of each platform and version. The PDM contains all the physical constructs including triggers, stored procedures, indexes, references and referential integrity, storage parameters, users, views and more. The PDM is used to generate and reverse engineer 100% of your database structures, including incremental iterative development, through a comprehensive database compare-and-alter script technology.

PowerDesigner automatically tracks the denormalization, schema optimization and design work done in the PDM, when it is generated from the CDM or directly from the UML class diagram. This will allow iterative generations of the PDM from any source, without overwriting these deliberate transformations.



[Diagram 6] *Dimensional diagram*

Warehouse support, including star and snowflake schema, cubes and dimensional modeling, and external source mapping, is provided in the Dimensional Diagram included standard in every PowerDesigner PDM. Warehouse designers may take advantage of OLTP designs linked to the OLAP designs in one tool, giving better documentation of the warehouse environment and faster response to change.

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Minimum System Requirements

- Windows® 95/98, NT 4.0 or 2000
- Pentium® CPU
- 32MB RAM
- SVGA monitor
- CD-ROM drive
- 60MB avail. disk space

MetaWorks Minimum System Requirements

A supported RDBMS with ODBC connection.
(Supported databases include: Sybase®, Microsoft®, Informix®, Oracle®, and IBM®.)