



Visual Paradigm
SDE

Streamlined design and development environment

Product Overview

Smart Development Environment (SDE) for Visual Studio provides model-driven development capabilities for software developers and designers to create elite systems. SDE gives developers and designers a fully visual analysis-designer-development environment to develop Java-based and .NET-based applications.

Features

UML Support

1. Class diagram **ENHANCED**
2. Use case diagram
3. Sequence diagram
4. Communication diagram
5. State machine diagram
6. Activity diagram
7. Component diagram **ENHANCED**
8. Deployment diagram
9. Package diagram
10. Object diagram
11. Composite structure diagram
12. Timing diagram
13. Interaction overview diagram
14. Use case details editor
15. Support use case flow of events
16. Generate sequence diagram from flow of events
17. Business use case support

Requirements Management

1. Requirement diagram
2. Textual analysis
3. CRC card diagram
4. User interface designer
5. Identify candidate activity and action by textual analysis
6. Define and customize requirement types
7. Display full set of requirements in tabular view

Business Process Modeling

1. Business process diagram
2. Data flow diagram
3. Export business process diagram to BPEL
4. Identify candidate business process element by textual analysis
5. Automatically stretch pools and lanes to fit diagrams
6. Smart routing for connecting objects

Mind Mapping

1. Mind mapping diagrams
2. Create link relationships between nodes

Database Modeling

1. Entity relationship diagram
2. ORM diagram
3. Reverse existing database into ERD
4. Generate database from ERD
5. Reverse stored procedure to ERD
6. Foreign key auto naming
7. Download database driver automatically
8. Show database architecture by ORM pane
9. Customizable SQL generation
10. Generate class diagram from ERD
11. Generate ERD from class diagram
12. Support Oracle schema in generate/reverse database
13. Generate/reverse user-defined database type
14. Modeling database trigger and stored procedures
15. Reverse DDL to ERD models
16. Generate/reverse database trigger and stored procedure

Object-Relational Mapping

1. Java ORM code generation
2. .NET ORM code generation
3. PHP ORM code generation
4. Lazy collection fetching
5. Database view support
6. Support custom ID generator
7. Mapping one class to multiple tables
8. Custom query support
9. Automatic array table generation
10. Generate criteria classes
11. Generate DAO Code
12. Generate Factory Code
13. Generate POJO Code
14. Optional libraries selection
15. Hibernate annotations support in ORM persistence
16. Generate Hibernate version tag for optimistic concurrency control

Visual Modeling

1. Annotation with callout shapes
2. Annotation with freehand shapes
3. Organize model elements and diagrams using Model Explorer
4. Support bookmark
5. Handi-selection
6. Customizable data type to fit to any programming language
7. Overview diagram
8. Resource centric interface
9. Model sharing
10. Cut/copy/paste
11. Copy to other applications as image
12. Undo/redo
13. Mouse gestures
14. Reverse connector direction
15. Support grouping **ENHANCED**
16. Jump to shape/model
17. Quick connect
18. Navigate to connected element
19. Model comment

20. Duplicate shape/model
21. Selectable/non-selectable shapes
22. Lock diagram
23. Reference to any type of artifact
24. Advanced file and directory chooser
25. Advanced tree support
26. Duplicate, move and reconnect connector
27. Package header for all types of diagram
28. Visualize tagged value in diagram element
29. Sub-diagram and reference indicator
30. Visio integration
31. Import Visio stencils
32. Rectilinear, Round Rectilinear, Oblique, Round Oblique, Curve connector style
33. Sweeper
34. Create shape with specified initial size
35. Create shapes in diagram from tree (drag and drop)
36. Auto fit shapes size
37. Inline editing
38. Spell checking
39. Visual alignment guide
40. Various grid options
41. Show diagram info in diagram
42. Jump to diagram
43. Drag-and-drop copying, moving and reordering of classes and entity members
44. Open view from model element
45. Diagram renaming boxes
46. Add folders as favorites **NEW**

Model Element Nicknaming

1. Assign nicknames to model elements

Model Transitor

1. Generate and link model elements
2. Trace the origin of model elements (model traceability)

Style and Formatting

1. Customizable shape style and formating
2. Incorporate image in diagram
3. Stereotyped element appearance
4. Rich text documentation
5. Add rich text element to diagram
6. Format copier
7. Enrich documentation of model with images
8. Save/load template for documentation of model

Team Collaboration with VP Teamwork Server

1. Concurrent and collaborative modeling with VP Teamwork Server
2. Import project to VP Teamwork Server
3. Checkout project from VP Teamwork Server
4. Commit project to VP Teamwork Server
5. Update changes from VP Teamwork Server to local working copy
6. Checkout old revision from VP Teamwork Server
7. Revision comparison with VP Teamwork Server
8. Detect and resolve conflict with VP Teamwork Server
9. Branch/Tag project with VP Teamwork Server
10. Merge changes between branches with VP Teamwork Server
11. Export multiple revisions from VP Teamwork Server
12. Run VP Teamwork Server on common Java web servers

Team Collaboration with CVS Repository

1. Concurrent and collaborative modeling with CVS Repository
2. Import project to CVS Repository
3. Checkout project from CVS Repository
4. Commit project to CVS Repository
5. Update changes from CVS Repository to local working copy
6. Checkout old revision from CVS Repository
7. Revision comparison with CVS Repository
8. Detect and resolve conflict with CVS Repository
9. Branch/Tag project with CVS Repository
10. Merge changes between branches with CVS Repository
11. Export multiple revisions from CVS Repository

Team Collaboration with Subversion Repository

1. Concurrent and collaborative modeling with Subversion Repository
2. Import project to Subversion Repository
3. Checkout project from Subversion Repository
4. Commit project to Subversion Repository
5. Update changes from Subversion Repository to local working copy
6. Checkout old revision from Subversion Repository
7. Revision comparison with Subversion Repository
8. Detect and resolve conflict with Subversion Repository
9. Branch/Tag project with Subversion Repository
10. Merge changes between branches with Subversion Repository
11. Export multiple revisions from Subversion Repository

Team Collaboration with Perforce

1. Concurrent and collaborative modeling with Perforce Repository
2. Import project to Perforce Repository
3. Checkout project from Perforce Repository
4. Commit project to Perforce Repository
5. Update changes from Perforce Repository to local working copy
6. Checkout old revision from Perforce Repository
7. Revision comparison with Perforce Repository
8. Detect and resolve conflict with Perforce Repository
9. Branch/Tag project with Perforce Repository
10. Merge changes between branches with Perforce Repository
11. Export multiple revisions from Perforce Repository

Documentation Generation

1. PDF report generation
2. MS Word report generation
3. HTML report generation
4. Project publisher
5. Ad Hoc report creation
6. Intelligent element sorting in report generation

Printing

1. Print multiple diagrams
2. Preview printable page
3. Print clip marks
4. Support change page margins, size and orientation
5. Fit to pages option
6. Fit to ratio
7. Customizable page header/footer
8. Show project name, diagram name in header/footer
9. Support print with frame, border
10. Enable/disable gradient color printing
11. Support quick print

IDE Integrations

1. Embedded modeling environment in Visual Studio

State Machine Diagram Code Generation

1. Generate Java code from state diagram
2. Generate C++ code from state diagram
3. Generate C# code from state diagram
4. Generate VB.NET code from state diagram

.NET Round-Trip Engineering

1. Reverse C# source code to Class diagram
2. Update C# source code based on the Class diagram
3. Reverse VB .NET source code to Class diagram
4. Update VB .NET source code based on the Class diagram
5. Reverse C++ source code to Class diagram
6. Update C++ source code based on the Class diagram

Reverse Engineering

1. Instant reverse engineering code or executable to class diagram
2. Reverse engineering Java source, classes and jar
3. Reverse engineering C++ source
4. Reverse engineering .NET dll and exe
5. Reverse engineering CORBA IDL source
6. Reverse engineering Ada 9x source
7. Reverse engineering XML
8. Reverse engineering XML Schema
9. Reverse engineering database with JDBC
10. Reverse engineering Hibernate mapping file
11. Reverse engineering PHP 5.0 source
12. Reverse engineering Python
13. On-demand Java reverse engineering
14. Support template parameter

Code Generation

1. Instant generate code from diagram
2. Generate Java
3. Generate C#
4. Generate VB.NET
5. Generate PHP 5.0
6. Generate Object Definition Language
7. Generate Flash ActionScript 3.0
8. Generate IDL
9. Generate C++
10. Generate Delphi
11. Generate Perl
12. Generate XML Schema
13. Generate Python
14. Generate Objective-C
15. Generate Ada
16. Generate Ruby
17. Support template parameter
18. Template support for generating code with generic constructs
19. Customizable code generation

Shape Editor

1. Design your own shape
2. Import SVG shape
3. Incorporate different shapes into UML diagram
4. Organize shapes by gallery, category and stencil
5. Advanced shape design capabilities

Layout Facilities

1. Automatic diagram layout
2. Aligning and centering shapes
3. Make all selected shapes same width/height
4. Automatic distribution shapes

Interoperability

1. Import Telelogic Modeler project file
2. Export/import EMF based UML2 model
3. Command-line operations
4. Import/export XMI 1.0, 1.2 and 2.1
5. Import/export XML
6. Import/export VP project file format
7. Import/export Use Case model to MS Word
8. Import Rational Rose project file
9. Import ERwin data modeler project file
10. Generate BPEL for Oracle workflow engine
11. Generate BPEL for JBoss workflow engine
12. Export diagram to JPG, PNG, SVG and EMF image format **ENHANCED**
13. Export diagram to PDF
14. Slice exported diagrams

Intuitive User Interface

1. Group diagram by category
2. Advanced property pane
3. New project with predefined template
4. New project with predefined template
5. Easy to use "New Diagram" dialog
6. Flexible zooming
7. Pallet style toolbar
8. Collapsible toolbar
9. Show name in toolbar button
10. Expand grouped toolbar buttons
11. Show various diagram categories in toolbar
12. Support various look and feels
13. Import user preference from existing workspace
14. Multilingual support
15. Searchable Options

Automatic Updates

1. Automatic on-line updates
2. Maintain local update server - Update synchronizer

Open Architecture

1. Plug-in Support (Java)
2. Interact VP model with XML

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