

WINDEV®

New
Version

16

**INTEGRATED
DEVELOPMENT
PLATFORM**

Windows, .Net, Linux, Java
Windows 7, Vista, 2008, XP,
2003, 2000

All databases

MULTI-PLATFORM CODE:
Windows, .Net, Linux, Java,
PHP, J2EE, XML, Internet,
Ajax, SmartPhone, Tablet,
Android, Windows Phone 7...

Free deployment



DEVELOP 10 TIMES FASTER

www.windev.com

WELCOME TO A WORLD OF PERFORMANCE

T o c

You are asked to develop Windows, Linux, Java, .NET, Internet, Pocket PC, Smartphone, Android applications that are robust, secure, open and high-performance, and you have to do it under always tighter deadlines and budgets...

Taste high performance, increase the productivity of



WINDEV
presentation
seminar

your teams by using the new version 16 of WINDEV.

Regardless of your existing code, you will develop up to **10 times faster**.

This is proba-

bly why WINDEV was voted "most productive language".

All the tools and modules described in this brochure are **supplied with the product**. Everything is totally integrated, the editors share a common interface, the learning curve is very low - usually one week is all it takes: listen to your logical side, it's cost effective. Of course, you can decide to only use some of the modules that are provided.

With WINDEV 16, your development teams will build applications that exactly match the requirements of your most demanding users, **in time frames and budgets** you wouldn't have dreamed about.

Join **120,000** professional developers worldwide and pick the #1, choose WINDEV today.

PS: You're already familiar with version 15? Please note that there is a 68-page technical document devoted to the 996 new features in version 16. Printed version available by simple request; PDF version available on www.windev.com.



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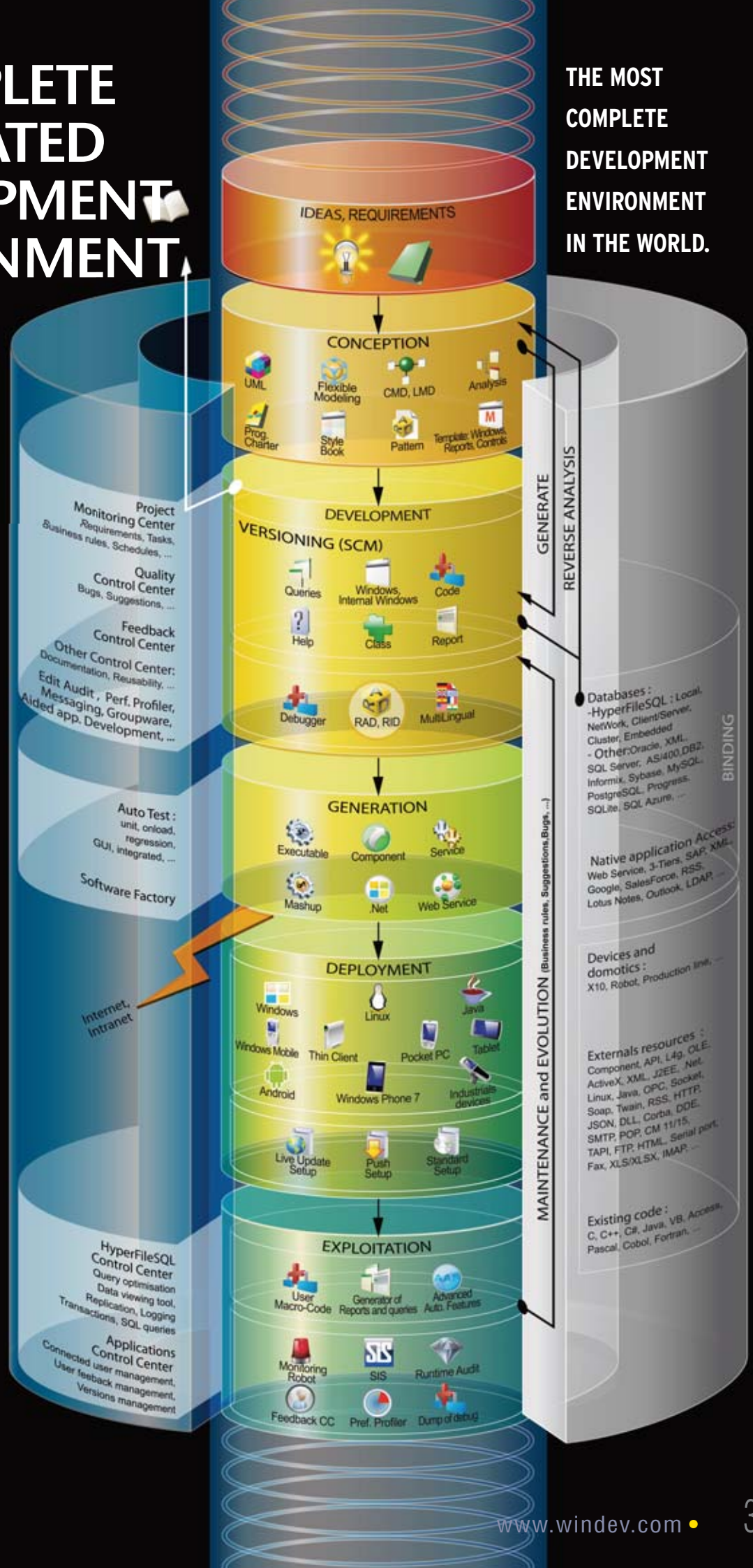
A COMPLETE INTEGRATED DEVELOPMENT ENVIRONMENT



**WINDEV 16 :
EVERYTHING IS
INTEGRATED**

- Only 1 environment to master: your teams are immediately productive
- A single tool to acquire ; reduces costs
- A single point of technical support, free
- You're a winner

**WINDEV #1 FOR
MANAGING THE
LIFE CYCLE OF
APPLICATIONS**



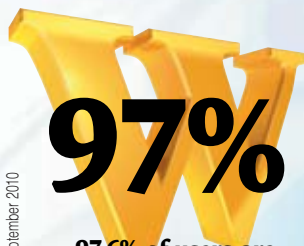
WINDEV 16 IS UNIQUE



YOUR QUESTIONS ABOUT WINDEV 16

| | | |
|-----------|---|--|
| 1 | Who is WINDEV for? | It is for all the developers who want to create Windows, .NET, Internet and Java applications. |
| 2 | What type of applications can I develop? | Any type! Payroll, industrial, medical, inventory, EDI, CAE, ERP, CRM, EAI, back and front Office, .NET, Web services, catalogs etc. There is no limit. (See the special issue of "01 Informatique") |
| 3 | What do I need to know? | You need to have programmed at least once in your life (or in school!). The ease of development proposed by WINDEV has become legendary. |
| 4 | How much time will it take me to come up to speed on WINDEV? | Usually one week is enough for self-training. A tutorial guide is supplied with the product. |
| 5 | How much time will I save by developing with WINDEV? | Our customers have stated gains of a factor 3 to 10 depending on their previous tool. Maintenance is also much easier and faster. You'll take 2 months to build what used to take you a year... |
| 6 | Are all the modules are supplied with the product? | Yes, everything is included, from conception to maintenance, and including testing, all using a similar interface. |
| 7 | I've heard about a reporting tool that can be freely distributed? | Yes. WINDEV 16 gives the users the ability to create their own reports and queries. The "Reports and Queries" reporting tool can be deployed freely with your applications. |
| 8 | I already have an application. Will I be able to use it with WINDEV? | Yes, most certainly, WINDEV supports all the computer standards (languages, databases, protocols, etc.). |
| 9 | I am currently using a 4GL for development. Would these skills be useful? | Yes, and you will appreciate even more the power and ease-of-use of WINDEV. |
| 10 | Can I build Client/Server applications with WINDEV? | Yes, of course, with any of the industry databases. HyperFileSQL Client/Server (Linux and Windows) is supplied with the product and it can be freely distributed with your applications (unlimited version). |
| 11 | Can I build n-tier applications, SOA and Saas with WINDEV? | Yes, of course. |
| 12 | Can I use Webservices with WINDEV? | Yes of course, you can use them, build them and host them as well. |
| 13 | Can I freely distribute the integrated database? | Yes. Regardless of the number of computers, and regardless of the number of servers. For Windows and for Linux. |
| 14 | How powerful is the WINDEV language? | WLanguage is a 5th generation language (5GL), which is simple yet very powerful. The number of code lines you have to write (or generate) is reduced by up to 90% compared to a 4GL. |
| 15 | What size development team does WINDEV support? | From one to 100 developers on the same project, on one or several sites. A versioning tool (SCM) is supplied with the product. |
| 16 | My application contains 1,500 windows and tables with several million records... | This is common with WINDEV ; see the special testimonial issue of "01 Informatique" to read about real life implementations. |
| 17 | How can you offer such a product for such a low price? | Our high volume sales enables us to keep the price low. |
| 18 | I've heard that technical support is free. Is this true? | Yes, it's free (15 free custom inquiries). It can be accessed by email and by phone. There are also other forms of custom assistance and consulting. |
| 19 | Who uses WINDEV? | All kinds of professional entities: consulting companies, IS department, lab engineers, government offices, city halls, administrations, individual consultants, etc... |
| 20 | WINDEV is therefore a "must have" for professional developers? | Yes, absolutely. More than 120,000 professional developers have already chosen it. |

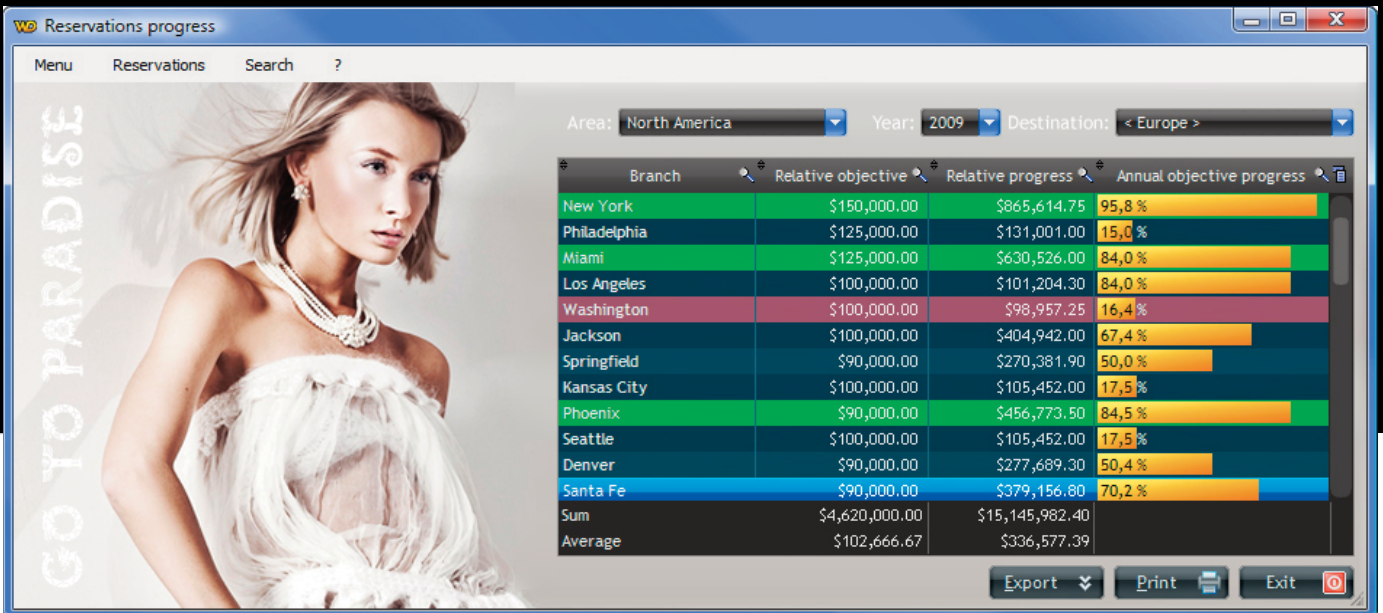
We are going to answer the most frequently asked questions about WINDEV.



97.6% of users are satisfied with their product. Don't wait any longer!

Do you have more questions? Call us, we'll gladly answer them.

poll conducted in September 2010



Benefits

- Software created with WINDEV 16 always offer a set of advanced features without any programming or any action from the developer, via our exclusive AAF technology (see p 24).
- Users automatically get a reporting tool (Reports and Queries, see p 30 and 31).
- Industrialization of the software creation process: with WINDEV it's automatic.
- Therefore, the quality of the applications built is less dependent upon the experience of the development team.
- Your teams are operational in one week.
- Your teams don't spend their time reinventing the wheel.

CREATE WINDOWS EXES

Develop your applications 10 times faster with WINDEV 16.

Create **WINDOWS 32-bit & 64-bit EXEs**.

WINDEV 16 allows you to **create sophisticated and robust Windows applications**, that automatically come with rich, secure and user-friendly interfaces.

WINDOWS 7, VISTA, XP, 2008, 2000...



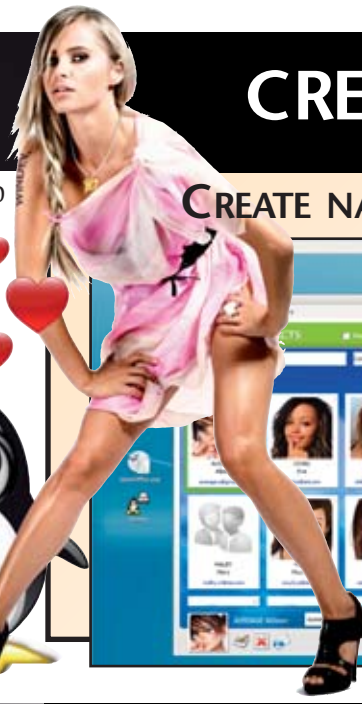
Regardless of the Windows version, create beautiful applications, in any field. You'll never be limited. WINDEV is open to all standards, all databases, all languages.

CREATE LINUX EXE

WINDEV 16 allows you to create **native Linux EXEs**.

The Linux GUI can be directly created in the window editor. With WINDEV 16, without knowing Linux, you **create sophisticated and robust Linux applications**.

CREATE NATIVE EXES IN LINUX



More than 1400 WLanguage functions are available.

All the environment features are available:

- Dynamic audit
- API functions (used to call .so libraries)
- File links and databinding
- Multilingual
- Debugging
- Debugging dump, ...

Reports are generated in PDF format.

GENERATE JAVA CODE

Generating **Java** code may be useful: answer a request for proposal, build an application that needs to run on Mac or Linux, or create Applets that will be used in a site built with WEBDEV 16 for example...

With WINDEV 16, you **become a Java specialist**, even if you're not familiar with the language! **In 1 click**, your application has switched to Java.

BECOME A JAVA SPECIALIST IN ONE CLICK!



With WINDEV 16, the Java programs automatically have nice interfaces: all you have to do is use the available skin templates. WINDEV creates a Java archive (.JAR) directly executable on any platform. The programming is done with the 5GL language of WINDEV (but you can also enter Java code if you prefer). Over 1,000 WLanguage functions are already supported in Java.

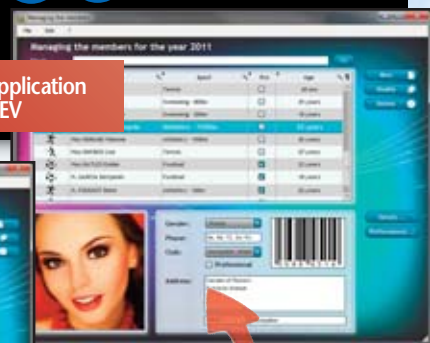


The same source code for all the targets

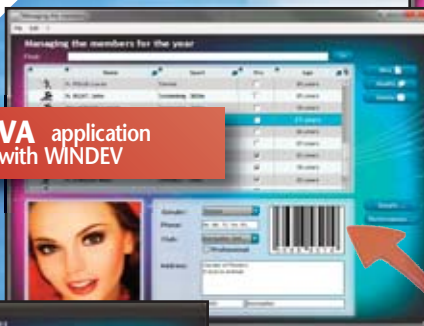
YOUR APPLICATIONS RUN ON MULTIPLE PLATFORMS



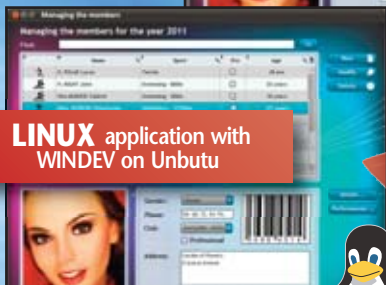
WINDOWS application with WINDEV



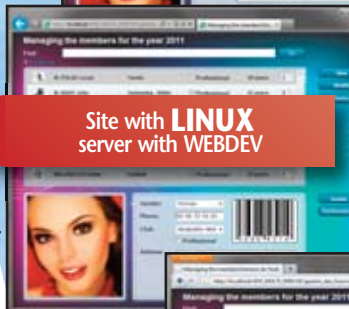
JAVA application with WINDEV



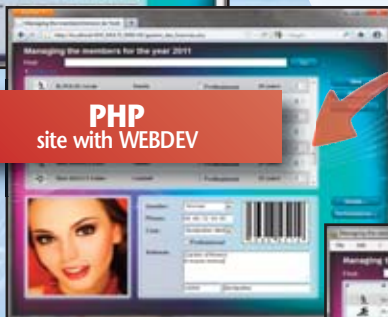
LINUX application with WINDEV on Ubuntu



Site with **LINUX** server with WEBDEV



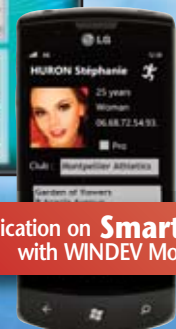
PHP site with WEBDEV



.NET application with WINDEV



Application on **Smartphone** with WINDEV Mobile



Site on **iPhone, iPad, Tablet** with WEBDEV



Your applications also work on rugged terminals and tablets.



Multi-target development (Windows, .Net, Internet, Intranet, Pocket PC, Smartphone, terminal, Windows Server or Linux...) is lot easier thanks to the compatibility between WINDEV, WEBDEV and WINDEV Mobile.

WINDEV creates applications intended to run on Windows, Linux and Mac. WEBDEV recompiles them to run on Internet and WINDEV Mobile to run on a tablet or a phone ...

You use the same project, the same code, the same objects and the same elements...

A single code regardless of the target.



MANAGER

Simply recompiling an application when changing target gives you a competitive advantage. It guarantees your future and your ability to respond to changes.

NEW

Native compatibility with Linux

AAF TECHNOLOGY

A lot of automatic features are available

MAIN POINTS

Portable code and objects (including for Web browser and Mobile code)

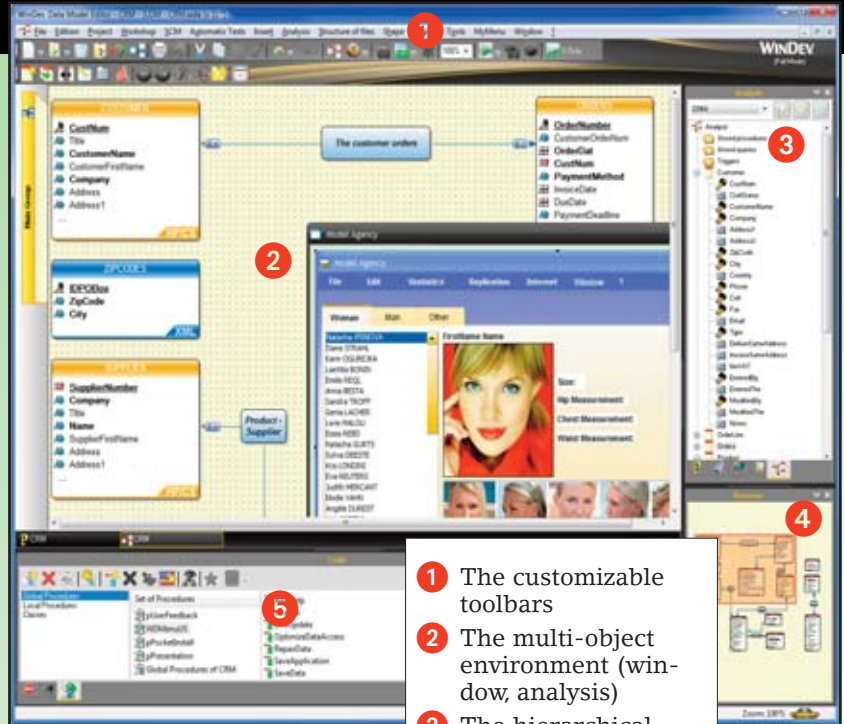
CAPITALIZE ON YOUR EXISTING CODE
THE SAME SOURCE APPLICATION, RUN ON DIFFERENT PLATFORMS

A COMPLETE AND FULLY INTEGRATED ENVIRONMENT

The environment's features are all interconnected: data, controls, business rules, test... Everything is integrated, each feature is aware of the others. For example, the feature that displays a table is aware of all the characteristics for each data in each cell, **the link with the database is always updated, automatically.**

This saves a **lot of time**, reduces the potential for forgetting something or for bugs, avoids unnecessary or redundant programming, increases the application speed and makes development a lot easier.

This **integration, which is unique in the market**, provides multiple and immediately profitable benefits.



EVERYTHING IS INTEGRATED

POC: PERFORMANCE OPTIMIZATION CENTER

Click here to enhance performance of CustomerOrders query
Query performance will be enhanced.

The environment **detects the possible improvements** to increase the speed of your application, and suggests them to you. Accept

them, and your application takes off... Don't forget that WINDEV is supplied with a source code profiler (see p 35).

AAD: AIDED APPLICATION DEVELOPMENT

The environment gives you some **tips** on how to optimize its use according to the tasks you are performing!

Fast Opening of Project Elements

CTRL+E enables you to quickly open the project elements.

Click here to automatically correct the anchor of 'IP_Address' (Edit Control).

This control (green border) and the other window controls (red border) may overlap when using this anchor.

- 1 The customizable toolbars
- 2 The multi-object environment (window, analysis)
- 3 The hierarchical treeview of project elements
- 4 The project browser, to quickly navigate in a large project
- 5 The bottom pane, for the advanced information

MANAGER

A single environment for all the development tasks, resulting in a phenomenal productivity. Since everything is integrated, the security is greatly increased.

NEW

Improved user friendliness
Wider scope search, Clipboard history
New document bar

AAF TECHNOLOGY

A lot of automatic features are available in your applications

MAIN POINTS

Integrated, very intuitive
Unique concept on the market

TECHNOLOGIES

- Refactoring (intelligent renaming)
- Unlimited Undo/Redo operations
- Live data
- Zoom
- Rulers, snap-on
- Customized backdrop with your images
- WYSIWYG
- Dual-screen mode
- Unlimited backup

The IDE that will make you successful



TIME SAVINGS MONEY SAVINGS

WINDEV 16 helps you reduce development times. You will save large amount of money.

THE ONLY ONE IN THE WORLD!

The environment is truly unique (which explains its success) in term of integration and richness.

Everything is supplied with the product: you don't have to buy any library or add-on for each feature (PDF, images, database management, help, bar codes, OPC, link with SAP R/3, Lotus Notes, Outlook, SNMP, Google Apps...). Everything is immediately available and totally integrated, which contributes to the incredible development speed possible with WINDEV 16.



YOU ARE INSTANTLY PRODUCTIVE

The architecture of the editor allows for its total control within a few minutes. everything is very intuitive and always a keystroke or a mouse click away.

The modules are totally integrated, sharing the same data dictionary: each module (project, database, GUI, setup, queries, reports, ...) shares the information of the other

HUNDREDS OF EXAMPLES AND WIZARDS

In addition to **the tutorial provided with the product**, WINDEV 16 is supplied with **hundreds of examples** and wizards: this makes being productive easier.

FULL COMPATIBILITY WITH THE EARLIER VERSIONS

WINDEV 16 respects your existing work.

No migration step is required between WINDEV 7.5, 8, 9, 10, 11, 12, 14, 15 and WINDEV 16: all you have to do is recompile the application and it will work in version 16.

The existing components (version 8, 9, 10, 11, 12, 14 or 15) work directly (without having to be recompiled) with applications in version 16.

A version 15 can directly open a project in version 7.5, 8, 9, 10, 11, 12, 14 or 15.

Several different versions of your environment can coexist on your PC ; a license 16 also runs the earlier versions (15, 14, 12, 11, 10, 9, 8, 7.5, 5.5,...).

modules, and can, by default, propose the most logical actions.

EXCLUSIVE TECHNOLOGIES EASE YOUR TASKS

Many exclusive technologies ease your tasks to improve your ease-of-use and your productivity, the environment proposes an important number of exclusive technologies:

- perfect WYSIWYG (with zoom)
- "7-tab" technology, to define all the control parameters via a simple click (saving thousands code lines)
- Modifier, for a quick access to the properties
- Panel, for the list of project elements
- Permanent popup menu
- AAD and POC
- Unlimited UNDO and REDO operations, cut/paste history
- Immediate "GO" of the project without recompilation, etc.

FULL DOCUMENTATION IN 1 CLICK

WINDEV can generate a full documentation in just 1 click (printer, pdf, html...). The documentation is built by reverse analysis of the project, and therefore it is always up-to-date (see page 62).

COMPARATOR ("DIFF")

Immediately detect all the modifications made to an element (interface, code, analysis, ...) between 2 versions with the integrated versioning tool.

FREE TECHNICAL SUPPORT

We trust our tools: technical support is offered for free*, for all the modules included in WINDEV 16!

WINDEV 16 is a complete, integrated, user-friendly environment, which automates tasks, and saves you a lot of time during all the development phases: state of the art...

| | |
|---------------|---|
| LCM | Full application life cycle management, including maintenance and upgrades |
| AAD | Aided Application Development, automatic actions to improve your applications |
| POC | Performance Optimization Center |
| SCM | Source Code Manager (versioning tool) |
| AAF | Automatic Application Feature |
| ADU | Automated Deployment and Upgrades ("Live Update" for your applications) |
| SDD | Synchronization with the data schema |
| IRAD | "real RAD", automatically generates full applications |
| AAA | Automatic Application Architecture: code and window patterns |
| BAG | Automatic support of style book |
| EDA | Embedded Database Access |
| Custom folder | Organization of your analyses and projects |

INTEGRATED TECHNOLOGIES

These technologies bring normalization, easier development, ability to share the existing code, improved reliability and better application quality.



MASTER THE LIFE CYCLE: CONTROL CENTERS

The Control Centers are used to **manage** all the aspects of the **life cycle**.

The Control Centers are **totally integrated** in the environment and they interact among themselves and with the editors: window editor, project editor, source code editor,....

The entire information is **shared**.

WINDEV 16 includes the following Control Centers:

- Project Monitoring Center
- Quality Control Center
- HyperFileSQL Control Center
- Document and Resource Control Center.
- Reusability Center



Overall view of a project

MANAGER

The Control Centers allow you to manage all the organizational tasks required for developing applications.

NEW

Filtering the bugs according to the requirements

AAF TECHNOLOGY

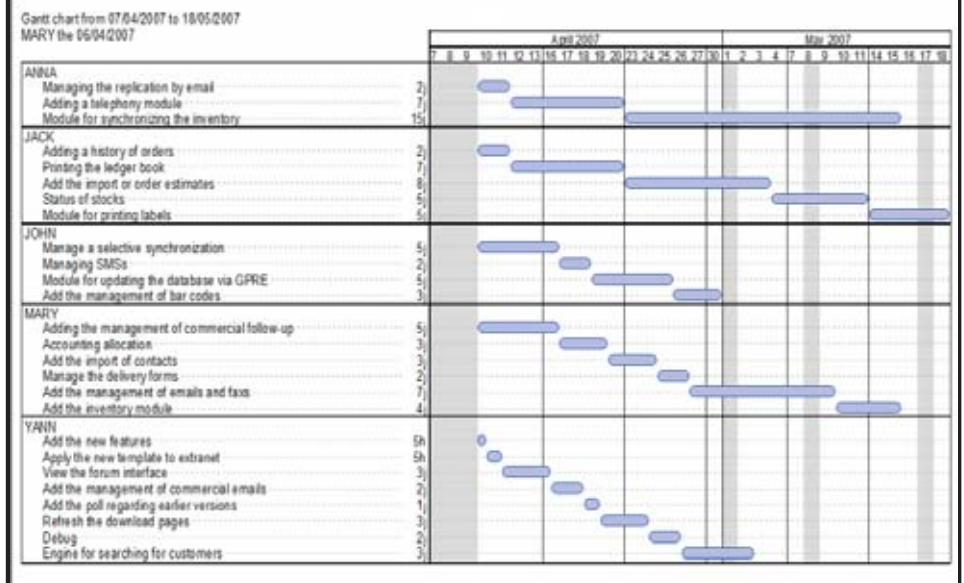
The user feedback can be automatically included

MAIN POINTS

Fully integrated to the environment
Industrialization without constraints

MANAGE THE LIFE CYCLE, MANAGE THE SCHEDULES

The Control Centers allow you to easily manage the complete life cycle of an application.



A BENEFICIAL INTEGRATION

Unlike third-party tools that are heavy to implement, the WINDEV control centers are natively integrated in the editors.

The link with the environments is natural.

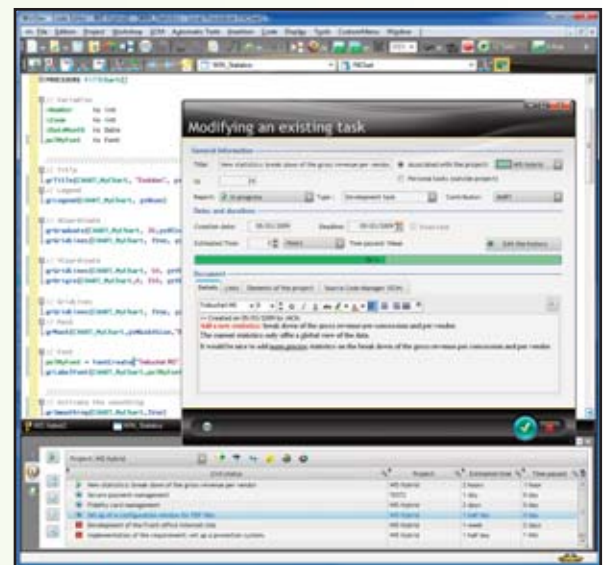
MANAGING TEAMS

The Control Centers allow you to manage the contributors, the groups of contributors, as well as their accounts.

This includes their photo, their phone numbers, their addresses, whether they are currently working or not...

The contractors are also supported.

Each Control Center knows these groups: you have the ability to view the schedule of a group for example.



Let's see the integration in the environment, in the code editor: reminder of the assigned tasks in the bottom pane, details about the task to perform (in the open window).

AGILE METHODS

The methods for Agile development are based on an iterative development: instead of delivering all at once a program meant to answer a set of requirements set in stone, development is done through iterative deployments in short time frames.

WINDEV 16 is totally adapted for agile development: Scrum, XP, ...

TIME TRACKING

A time management tool is included in the environment. Based on an intuitive communication method, this tool asks each team member to validate the current task in real time.

The current task is proposed by the tool, which deduces it from the current action.

VERSIONING

A powerful versioning tool (see page 46) is included in the environment. For each iteration (version) of the project, the list of elements is generated.

"STRICT" MODE

This mode is mainly used for the sensitive projects or for the projects that need to strictly follow some specific methods. In this mode, the environment cannot be used unless the task associated with the element on which we are working on was enabled beforehand. The environment can work in a "strict" mode.

REMOTE ACCESS

The Control Centers can be used remotely, via an Internet connection for example.

EASY MONITORING OF SCHEDULES

The Project Monitoring Center enables you to easily manage the schedules of a team and to analyze where time is spent!

Totally integrated with the development environment, this center provides vital help in making your projects successful within their schedule.

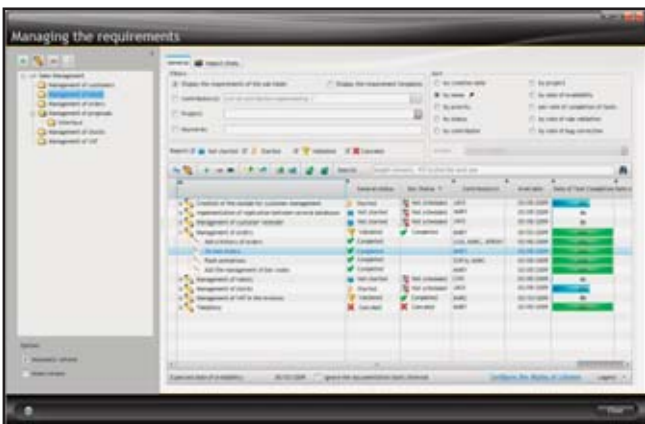
If you bill by the hour, the center enables you to easily keep track of your resources.



QUALITY ASSURANCE

The Quality Control Center keeps track of bugs in the application and it can be used to assign them to a developer.

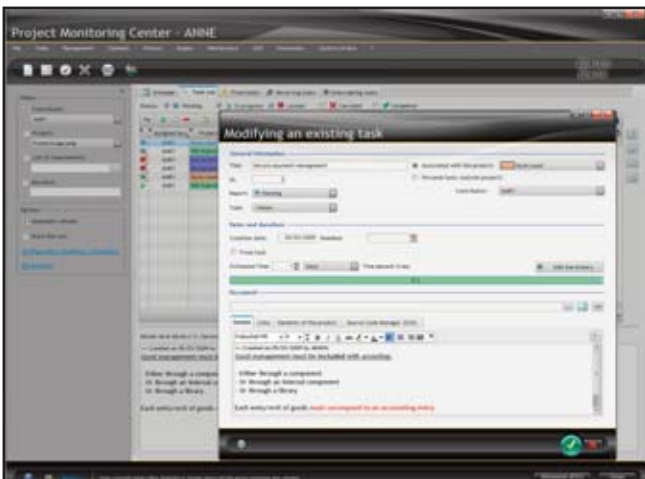
It enables you to centralize the information, to track bugs, to calculate statistics, and prevent oversights (see "Feedback", page 69).



REQUIREMENT MANAGEMENT

The Project Monitoring Center allows you to define and follow the status of each requirement for each version of the project. A requirement corresponds to a feature that must be developed in the software.

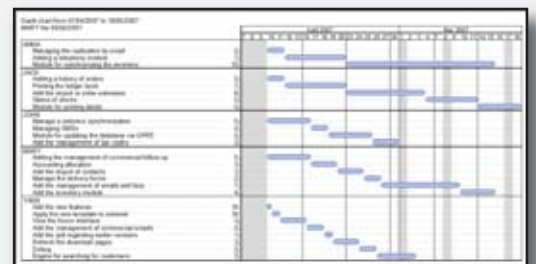
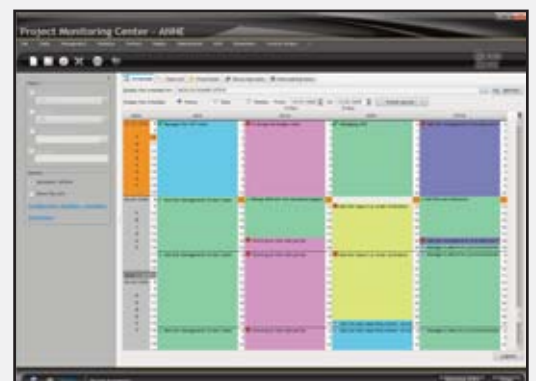
Each requirement can be linked to several tasks (development task, test task, documentation task, ...), bugs, business rules...



TASK MANAGEMENT

Each member of the team can access his task list and change the priorities, add comments, see the linked requirements...

The project manager has access to an overview of the team's tasks and their status.



An overall view is automatically generated in a Gantt diagram

DASHBOARD: DRIVE YOUR PROJECTS



Any project manager would like to have a **global** and synthetic view **of the status of his projects.**

The QA manager wants to know the number of bugs in a project and their priority, as well as follow their status.

The product manager would like to know what new features are requested by the users.

The new "**Dashboard**" concept automatically provides this high-level view of the progress status of the projects, of the overall **Quality**, and for the deployed projects, of the needs for maintenance and bug fixing.

The lights switch from green to red whenever a section of the project requires some attention: bug fixing, optimization, ...

SLICK AND INDISPENSABLE



The dashboard

DRIVE YOUR PROJECTS

A CONSTANT MONITORING

The dashboard provides a high-level view, even during extremely stressful times such as code complete or deployment phases.

The Dashboard alerts you when the tools for project optimization must be run (profiler, query analysis).

An alert is also displayed when deadlines are missed.

EVERYDAY'S SHORTCUT

The dashboard is also a tool used everyday by the developers because it gives them the ability to directly access the displayed elements and to create shortcuts to their favorite code sections.

It can also be used to create shortcuts to the code sections that are frequently used.



New bugs, failed tests, overall quality: how did we manage before the dashboard?



A red light indicates a potential problem: all you have to do is click it to fix the problem



Follow the progress status of the project at a glance

MANAGER

The dashboard allows for a high-level view and for an optimization of your projects. Managing the projects is made easier

NEW

New look

MAIN POINTS

High-level view
Suggested optimizations
Developer mode, Project Manager mode

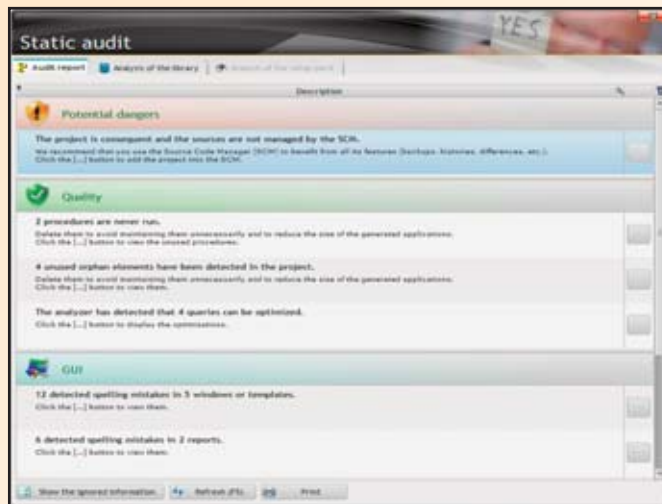
STATIC AUDIT: SECURE YOUR APPLICATIONS

The static audit analyzes the **source code** of the project and its elements.

A **detailed report** is printed: content of the setup, code metrics, potential dangers for the project, unused elements, optimization tips...

You have the ability **to perform an audit of your applications** as often as you want. You reduce the size of your .EXEs and setup files. You increase the speed and security of your applications.

AUDIT YOUR CODE IN 1 CLICK



Example of a static audit report: here the potential trouble areas of the project

DYNAMIC AUDIT: INCREASE THE PERFORMANCES

A dynamic audit is performed on a **running application**. The execution is performed on a deployment computer or on a test computer.

The dynamic audit allows you to follow the execution of an application on a computer and track **the memory footprint**.

The audit generates a status report containing the runtime warnings, asserts, memory dumps...

The generation of the status report can be requested by programming or by the user.



When running the application, locally or remotely, the memory footprint can be easily analyzed.

The developer can analyze the elements that take up the most amount of memory and check that this is not caused by a programming error and/or by a design error.

The dynamic audit also signals the runtime warnings, the non-fatal errors and the asserts (defensive programming).



RAD AND APPLICATION GENERATOR: INDUSTRIALIZE THE CODE

Automatically generating processes or entire applications is a standard feature of WINDEV 16.

Several preset programming models are available.

You have the ability to create entire applications or prototypes **in a few clicks**.

This enables you to answer a request for proposal really fast or validate a model really quickly.

But WINDEV 16 also allows you to create your own RAD patterns: **you choose the code** that is generated as well as the positioning of the groups of controls!

Time to market is crucial in a competitive world: with WINDEV 16, you can offer **fast time** to market to your company and to your customers.

MANAGER

RAD (whose use is optional) can generate entire applications or specific processes. RAD also enables you to create prototypes. The time saving is really noticeable.

NEW

Improved creation wizard

AAF TECHNOLOGY

The generated applications automatically benefit from all the AAF

MAIN POINTS

Immediately usable application
A prototype in a few minutes
Patterns
Customization

CHOOSE YOUR RAD

YOUR OWN CODE



SIMPLE CODE

OOP CODE

CLIENT/SERVER CODE

REMOTE ACCESS CODE

JAVA CODE

OPTIMIZED CODE

WEBSERVICE CODE

INDUSTRIALIZE THE CODE GENERATION: CREATE PATTERNS

AAA: Automatic Application Architecture ("pattern")

A constant worry for the project manager is to insure that programmers in the development team follow the company standards when developing applications: GUI, code...

The AAA technology (see page 9) allows you to create your own RAD patterns. You decide what is included in the windows, where the controls are positioned and what code will be generated by the different RAD options: entire application or section of code.

The increase in productivity and in code security is phenomenal.

For a small investment (pattern creation), each use of the pattern will help standardize the future developments without imposing constraints.

A RAD pattern is easy to create: it is a simple WINDEV project.

The applications automatically respect the style book. The project manager is therefore sure of the consistency of the programs built



(code and GUI).

And the produced code is already tested!

Patterns are the answer to your constant needs for quality control and style book enforcement.

Create an application in 6 clicks

16

WINDEV®

With WINDEV 16, you can write your programs yourself, or you can use RAD. The Rapid Application Development gets its full meaning!

6 STEPS FOR CREATING AN APPLICATION

An application is defined in 6 easy steps with the WINDEV 16 RAD:

1. Define or retrieve the analysis: the tables, the columns, the keys, the indexes, the links...
2. Click the "RAD" icon ...
3. Select the tables that will be used by the application.
4. Choose your application's style book (skin template) and pattern.
5. Choose the additional features to include: automatic backup, help, report generator...
6. Validate: the application is generated.

It's that simple. The entire application (code, menus, windows, reports, ...) is generated in a few seconds.

EVERYTHING CAN BE CUSTOMIZED

The created application is ready to operate. You can modify it and customize it as you wish.

AUTOMATIC DEPLOYMENT

Deploying the application (CD, network, HTTP, ...) is automatic via the setup procedure generator supplied with the product.

ANSWERING A REQUEST FOR PROPOSAL? A PROTOTYPE!

A RAD application can also be used as an answer to a request for proposal: the prospect will directly use the future application, rather than read a document describing it (WINDEV automatically generates this document as well, see page 62).

You're a consulting company? You'll win bids thanks to WINDEV 16!

INSTALL A READY-TO-USE APPLICATION IN RECORD TIMES

An urgent application must be created and deployed as quickly as possible? Create this application with RAD, and deploy it immediately.

You can customize it and develop additional features while users can already use this first version.

Time to market is crucial in a competitive world.

Thanks to WINDEV, you can offer fast time to market to your company and your customers.

"WINDOW" RAD, RID

RAD can also manage specific windows, or only the interface (RID: Rapid Interface Design).

EASILY CREATE YOUR OWN PATTERNS

The version 16 enables you to create your own RAD patterns: see opposite.

Example of automatically generated application. Some of the windows generated by the "Application RAD": the entire application can be used right away. Everything can be modified and customized.



THE MOST ATTRACTIVE INTERFACES WITHOUT WRITING ANY CODE

The interface generator (UI) supplied with WINDEV 16 is certainly the **most powerful** and **easiest** to use **on the market!**

You'll easily create great custom applications.

No knowledge of UI design is required.

The management of UIs (interfaces) is performed visually (WYSIWYG) **with the mouse.**

Better designed UIs greatly benefit the companies using them: fast training, information easier to manage, ...

CREATE FABULOUS INTERFACES



CREATE FABULOUS INTERFACES

Too often in Windows, the created interfaces are dull, ordinary, and lacking in character.

The WinDev UI generator will enable you to easily create great-looking windows that respect the Windows standard but are custom designed.

The use of style sheets and skin templates will help you standardize the entire look of your application (style book).

FULLY CONFIGURABLE WINDOWS

The windows can be fully customized: title, icon, initial position and size, animation at opening, resizing and storing, automatic adaptation to the content size, scrollbars, DDW, popup menu, independent HyperFileSQL context, background image, opacity, message bar, movable menu bar + custom color, toolbar, grip, MDI, border type, splitter and anchoring, plane and tab management, ...

A window can support up to 10,000 controls.

NON-RECTANGULAR AND TRANSPARENT WINDOWS

WINDEV 16 enables you to automatically create windows of any shape and to manage the opacity of the controls and backgrounds.

AN EXTENSIVE "CLIPART"

WinDev comes with more than 10,000 "clipart" pieces (buttons, images,...).



MANAGER

An attractive, efficient interface insures a better productivity for the users. And it makes your applications stand out. WINDEV 16 is the only tool in the world to offer this integrated UI concept

NEW

Scheduler control
Evolutions of controls: table, treeview, ListView

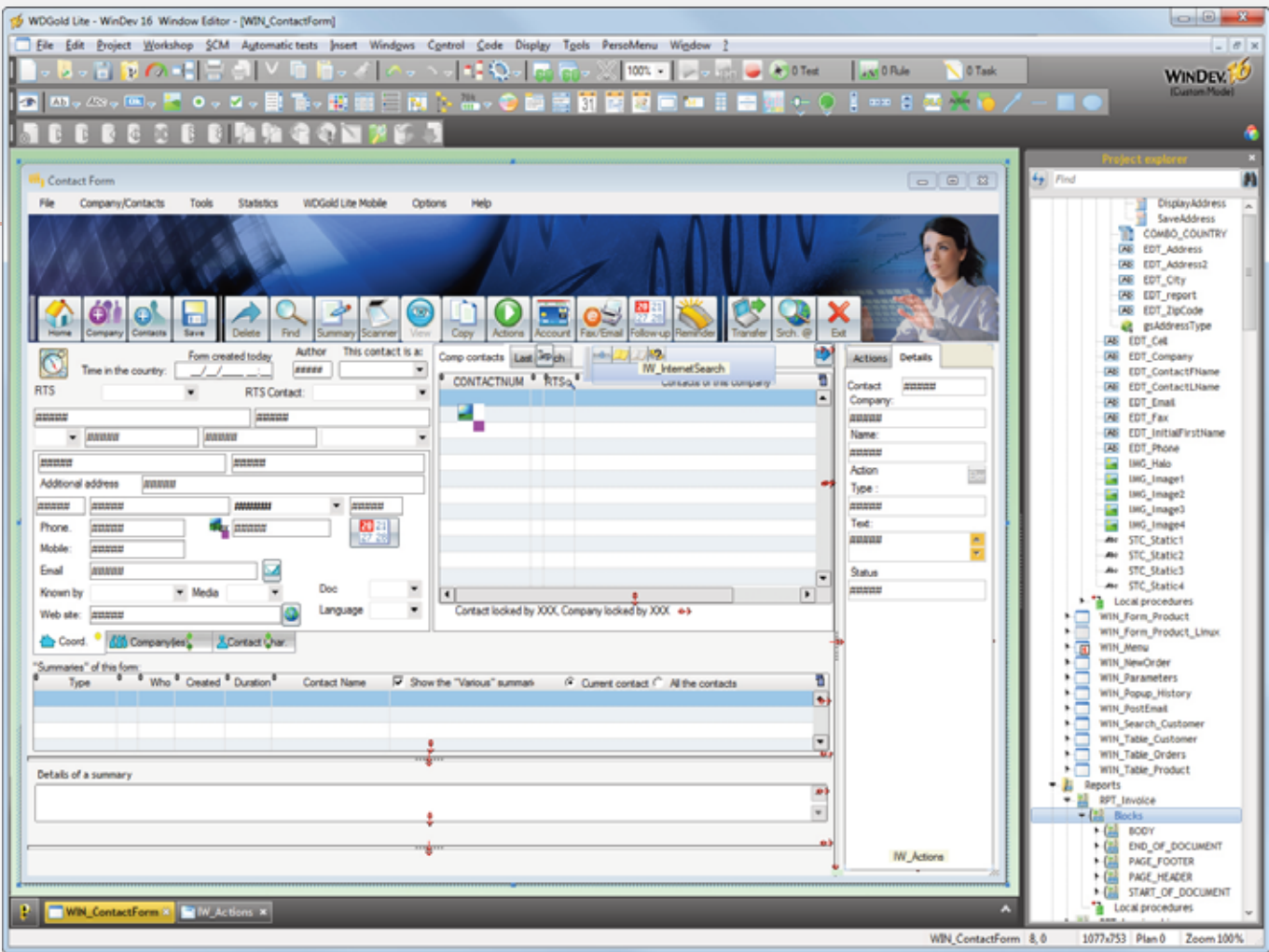
AAF TECHNOLOGY

Automatic & assisted input
Input masks
Spelling checker
Persistence of control content
Resizing combo boxes
export to Word, Excel, XML,

MAIN POINTS

Arguably the best interface generator in the world (and the easiest to use)

A turbo-charged window editor



Creating windows is very intuitive: all you have to do is Drag/Drop the controls from the toolbar with the mouse. Still with the mouse, you

have the ability to select a control, resize it, move it, edit its properties ("7-tab" technology), enter its code: everything is WYSIWYG. Click the "GO" icon to run

an immediate test of the window, without compiling the entire project.

YOU'LL NEVER BE LIMITED

The windows themselves offer a powerful setting, without having to enter a single code line:

- automatic style book (skin template, see page 26)
- customizable menu bar
- background image
- type of border
- icon
- resizable or not
- multilingual (see page 65)
- automatically store

the size and position

- animation at opening or closing
- presence (or not) of system buttons
- configurable sizing handle
- clipping (free shape)
- popup menu
- management of planes
- MDI, modal window, non-modal window
- toolbar
- inheritance (win-

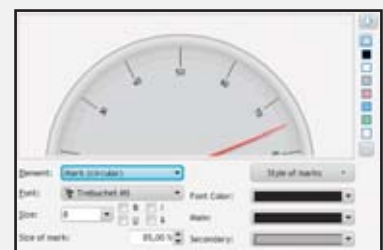
dow templates, see page 29)

- internal windows
- dim disabled windows (DDW)
- initial and maximum width/height
- automatic closing
- AAF (see page 24)
- automatic edit of the window documentation (see page 62)
- database context linked to the window

The created windows are multi-plat-

form windows. They work on Windows, Linux, Java and they are compatible with Mobile and Internet.

The controls found in the windows offer even more parameters (see the next pages).



The controls offer a great richness and unlimited settings (different available progress bars, above, definitions of parameters)





...continued

The creation and maintenance of controls, as well as their look, which can easily be configured (they are created and configured in **WYSIWYG** mode), are a real asset that you won't be able to do without as soon as you've had a taste of it



The Scheduler control

AUTOMATIC SECURITY

When defining a control, it automatically inherits all the security parameters defined during the modeling and you only have to specify the additional security parameters: checking the existence in a database, number of characters, switch to uppercase characters, date validity...

Without writing any code, in just a few clicks, you've secured your applications. This information is printed in the documentation so that it can be checked and modified later by programming.

THE UI OBJECTS: NO CODE IS REQUIRED

WinDev uses an innovative approach for managing the elements of the interface: the controls are drawn interactively in the UI editor, and their description is directly stored in the window. No code is required; you don't have to handle any API, nor any complex or incomprehensible class!

The windows are advanced objects that contain the description of their controls.



AUTOMATIC SOPHISTICATED CONTROLS

CREATE SOPHISTICATED CONTROLS, SECURED VIA INPUT MASKS

- Sophisticated controls, ready to use and to be customized:
- formatted edit controls
 - display controls (formatted static control)
 - tabs
 - drop-down list boxes
 - combo boxes
 - auto-filled combo boxes
 - images
 - animated

- images
- scrollbars
- graphic buttons (icons)
- animated graphic buttons
- text buttons
- on/off buttons
- time-delayed buttons
- check boxes
- radio buttons, single column and multi-columns
- tables
- graphic lists

- treeviews
- treeview tables
- hideshow controls
- OLE controls
- ActiveX controls
- map areas
- spin buttons
- controls with soft shadow
- sliders, progress bars
- HTML controls
- icon bars
- geometric shapes
- splitters

- graphic lists
- status bars
- Web camera
- RTF
- loopers
- progress bar
- sidebars
- charts
- bar codes
- carousel
- calendar
- organizer
- scheduler
- ...

6 EXAMPLES among hundreds of possibilities. *Green border: the definition of the control in the "7 tabs"; black border: the displayed control*

Automatic scrollbar

Input mask: ALL IN CAPS (letters, digits and symbols)

Select or enter a mask:

Input mask: 1st letter in uppercase characters

Select or enter a mask:

Input mask: Email address (strict validation)

Select or enter a mask:

First Name: James

Input mask: Email address (strict validation)

Select or enter a mask:

Information text displayed when the control is empty:

Enter your email address

Email: Enter your email address

Help displayed in the control

Mandatory input

Check the spelling

Store the value

Display the bounds in:

EDIT CONTROLS: EXAMPLE OF SETTING

The "edit" control of WINDEV 16 offers incredible power.

Let's see some setting options (via the "7 tabs" or by programming):

- **Text**, single line or multiline (automatic management of scrollbars, scrolling), RTF, HTML...

- Several preset **masks** are available: text (uppercase characters, first letter uppercase), numeric, currency, date, time, duration, password, file path, IP address, zip code,...

The mask can be customized with a regular expression.

The input can be defined as being mandatory or not, it can allow a maximum number of characters, check the numeric bounds (min and max)

- **Are also proposed:** associated caption, alignment, spelling checker, assisted input according to the values found in the database, popup menu, automatic storage of previously entered values, ellipse, automatic drag and drop, context-sensitive help (information text, tooltip, link with the help editor...)

The style of each elements is inferred from the current style book and it can be modified.

Spelling checker



Control toolbar

- Therefore, each window knows how to display its controls and manage the input without any programming.

The window editor allows you to create and modify the objects independently from the source code of the application.

LOTS OF IMMEDIATE BENEFITS

- No code generation is required to create objects,
- The supported objects are more evolved than the base objects (input mask, color, fonts, styles, images, tooltip ...),
- The codes for initializing and checking the objects can be associated with the object and stored in the window.
- The control properties can be modified by programming: size, color, visibility, position, caption...

This approach for working with controls will save you a great amount of time when maintaining your applications, and will make your programs more robust.

CREATE CONTROLS BY PROGRAMMING

The functions named **ControlClone** and **ControlDelete** are used to dynamically create and delete controls from a program: this can be useful sometimes!

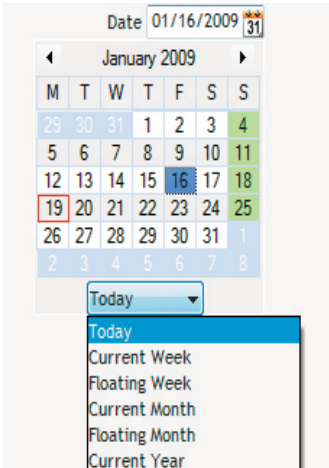
WYSIWYG MENU GENERATOR

The menu editor allows you to create menus that follow the Windows standard, with the Office XP or Vista look, and that will work regardless of the Windows version.

DRAG & DROP

Drag & Drop operations can be easily implemented in your applications.

Don't get left behind. With WINDEV 16, easily create the most sophisticated interfaces!

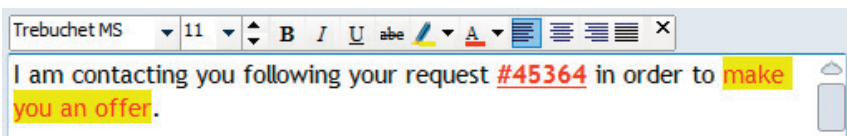


THE "DATE" CONTROL WITH AUTOMATIC CALENDAR

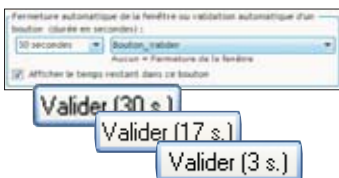
This control is used to enter and display a date. The integrated input mask prevents from entering invalid dates.

Even more sophisticated, the control proposes on its right a mini icon that displays a calendar (fully customizable) in order to simplify the input.

The calendar can also be displayed by programming.



TIME-DELAYED VALIDATION BUTTONS



This type of button is used to display a countdown stopwatch and to validate the window if no action is performed by the user. Very useful to prevent from locking a batch process for example!

THE "RTF" AND "HTML" CONTROLS

The "RTF" and "HTML" standards are universal standards for text formatting. This RTF and HTML control automatically displays a formatting toolbar to the end user. The spelling checker is enabled.

THE 2D AND 3D CHART DESIGNER

A powerful chart control is available. It offers 2D charts and a spatial 3D view of charts; the user can move the chart at run time, make it turn, change the view angle, change its type, etc...

Chart creation is also offered to the end user via the user menu (AAF feature), allowing all the users of your applica-

tions to graphically view the requested data. And these charts can even be printed: imagine how your reports will look!



POWERFUL VISUALIZATION TABLES

...continued

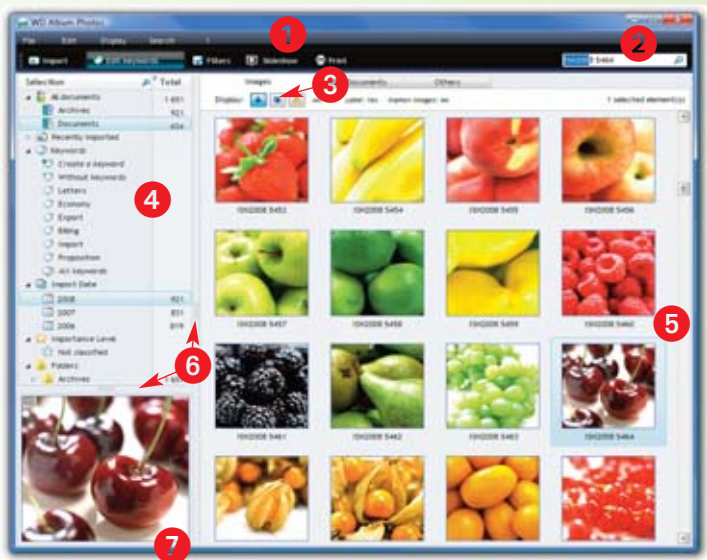
WINDEV 16 makes it easy to view the content of tables. You can easily and quickly create great looking and easy to use visualization windows, that contain all the features expected by the users.



COMMENTED EXAMPLES OF EFFICIENT "VISUALIZATION TABLE" UI

- 1 Help included in the control
- 2 Automatic search magnifier
- 3 Different fonts, sizes and colors in a cell (RTF)
- 4 Multiline cells
- 5 Proportional scrollbar boxes (also displays the record number)
- 6 Display of bar codes
- 7 Automatic menu for exporting to XML, EXCEL, WORD, OpenOffice, for creating charts, for selecting columns to view, for printing...
- 8 Image
- 9 Merging cells
- 10 Automatic column total (the user has the ability to add some via AAF)
- 11 Resizable table

- Also:
- Automatic fill via a query
 - Save the custom configuration
 - Column moved by the user
 - Horizontal tables

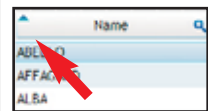


- 1 Icon bar
- 2 Assisted input (if the value entered is already found in the database, it is automatically filled as soon as the first characters are entered)
- 3 On/Off button
- 4 Treeview table
- 5 ListView
- 6 Splitter allowing the user to resize the inside areas of the window (up to 16 per window)
- 7 Image

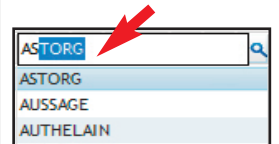
The end user can add totals, averages, hide columns, print a table, export a table to Excel or Word, ... See page 24.

DETAILS OF COLUMN TITLES

The user can sort a column by clicking its title.



You can search for a value in a column by clicking the magnifier icon in the title bar.



- 1 Mix a table with edit sections
- 2 All the table elements can have a different style: color, size, font...
- 3 The image of the grip can be customized
- 4 All the controls can have an opacity coefficient



The selection bar can be fully customized



The search in a table is automatic





Click to create, no coding required

POWERFUL CONTROLS IN JUST A FEW CLICKS "7-TAB" TECHNOLOGY

...continued

You know how to click: you know how to create controls!

With WINDEV 16, the characteristics of each control can easily be defined via an exclusive interactive dialog, which is very simple and very powerful: the "7-tab" technology.

Each tab is used to define the different characteristics of a control, a window, a report...

THE "7 TABS"

The content of the tabs depends on the control type ; we are only detailing three of the tabs for a control (see the next pages).

The 7 tabs of a control are:

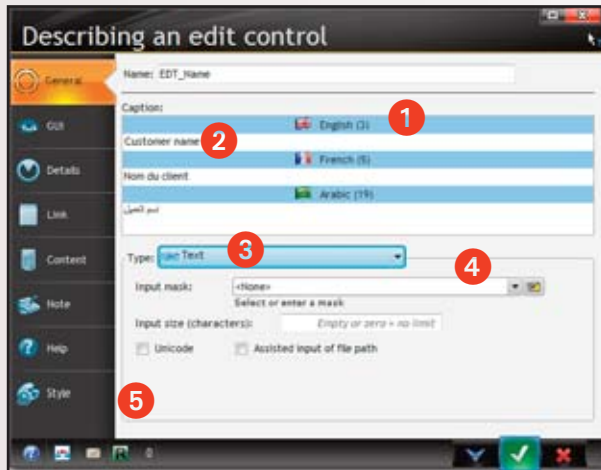
- the general aspect
- the GUI
- the details
- the link to data
- the automatic fill
- the notes
- the help associated
- the style.

It is of course also possible to create and modify controls via the traditional method of the "modifier" or by programming.

THE "7-TAB" CONCEPT ELIMINATES 95% OF THE CODE REQUIRED FOR THE UI!

Via the 7-tab technology, you can just click to define what would take hundreds

of code lines in other environments.



The 1st tab: "General". The main control information is defined here: type, input mask,...

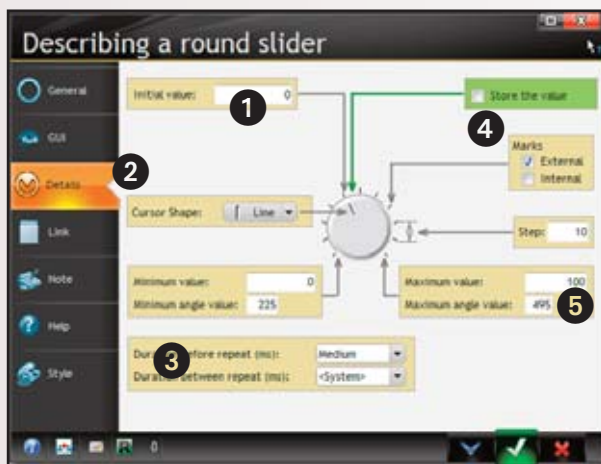
- 1 Caption in all the languages supported by the project
- 2 Spelling checker
- 3 Control type
- 4 Input/Display mask
- 5 Call to the automatic translation tool



The 2nd tab: "GUI". The interface elements of the control are defined. Remember that any choice can be modified later by programming.

- 1 Initial status of control
- 2 Effect of TAB key
- 3 Various information: alignment, popup menu to open, shortcut letter...
- 4 Management of planes and groups of controls
- 5 Automatic anchor when resizing a window

Etc...



Let's see the "Details" tab of a "slider" control. The presentation elements of the control are defined

- 1 Initial value
- 2 Cursor shape
- 3 Duration
- 4 Marks
- 5 Bounds...

Etc...

MANAGER

No knowledge of Windows API or OOP is required to create extraordinarily original interfaces, that are efficient and secure

NEW

Larger visualization area

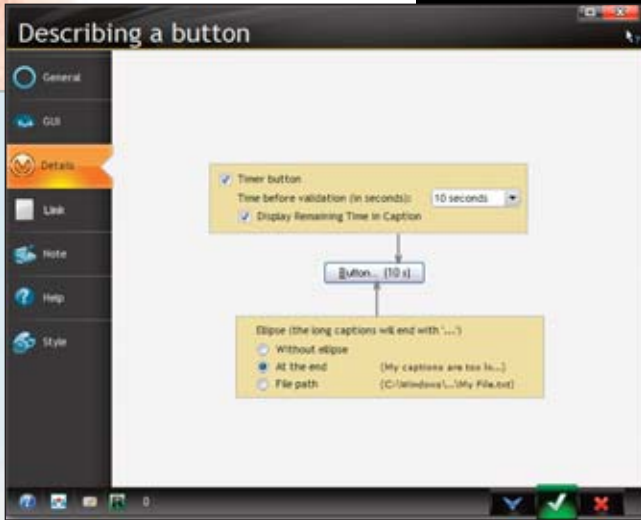
AAF TECHNOLOGY

Automatic input checks
Visualization of areas
Automatic help

MAIN POINTS

A few clicks replace thousands code lines
Fewer risks of bugs

POWER AND TECHNOLOGY OF "7-TABS"



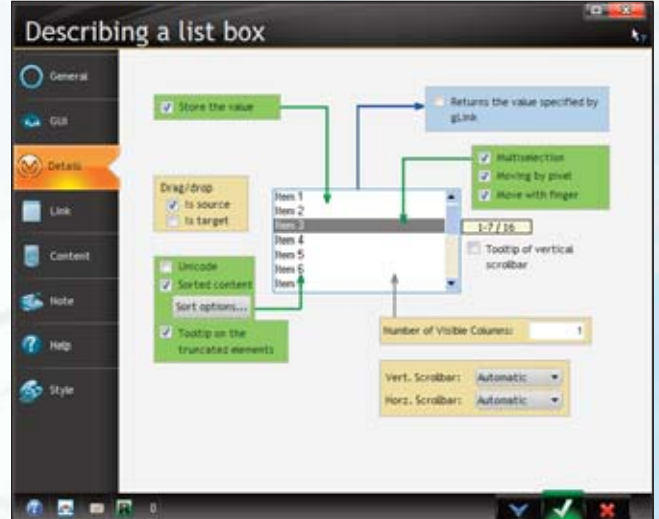
"Button" control



"Edit control" control



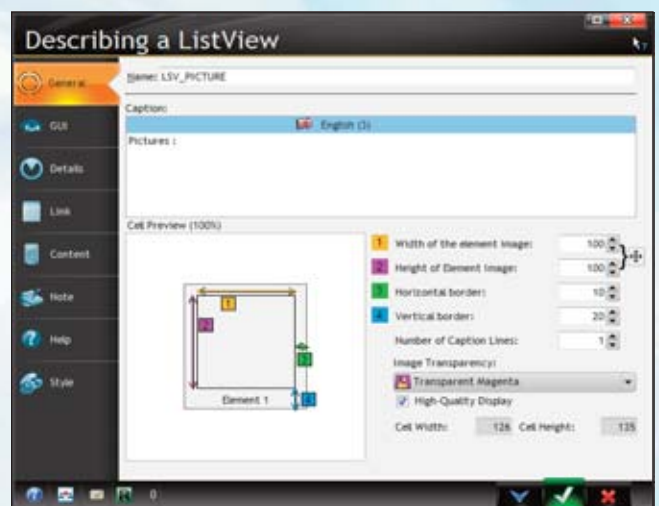
"Bar code" control



"List box" control



"Image" control



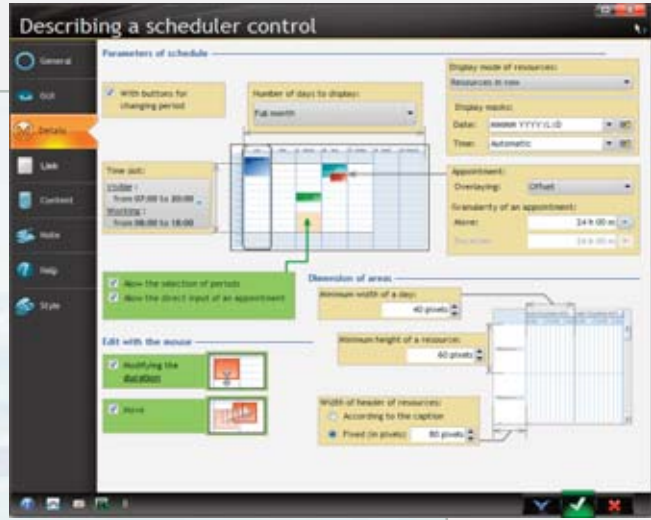
"ListView" control

You save millions of code lines with the "7 tabs".
Great time savings!
What power, security, efficiency for your interfaces!

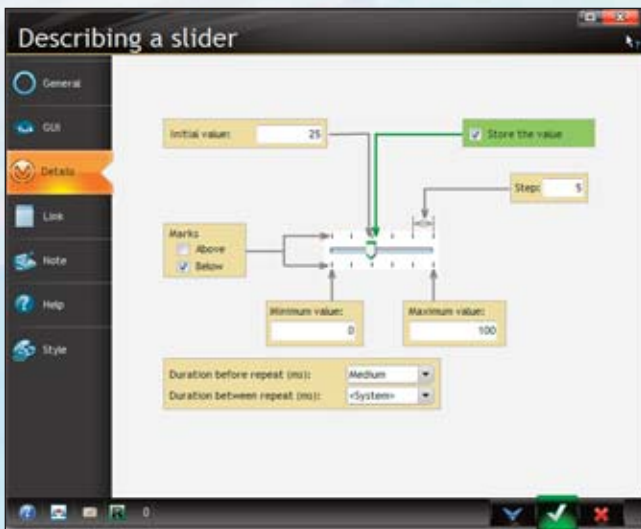
The "7 tabs" make it easy to configure all the parameters available for the controls by proposing visual choices whenever possible. This makes it easy to find out what options are available, to understand what they affect, and to implement them. Let's see some examples of the "7-tab" windows.



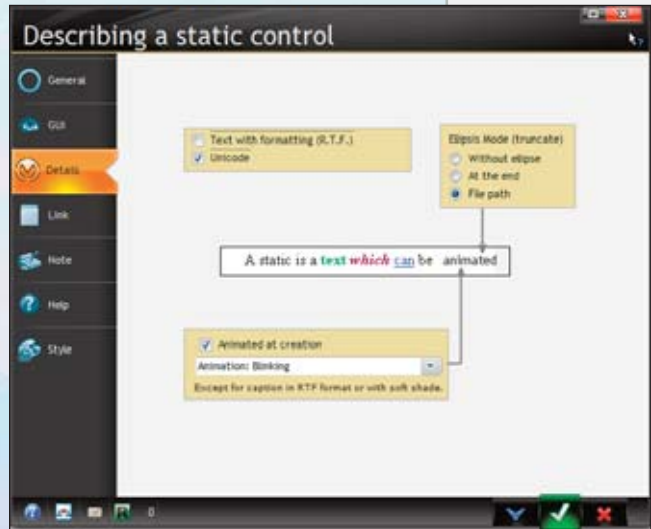
"Automatic link with table column" control



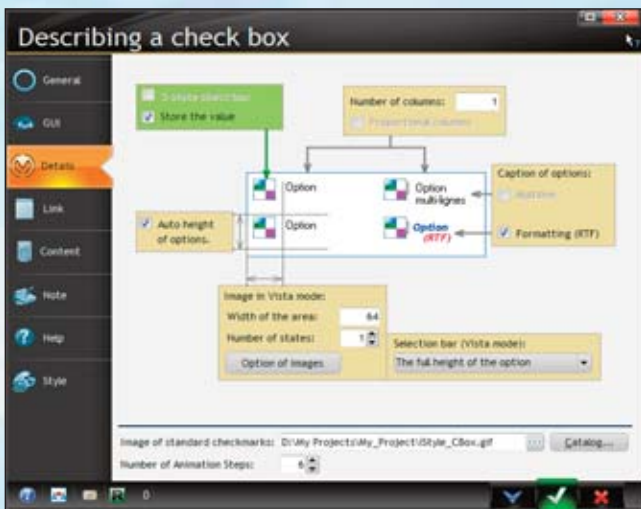
New "Scheduler" control



"Slider" control



"Static control" control



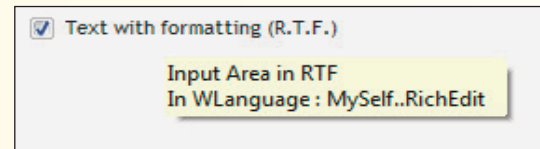
"Check box" control

MODIFYING THE PROPERTIES BY PROGRAMMING

Most of the properties defined in the "7 tabs" can be modified by programming.

But what is the name of the property I need to use?

The name of the property is intuitive and the "7-tab" tooltip indicates the name of the WLanguage property. This doesn't seem like much, but you won't be able to live without it!



Did you know it? You have the ability to define a text input area in "RTF" (Rich Edit) by programming. A tooltip reminds you of it...

AUTOMATIC FEATURES (AAF) FOR YOUR USERS

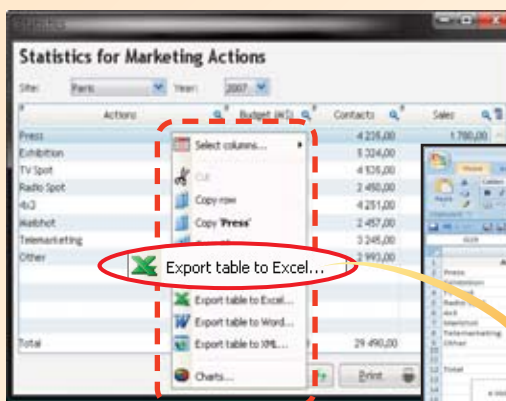
Regardless of the skill of the development team, the user will always want to do something that hasn't been planned, or modify the behavior of a window!

The UMC (User Macro Code) allows the user to create macros.

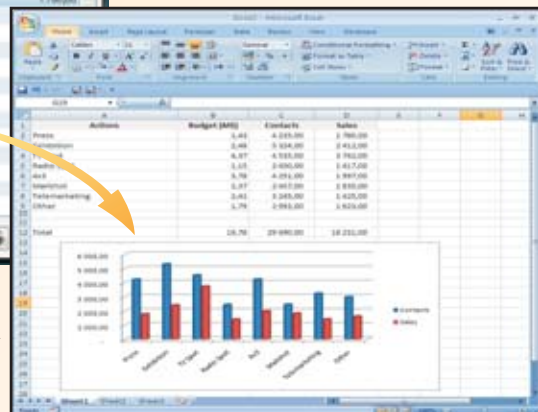
The "Reports and Queries" reporting tool can be freely distributed with your applications (see page 30 and 31).

And the **AAFs** (Automatic Application Features), **present by default in all the applications developed with WINDEV 16**, allow each user to optimize the applications via rich features without your teams having to code anything!

AUTOMATIC EXPORT TO WORD, EXCEL AND OPEN OFFICE



A right click in your applications automatically opens the AAF menu



AUTOMATIC LINK TO WORD, EXCEL AND OPEN OFFICE

Linking to Office applications (Word and Excel) is simple: a popup menu is automatically present in your applications (accessed by the user via a right click) and enables data export from tables without programming. By programming, clear commands are used: TableToExcel, TableToWord...

USER FREEDOM AND EFFICIENCY

AAF: IT CHANGES THE LIFE OF THE USERS

Imagine: a user must perform an inventory at the last minute that wasn't planned for in the application? How to get the product list, simulate unit costs? With WINDEV it is automatic. Each table comes with an automatic export to Excel (and OpenOffice Calc) feature. One click and the export is done...

RICH AND POWERFUL AAF

The AAFs are accessible in each application via a right click in the relevant control or window.

The user can enable the sto-



Dim disabled windows (DDW): the inaccessible windows (in which no click can be done) are grayed. Convenient!

rage of a control or the history of inputs, add a total or an average into a table column, create display filters.

The users can also increase the size of the combo boxes displayed (did you notice: they're often too small!!)

Via the AAFs, the user is more effective without adding any work to the development team.

MANAGER

The AAFs are exclusive to the applications developed with WINDEV. The users are more efficient.

NEW

AAFs available in Linux
Print setting
AAF for the TreeView control

AAF TECHNOLOGY

See the list on these 2 pages

MAIN POINTS

Make the users more efficient and happy
Free the Information Services department from several tasks



Find out the list and details about AAFs on www.windev.com

AMONG THE AVAILABLE AAFS...

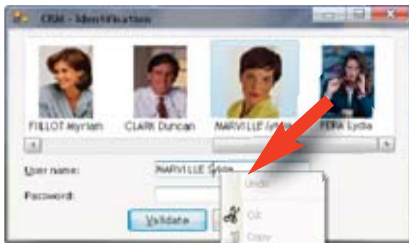
Let's see a list of the main AAFs available by default in an application developed with WINDEV 16.

Each user benefits from these features without the developer having to code anything.

- The "Reports and Queries" program can be provided with your applications:

reports, queries, PDF, sending emails, bar codes (see page 30).

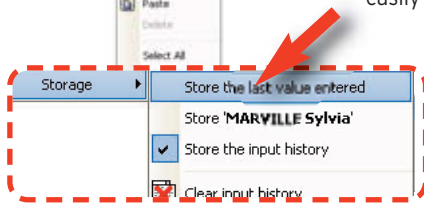
- Export the content of tables to Word, Excel and OpenOffice, XML,...
- Search in the database via any table, move and modify the table columns that are not locked
- Search in all the controls found in a window (Ctrl F)



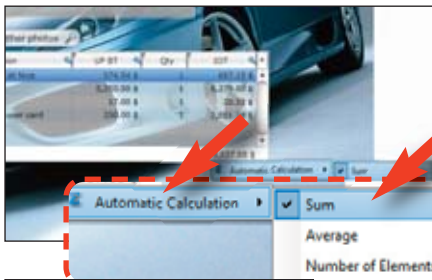
CONTROL PERSISTENCE

To avoid having to re-enter a common value, the user can enable the control persistence via a right click: store a fixed value or store the last value entered.

Very useful for date ranges for instance! By combining a control persistence and a button with automatic validation, you can easily start recurring processes.



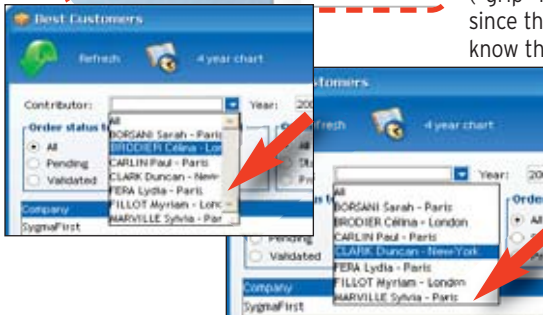
ADDING A TOTAL



Forgetting to total a column is unfortunately a common oversight. With the AAF, no worries for users! Users can add a total via a simple click, wherever they want (total, average, counter).

ENLARGING A COMBO BOX

Each combo box can be resized by end users ("grip" in the bottom right corner). Useful since the developer does not necessarily know the number of elements that will be proposed in a combo box that displays data, or the size..



- Automatically create charts based on a range of data
- Add totals, counter and average into the tables
- Add automatic validation timer to buttons (in order to prevent batch locking)
- The combo boxes can be resized by the user (avoid "postage stamp" size combo boxes, see opposite)
- The persistence of a control can be defined by the user (fixed value or last value entered)
- The history of values entered in a control is proposed to the user
- When the OpenOffice dictionary is installed on the computer, the spelling checker is proposed in the edit controls
- A popup menu for environment configuration is proposed on the windows ; the user can enable or disable the DDW feature and the window animations, or reinitialize the persistence parameters...

Users of applications developed with WINDEV 16 automatically benefit from features that allow them to better use their applications, and be more efficient in their jobs.

The companies that use WINDEV 16 applications perform better.

TIMER BUTTON

Adding an automatic validation timer to a button is useful for the long processes that

display not so useful confirmation messages... Instead of having the process locked, the user gets results without was-

ting time.



BE TOUCHY!

...continued

Touch screens are more and more common: **interactive kiosks** of course, but also laptops and **desktops, POS...**

WINDEV 16 supports the implementation of touch screens in your applications, automatically.

Your applications automatically operate with touch screens!

EVERYTHING IS AUTOMATIC IN WINDEV 16

The control's response to a screen touch is automatically taken into account in WINDEV 16 applications.

For example pressing a button with your finger on the screen instead of clicking it with mouse cursor.

You don't need to program anything!

EVEN FURTHER WITH TABLE CONTROLS

Table controls support scrolling with a finger with inertia effect by directly handling the data, without having to use the scrollbar (like with touch phones).



APPLY A STYLE BOOK IN ONE CLICK

...continued

Choose your application's skin template, or create it. And **your entire application** benefits from the **style book** defined this way regardless of the version of Windows: XP, 2000, 2003, 2008, Vista, 7...

STYLES

A style defines the different attributes of a control: color, border type, font and size of the label, font of the editable area, ...

All the elements of a style can be customized. Styles can be defined for any type of control.

Benefit: when a style is modified, all the controls that refer to it are immediately and automatically modified, in all project windows.

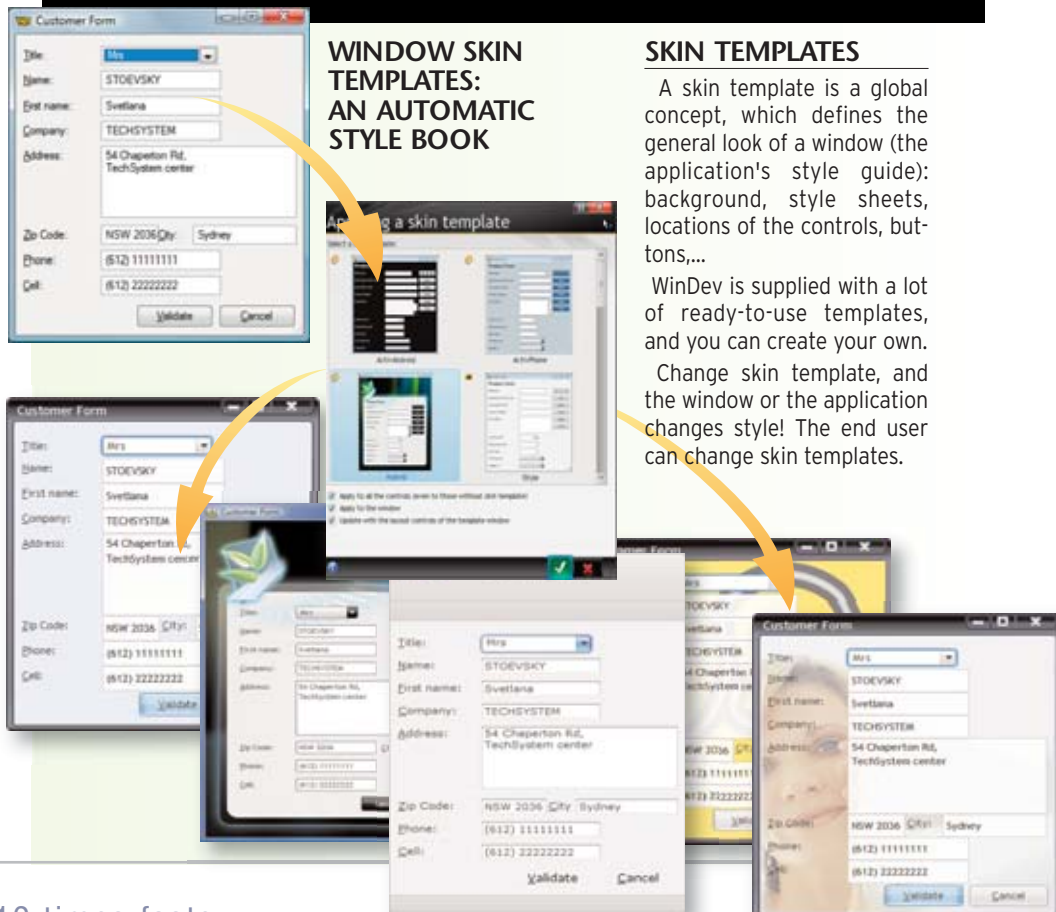
WINDOW SKIN TEMPLATES: AN AUTOMATIC STYLE BOOK

SKIN TEMPLATES

A skin template is a global concept, which defines the general look of a window (the application's style guide): background, style sheets, locations of the controls, buttons,...

WinDev is supplied with a lot of ready-to-use templates, and you can create your own.

Change skin template, and the window or the application changes style! The end user can change skin templates.

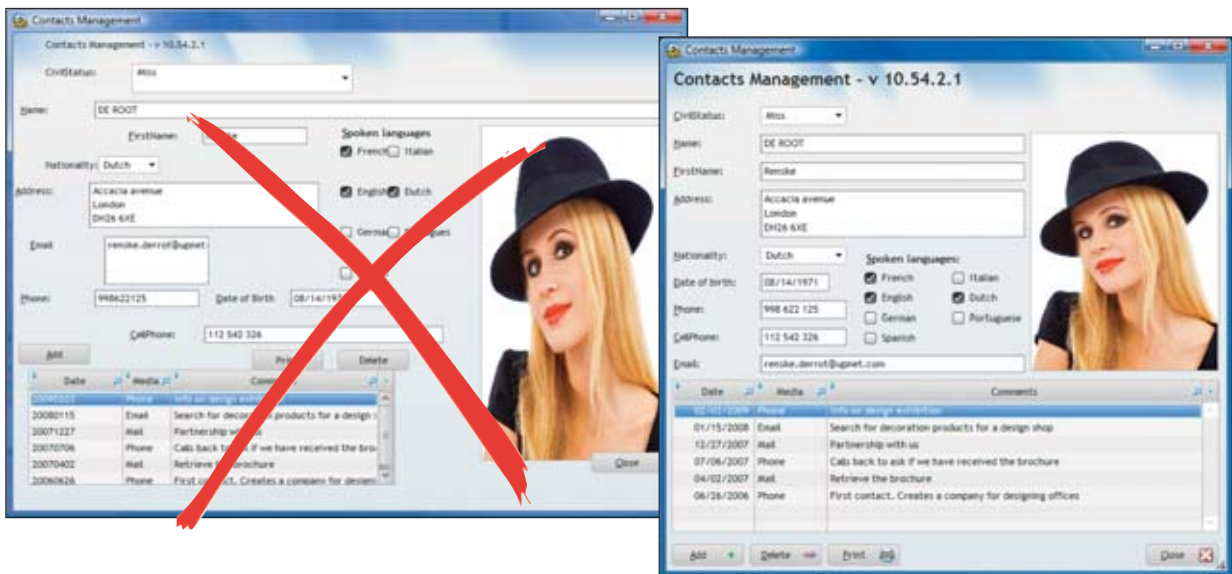




Say no to ugly, hard-to-use windows

AUTOMATIC INTERFACE CHECKER

...continued



THE INTERFACE CHECKER WORKS IN THE BACKGROUND

The real-time UI checker lets you immediately arrange your controls with precision. From the time you start developing your application, controls are perfectly aligned, respecting user-interface rules and windows standards.

The controls are positioned in real time by a smart snap-on feature that deduces their position based on all the other

controls' position.

You automatically deliver well-designed windows, with perfectly aligned controls and harmonious sizes. This gives your application a professional look from the outset without spending time on it! Combined with style and templates, the UI checker lets you create stunning interfaces!

UI COMPILER

When compiling a project, the windows' content is also analyzed. Errors are flagged during compilation: control too small, missing image...

Deliver clean and stunning windows from the get go with WINDEV 16 and make your customers really happy.



...continued

SECURE YOUR APPLICATIONS WITH THE GROUPWARE

CONTROL ACCESS TO YOUR APPLICATIONS

Access control is simply defined in the editor. No programming is needed to insure secured access to your applications, simply activate the "groupware" option.

Don't hesitate to restrict access to sensitive data (personal data, salary, revenue, etc...).

GRANULAR ACCESS CONTROL

Access control enables you to filter the access to several elements: menu choices, buttons, controls, groups of controls, windows, reports, ...

The protected elements are inactive and either grayed out

or hidden based on your choice.

THE SUPERVISOR MODE

The supervisor of the delivered application will be able to set up the user rights at any time. A friendly editor lets you define and manage these rights.

If you want, the rights of the users or group of users can be created or modified by programming.

LDAP

If you want to use an existing LDAP login database, the access control will use it.

Automatically make your applications secure, without coding anything!



INHERITANCE AND OVERLOADING OF UI (WINDOWS, CONTROLS) AND CODE



Your projects' size has increased with time and with the breadth of WINDEV.

Your main projects now often count 700 to 800 windows (according to the latest poll, the average number of windows per project is 278).

Inheritance and overloading enable you to perform **"overall" modifications** on control properties and source code for a set of windows: WINDEV 16 offers templates, inheritance and overloading.

EASY CHANGES



Window template

REMINDER

You're already familiar with version 15? Please note that there is a 68-page technical document dedicated to the 996 new features in version 16. Available in PDF format upon request at www.windev.com.



MANAGER

The very powerful concept of templates, inheritance and overloading let you easily manage the future modifications of the entire UI of an application, without having to retool each single window.

NEW

Miscellaneous changes

AAF TECHNOLOGY

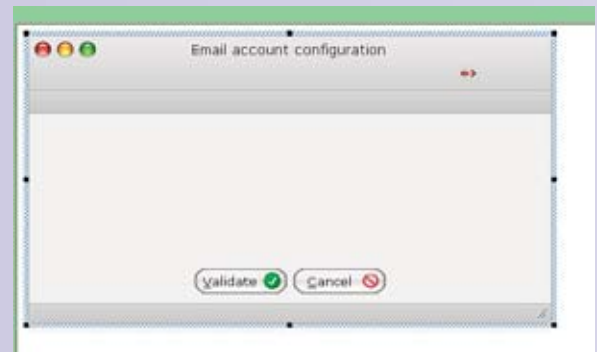
Windows and controls inherit from AAF

MAIN POINTS

Easy modifications of a set of windows
Customize modifications for each control setting

OPERATING MODE

1. The first step consists in creating the template (window template). You simply create the window as you would normally do. All the properties and code defined for this window will be applied to the window derived from this template.
2. Controls are usually added to the template. Properties and code are entered.
3. When you create a new window, you can specify that it derives from a template.
4. You can also apply the template to an existing window, or create a template of template.



Simple window template: only 2 buttons...

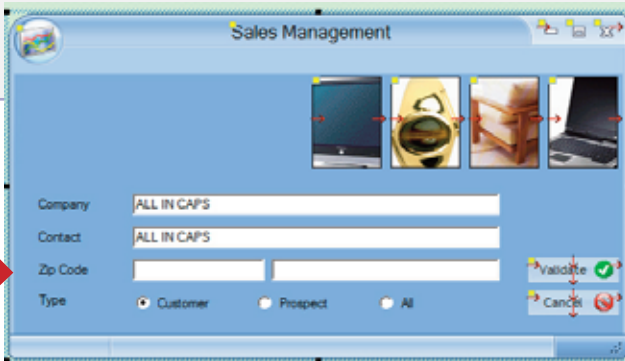
Note the skin template used here (comes with the product). No coding is needed to benefit from this feature.

WINDOW TEMPLATE

A window template is a sample window that you define.

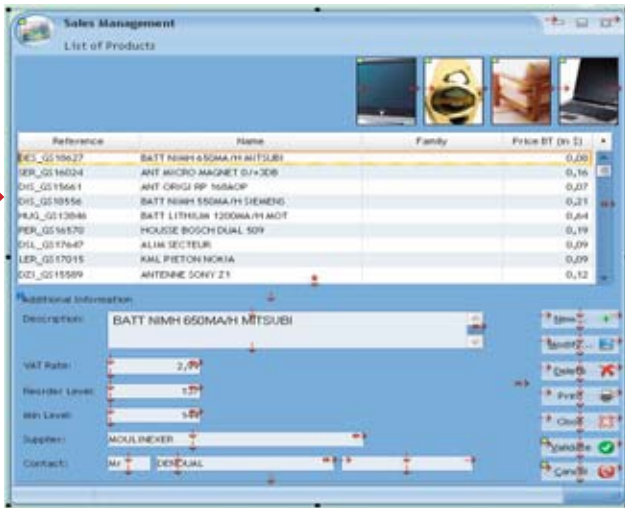
You define its contents (background, controls, code, local procedures, etc.) and the position of these elements.

Later on, each time you create a new window, it can be based on one or more



A first window derived from the template with overload.

Note that the little yellow square represents the inheritance link with the template's controls.



A second window derived from the template with overload of the template's "size" property: the size of the window has been modified.

Control properties (UI and code) can also be overloaded.

templates.

Window creation becomes standardized. You can also apply a template to an existing window.

When a template is modified, WINDEV 16 offers to modify all the windows that use this template.

If some windows should not follow the template any more, you can dissociate them from the template.

If in some other windows you may wish to only dissociate some controls from the template, or some parameters of these controls (the control location for instance), you can also do it.

INHERITANCE, OVERLOADING

Window and control templates allow you to share and re-use sets of controls and also overload them in order to modify them.

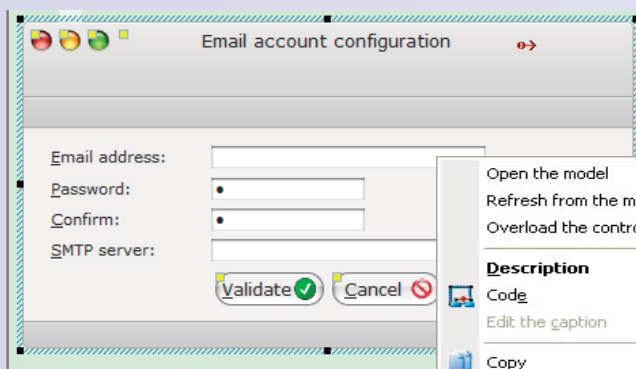
You easily can take advantage of the inheritance and overloading concepts, at the code level but also and mainly for the controls' other properties (position, etc.)

These new concepts allow for an optimized and easily modified UI.

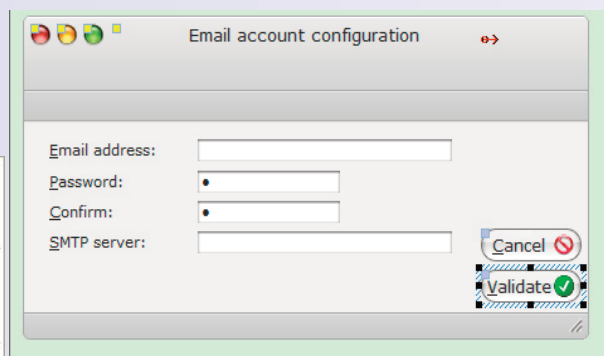
CONTROL TEMPLATE

This technology can also be used with controls. You can define a control template or a set of control templates, that can be reused in several windows or several times inside the same window.

These controls' UI properties and code can be overloaded.



The template was used to create a window. The yellow squares show the controls originating from the template.



A button has been grayed out, the "Validate" button has been customized (size and position), and inherits the other properties of the button (code, style, etc.) The blue square indicates these modifications.

5. In the "derived" window (which inherits the properties and the controls), you can overload the window's properties: change its size, make it non-resizable, add a background image, etc. The same is true for the code.

6. The behavior is the same for controls. You can move them,

make them invisible, change their size, overload their code. You can for example run some verification code before executing the click code defined in the template.



A POWERFUL REPORT GENERATOR (PDF, BAR CODE...)

Creating reports with WINDEV 16 is easy, either through coding or using the Report Generator **provided with the product**.

The PDF standard is supported, as well as **page background, bar codes, labels...** and everything you need!

And **distribute** the report generator **freely** with your applications!



Print preview example; note that you can totally customize this preview

MANAGER

Drawing your reports instead of coding them saves a lot of time. Integrated PDF printing is also an appreciated touch. The distribution of the report editor is free.

NEW

Composite report
Sign duplicate copies - QR code
PDF on Linux
Configuration from print preview

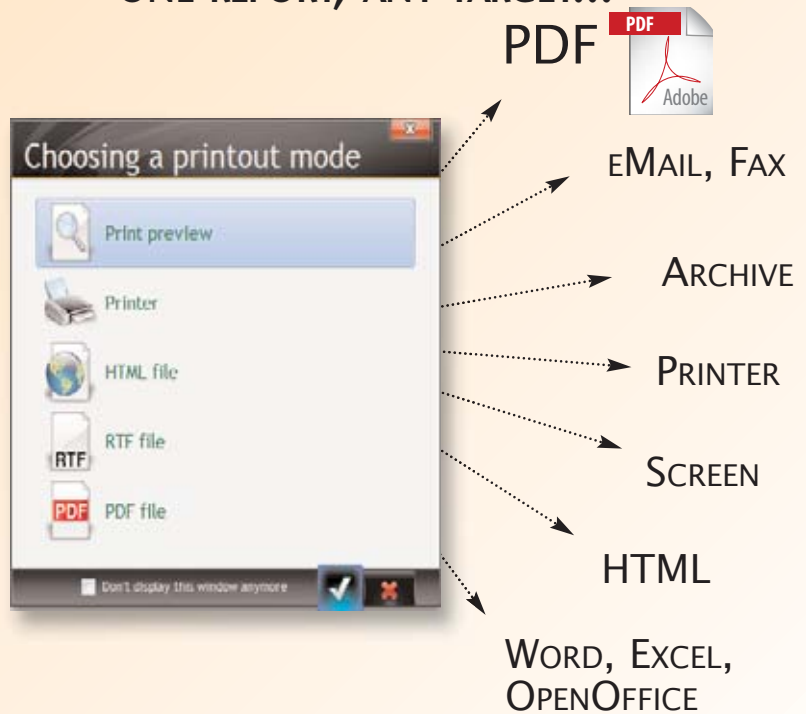
AAF TECHNOLOGY

Print preview
Export to Word, Excel, PDF, fax, email

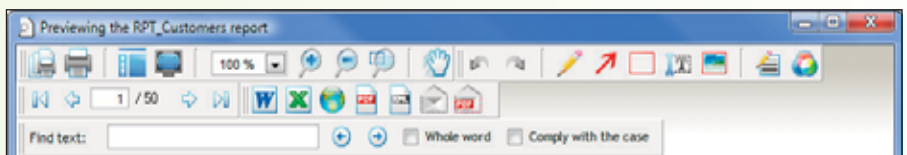
MAIN POINTS

Create reports using drag and drop
Automatic bar codes
Source code can be added to the report
Free distribution

ONE REPORT, ANY TARGET...



ANY TARGET



Preview menu: export the result to Excel or Word, create PDF with a single click, ... or send the report by e-mail



| TARGETS |
|---------------------|
| Laser printer |
| Thermal printer |
| Ink jet printer |
| Dot-matrix printer |
| Sublimation printer |
| Page background |
| Preset form |
| Labels |
| Mailing |
| Fax |
| Archive (Duplicate) |
| Images and photos |
| Business charts |



Easy reports



WINDEV®

DISTRIBUTE THIS REPORT GENERATOR **FREELY** WITH YOUR APPLICATIONS



DELIVER A REPORT GENERATOR FOR FREE TO YOUR USERS

The distribution of the report generator ("Reports and Queries") to your user can be done freely and at no cost!

Make your users autonomous, while freeing the I.S. department from time consuming tasks!

CREATING A REPORT: EASY

A wizard helps you create reports; it asks questions so you won't forget anything! You can of course print reports by using traditional programming commands.

SOURCE CODE WHEREVER YOU WANT IN THE TEMPLATE

WinDev also lets you include source code anywhere in a report template: this way you can create your most custom reports without any problems.

ANY DATA SOURCE

The data used for a report can come from any source: HyperFileSQL, Oracle, Access and so on, query, text file, memory zone, table,...

CLICKABLE CONTROLS

In print preview, report controls can be clickable (and therefore start processes), or even be Internet links. Skin templates apply to print preview.

PRINTING LABELS

WinDev enables you to print labels, page by page or on continuous form.

PDF AND FORM BACKGROUND

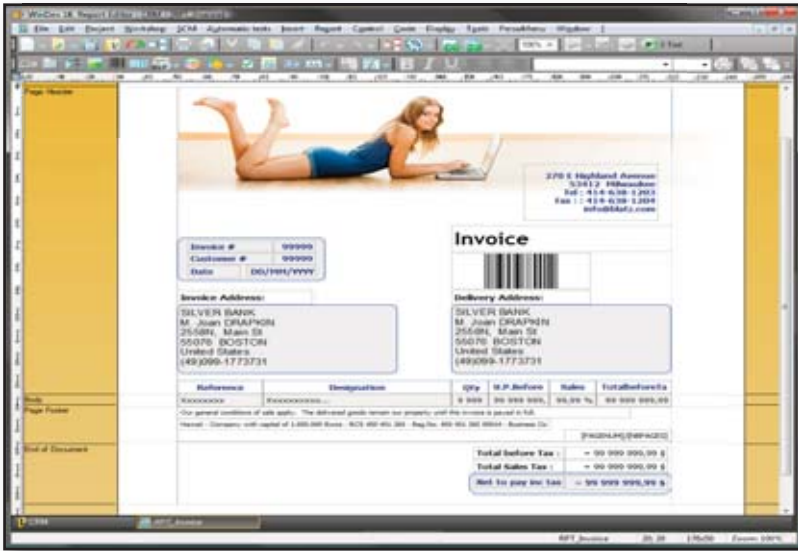
The report editor supports PDF background pages (form image printed on a blank page) as well as preprinted forms, and allows display and input in these forms.

IMAGES: AUTOMATIC

Including images - BMP, TIFF, PCX, GIF, JPEG, etc.- in a report is extremely simple. The image can be preset (logo, for example), or come from your program or from a file (product picture, for example).

Reports are made easy with WINDEV!

Easily create sophisticated reports



Labels



Page background



Preset form

AUTOMATIC BAR CODES

WINDEV 16 automatically prints bar codes (horizontally or vertically).

The supported formats are: QR, UPCA, UPCE, EAN13, EAN8, EAN128, CODE128, CODE39, CODE93, CODE11, CODE128, Intervals 2 of 5, CODABAR, CB_MSI, Datamatrix, PDF417,...

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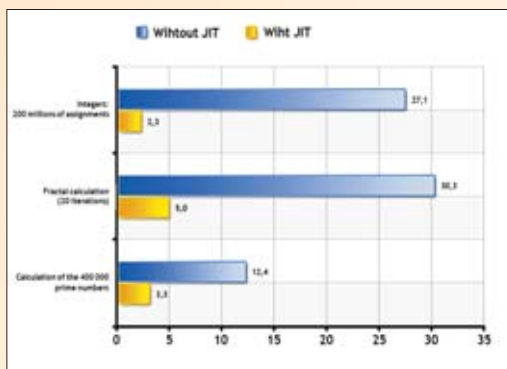


WLANGUAGE: 5TH GENERATION, EASY, POWERFUL, EVOLVING

The integrated WINDEV language, WLanguage, is powerful, simple and intuitive. It's a **5th generation language (5GL)**, which means that its commands are highly sophisticated. A command can replace dozens or even hundreds of 4GL commands, making programming easier and more reliable.

No more unnecessary complexity, no more incomprehensible APIs, no more out of bound pointers, no more useless programming!

JIT COMPILATION



JUST IN TIME COMPILATION (JIT)

The principle behind "Just in Time Compilation" -JIT- is as follows: the WINDEV 5GL code is converted on the runtime machine into "native assembly" code when executed.

The execution speed is faster for all instructions, and especially for integer calculations and real number calculations.

A POWERFUL AND INTUITIVE LANGUAGE

WLANGUAGE TYPES

WLanguage offers 3 categories of types: simple type, structured type, heterogeneous structured type.

Simple type example: integer, system integer, integer on 8 bytes, unsigned integer, boolean, string, decimal on 38 significant digits...

Structured type example: array, associative arrays, stack, file, list, structure, class, ...

Heterogeneous structured type example: XLSDocument, GglCalendar, RSSStream,...

THE STRING TYPE: INCREDIBLY POWERFUL

No "buffer overflow" type error is possible with strings.

Memory allocation for string management is automatic (automatic concatenation).

Strings accept binary content.

The "[]" operator lets you

easily access a piece of the string.

A lot of high level functions are available: find, replace, uppercase, left, right, middle, string extraction, automatic extraction of directory name or file name from a full path, conversion from/to numeric/date/time, etc.

Regular expressions are supported.

Optional concatenation allows for automatic management of the CRs at the end of lines or of the / in a path ... Formatted strings are supported.

MULTITHREAD

WLanguage is multithreaded. You can define and use semaphores, critical sections, signals as well as Mutex.

INDIRECTION

Indirection in WLanguage lets you access variables or controls from a string corresponding to their name.

"DEFENSIVE" PROGRAMMING

WLanguage offers assertion commands for implementing defensive programming concepts.

EASY OOP

Object Oriented Programming (OOP) is fully supported (see below).

The legendary simplicity of WINDEV makes object oriented programming a lot easier than with the older generation, traditional programming languages.

```
FOR EACH Customer
    Email.Recipient = Customer.EmailAddress
    Email.SendMessage ("CustomSuggestion")
END
```

Take the test: do you understand this code?

Yes, because WLanguage is so readable.

Here, an e-mailing.

MANAGER

A 5th generation language means up to 90% less code: which means faster coding, less chances for bugs, easier maintenance. And you choose your runtime target.

NEW

- 66 new WLanguage functions
- EXE, file, email signature
- Generalized indirection
- Reflection
- Mutex: shared critical section
- Convert dates to RFC format
- Native API call

AAF TECHNOLOGY

- User Macro-Code (UMC)
- Automatic language security

MAIN POINTS

- Fast learning: it's a 5GL
- Easy to use, powerful, fast and reliable
- Easy maintenance

OOP (OPTIONAL)

| |
|--|
| Classes |
| Inheritance, multiple inheritance |
| Reflection |
| Overloading |
| Virtual methods (polymorphism) |
| Constructor |
| Destructor |
| Data encapsulation: public, private, protected |
| Easy programming in 5GL |
| Automatic freeing |

32 or 64 bits :
the source code is 32-bit and 64-bit compatible, you choose at compilation time.



The source code is compatible with Windows 32, Windows 64, Linux (server and console mode), ARM 32 and 64.

COMPILER

The WLanguage compiler is integrated into the environment. A simple GO command on a window does not require a full project recompile: the potential errors and warnings are immediately detected.

WLANGUAGE: THE 5TH GENERATION

WLanguage is a 5th generation language:

They're easy to handle: `customer.name` for instance.

It is very easy to program secure database accesses thanks to a revolutionary concept.

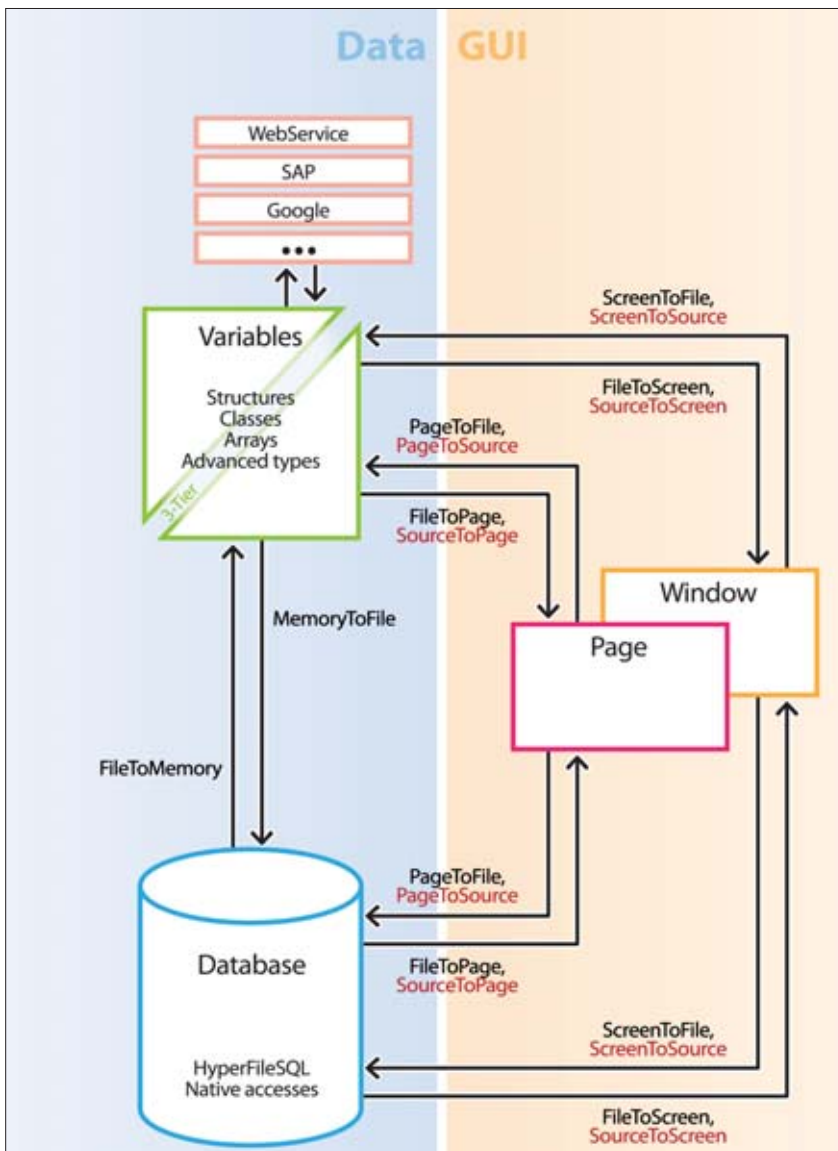
They are managed automatically by an array of these elements. One line of code (`SourceToScreen`), fills all the controls with the class members for instance.

INTEGRATED DATABASE ACCESS

WLanguage is optimized for all aspects of database management (see p 38 and `hReadSeek` p 41). The database structure is automatically recognized by the compiler.

DATA BINDING

Data binding allows you to link variables in memory with controls (in a window). These variables in memory can be: simple variables, a class, a structured element of the language (Google Calendar, XLS worksheet, RSS feed, etc.)
A table's content can be filled automati-



commands are short, precise and easy to understand. A WLanguage command usually corresponds to dozens of 4GL commands!

SELF-COMMENTED CODE

WLanguage is in English by default. This means that when you read code, you can understand it immediately.

WLanguage is also available in French, translation from one language to the other is automatic.

RECURSIVITY

WLanguage totally supports recursive operations, with call stack, result unstack, call context, ...

PROCEDURES

WLanguage lets you create and use procedures. These procedures can be grouped into sets of procedures, which can be shared among several projects (WINDEV, WEBDEV, ...).

You can choose to type or not the parameters (duck typing).

WLanguage supports procedures with a variable number of parameters.

SECURITY

WLanguage offers security against buffer overflow errors. You cannot write outside a string or access an element outside an array.

This limits the number of bugs and reduces the potential for security breaches.

TOTAL OPENNESS

You have access to all the Windows features and all the standards: API, DLL calls, ActiveX, .NET, J2EE, events... (see p 52 and 53).

NO MORE COMPLEX APIS

With WINDEV 16, you don't need to manage APIs in your code for all the programming operations. But when required, for special cases, they are available.

Programming is simpler, clearer, and safer with the WinDev 5GL.

The same program will work in Windows 2000, 2003, 2008, XP, Vista, 7...

DYNAMIC COMPILATION

WLanguage supports dynamic compilation. You can create (or configure) by programming the code to execute!

SOCKETS

Sockets (including SSL and UDP sockets for broadcasting) are supported.

WLanguage is an intuitive yet powerful language which helps write quality code fast.



THE CODE EDITOR: THE DEVELOPER'S FRIEND

The code editor is **totally integrated** with the environment.

It is intuitive to use for both novice users and accomplished developers.

Constant assistance is offered at each step (can be configured or turned off).

Powerful formatting and **coloring features** make it easy to type and read code.

Source code can be managed by SCM, the integrated versioning tool (see p46).



MANAGER

The WINDEV 16 code editor assists the code writing process. It is fully integrated with the environment, which improves its performance.

NEW

The code editor has been revamped in version 16

- Rectangular selection
- Visualization of block instructions
- Non-modal watch window

AAF TECHNOLOGY

User Macro-Code (UMC)

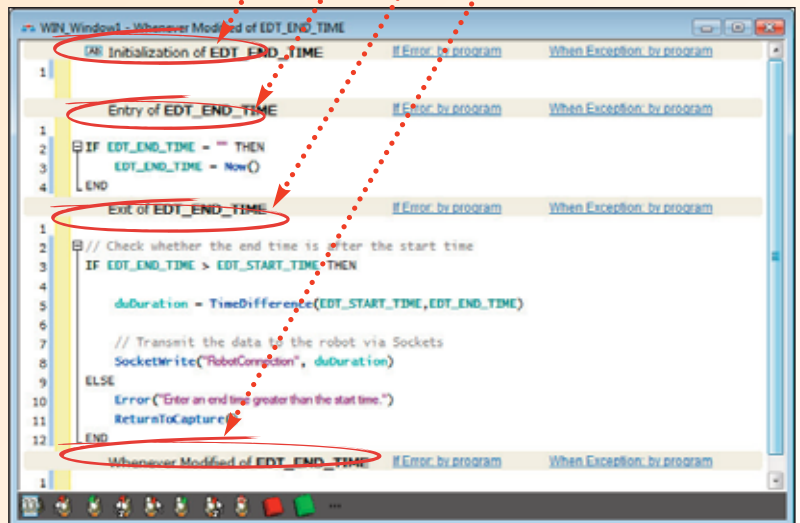
MAIN POINTS

- Complete integration
- Constant assistance
- Extreme user friendliness

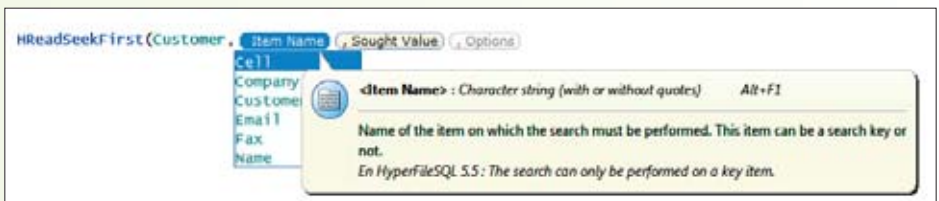
A REVOLUTIONARY CODE EDITOR

Process executed when:

- Control initialization
- Entry in the control
- Exiting from the control
- Whenever modified



Coding is intuitive, simply enter the code to execute in the corresponding event (here in an edit control). Note the row of icons at the bottom of the page which lets you add events.

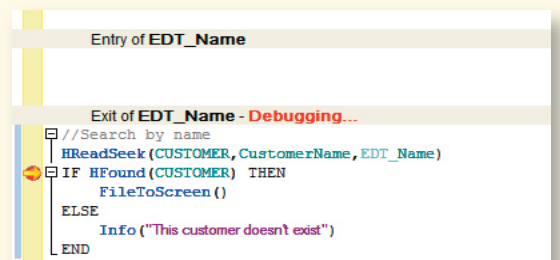


Assisted entry offers help for each parameter, as well as possible values based on the project's data (variables, global variables, data structures).

A VERY POWERFUL DEBUGGER

The user-friendly debugger offers advanced features:

- break points
- step-by-step execution
- variable visualization
- "edit & continue": modification of the running code
- real-time call stack
- thread and component debugging
- formatted display of HTML data, image, RTF...
- "set next statement"...



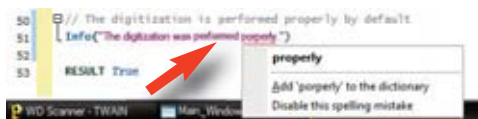
ENTERING CODE

The code is directly entered in the appropriate "event". It's simple and intuitive: you feel like you're just entering comments!

PROGRAMMING CHARTER

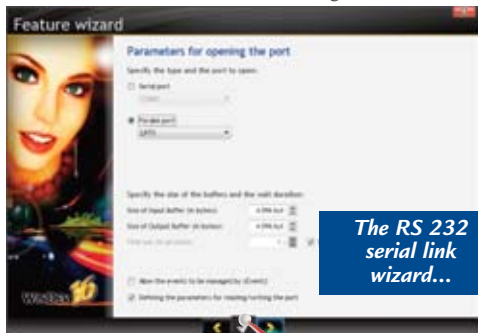
The code editor lets you activate a programming charter (prefix variable names), and even lets you define your own prefixes. These prefixes are colored and can be hidden.

The editor even adds the prefixes while you're typing if you've activated this option. The prefix is set based on the variable's type: local, global, according to the control's type...

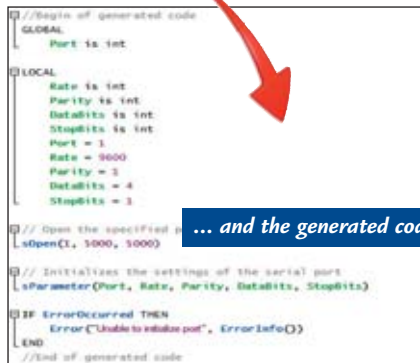


In addition to compilation errors, the code editor even flags spelling errors (here in a string). It also points out UI errors (control too short,...)

Among the dozens of wizards, here's the RS 232 serial link code generator



The RS 232 serial link wizard...



... and the generated code

SOPHISTICATED ASSISTED CODE ENTRY

The self-complete code feature is powerful for entering commands, variable or control names. Each time it is necessary, a wizard offers to generate the code for you (150 wizards).

PROFILER

Thanks to the performance optimizer, you can analyze the time used by each instruction in your program, detect functions that are called x numbers of time, ... Results are presented in an intuitive way, so you can act on them immediately.

INTELLIGENT RENAMING

When a variable is renamed, WINDEV offers to rename this variable everywhere it's used (either one at a time or globally).

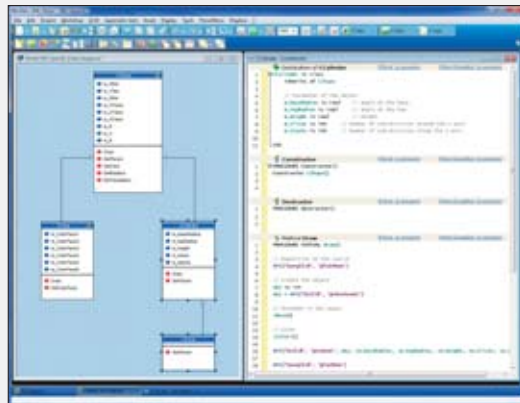
AUTOMATICALLY GENERATE A CLASS DIAGRAM

Starting from existing classes (project reuse), WINDEV automatically builds a UML class diagram with its relationships (inheritance, aggregation). This provides a global view of the architecture.

UML CLASS DIAGRAM: AUTOMATIC SYNCHRONIZATION

When you modify the code of a class or a structure (add a new member for instance), your UML diagram is automatically updated with your changes.

No more out-of-sync UML diagrams! Conversely, if you'd rather modify your classes or structures from within the UML diagram to benefit from a more global view, your changes will be automatically applied to the source code of the classes and structures.



EASY TEAM WORK

The versioning tool is fully integrated with the environment, and makes working in team a breeze (up to 100 developers); it makes comparing versions and backups easy as well. Each version of your application is automatically backed up.

COMPARE CODE, WINDOWS, UI...

A window that used to work three weeks ago has been modified by an intern, and does not work anymore. How do you find the differences? Simply use the "element comparison" feature: the two elements are analyzed, and their differences (code, UI, etc.) are displayed on the screen.

OPEN TO OTHER LANGUAGES

The code editor also lets you enter SQL code, Java code (in a Java WINDEV project), PHP code (in a PHP WEBDEV project),...

REMOTE DEBUGGING

You can debug an application that is running on another machine, connected through the network or Internet. You can debug an application running in Taiwan from your Boston office. You can also retrieve only a debug dump and then debug offline.



A developer spends a lot of time in the code editor. Therefore it is important that this editor be the most efficient possible: the WINDEV 16 code editor will be his pal!

Get the list and details about thousands of functions on www.windev.com

THE WLANGUAGE FUNCTION FAMILIES

...continued

In addition to the traditional commands of a programming language (for, if then else, while, ...) wlanguage offers 5th generation type function families. Here are the "function families":

- Window management
- Window control management
- Mathematical functions
- View table management
- String management
- Popup and pull-down menus
- Dates and times
- Calendar functions
- Automatic euro support
- Treeview
- Toolbars
- Functions for managing the

messages and the dialog boxes

- Drag and drop
- Drawing functions
- Business charts (line chart, bar chart, pie chart, ...)
- .Net functions
- J2EE functions
- SOAP functions
- HTTP functions
- Domotics functions
- Emails
- Telephony (TAPI)
- General exception mechanism
- Software Management
- Faxes
- User groupware
- XML document management
- SQL functions on HyperFileSQL
- ODBC specific functions
- Database management functions (HyperFileSQL and others)
 - Assign
 - Read operations, modifications with or without automatic record reading...
 - Useful commands
 - Remote access
 - Describe a connection (not described in the analysis)

on a third-party database: Oracle, MYSQL, etc,...

- Temporary table description
- Custom error management
- View management (temporarily load part of the table in memory)
- Filter management (temporarily store part of the table on disk)
- Trigger management
- Logs
- Replication
- Transactions
- Other functions
- Print functions
- Font management
- Java functions
- Third-party language: Java C++, C#, VB, Cobol, Fortran, etc...
- List and combo box control management
- Binary value management functions
- Financial functions
- Matrix management
- Statistical functions
- Image animation
- Video
- Generic multimedia functions (video, sound, ...)
- TWAIN device management:

scanners, camera,...

- MDI functions (non modal multi-windowing)
- Memory zone management functions
- Multilingual functions
- Standard FTP functions
- FTP / RPC
- Control an application via OLE automation
- ActiveX
- DDE management functions
- Miscellaneous Windows functions (API call, DLL)
- Windows events
- Miscellaneous WinDev functions
- Agents
- XML native functions
- Excel native functions
- Palm functions
- Serial and parallel ports
- Windows clipboard and recycle bin
- Project management functions
- Registry functions
- Socket functions (SSL, ...)
- Mouse functions
- System functions
- Threads
- OPC
- Disks, files and directories

- Network management
- File archiving and compressing (ZIP)
- USB
- CD and DVD burning
- EXIF (numeric images)
- 3-tier
- LDAP functions
- SAP functions
- Bluetooth functions
- SNMP functions
- Lotus Notes functions
- Google functions
- RSS functions
- OBEX functions
- Service functions
- Windows task scheduler
- Application update functions (Live Update)
- Debugging functions
- Array functions
- UMC functions
- Automated test functions
- Lock functions
- Xaml functions
- ...

THIRD-PARTY LANGUAGE: JAVA, C++, C#, VB, COBOL, FORTRAN, ETC...

...continued

You have "existing" code. WINDEV lets you use this code. You can enhance your legacy applications or migrate them smoothly.

WINDEV 16 is open to third-party languages and interfaces with your existing code regardless of the language!

You can call a third-party language from WINDEV.

From your third-party language, you can call WINDEV (source code, windows, and so on). Your legacy code is preserved.

From WINDEV you can also call programs written in another language (compiled as DLLs or assemblies).

```

Langage C et C++
void Display_Customer(void) {
    nWDEExecute("hReadSeek(Customer,Name,\"SMITH\")");
    nWDEExecute("hFound");
    if (bWDGetReturnValue())
    {
        nWDEExecute("FileToScreen");
    }
}
    
```

```

JAVA
void Display_Customer(void)
{
    CALLLWD("hReadSeek(Client,Name,\"Smith\")");
    CALLLWD("hFound");
    if (WDInt() != 0)
    {
        CALLLWD("FileToScreen");
        CALLLWD("ValidateButton..Color=iLightGreen");
    }
}
    
```

```

COBOL
* Opening the window call
call CALLLWD using
by reference "Open,find" & x"00"
* Find customer
call CALLLWD using
by reference "hReadSeek(Customer,Name,"Smith")" & x"00"
call CALLLWD using
by reference "hFound" & x"00"
call CALLLWD using
"FileToScreen" & x"00"
call CALLLWD using
"ValidateButton..Color=iLightGreen" & x"00"
    
```

```

VB
Sub DisplayCustomer()
Call callwd("hReadSeek(Customer,Name,"SMITH")")
Call callwd("hFound")
If WDInt =1 Then
Call callwd("FileToScreen")
Call callwd("ValidateButton..Color=iLightGreen")
End If
End Sub
    
```



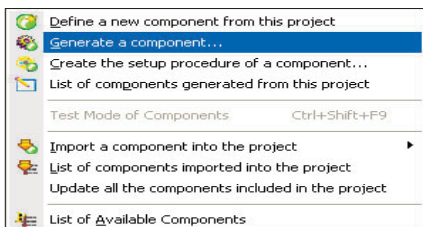
CREATE COMPONENTS SHARE YOUR CODE!

For years development teams have been looking for ways to reuse their legacy code instead of constantly reinventing the wheel.

WINDEV 16 innovates once more by offering the revolutionary concept of "automatic component".

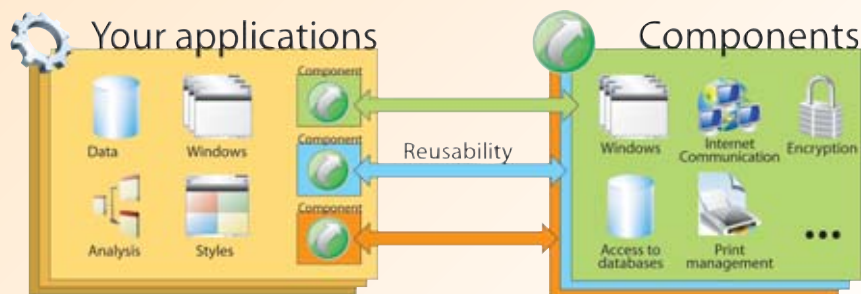
A "component" is simply a piece of code (with or without windows, files, etc.) encapsulated, secure, that several applications (written with WINDEV, WEBDEV or WINDEV Mobile) can share.

Professional development just became easier.



Creating a component only requires one click

DON'T KEEP REINVENTING THE WHEEL



MAKE REUSING CODE EASIER, MAKE YOUR APPLICATIONS MORE RELIABLE

A component is a black box, created by a developer who can then reuse it; a component is also available to other developers. Only the entry points and the type of information returned are made public.

Once a component has been tested, each program that uses it benefits from its reliability. Without any additional work the quality of your applications automatically improves.

A COMPONENT: A REUSABLE PROGRAM

A component may be very simple or very sophisticated.

A component can include an analysis, tables, windows, source code, classes, queries, procedures, reports, etc.

A component can itself use other components, or external data: database, Internet access...

CREATE A COMPONENT, THEN REUSE IT ENDLESSLY

A component can be used simultaneously by several applications.

SECURE YOUR COMPONENTS

The components that you create are secure, meaning that nobody can see or copy their source code, their analysis, etc.,...

AUTO DOCUMENTATION

When saving the component, WINDEV analyses it and generates a documentation outline.

AUTOMATIC SETUP

The installation of a component is automatic.

SECURE TEAMWORK

The benefit of using components when working in teams within a company for instance is the productivity gain for the whole team (see also SCM p 46):

- the component is always up to date, shared by all the developers: only one version is used. There is no more risk of using an old class, obsolete code, etc...
- no end user can modify the source code or the analysis, as it too frequently happens with other methods (shared procedures or classes).
- the access to the database can be totally encapsulated into a component, that will be made available to other developers. This way you can secure access to the database.

Create component for each building-block of your applications. You'll make your applications more robust, and you'll save time.

MANAGER

A component is a building block that can be reused. A WINDEV component prevents you from reinventing an existing routine. A WINDEV component is as easy to create as an application.

NEW

Use the same "binary" component regardless of the platform

AAF TECHNOLOGY

Automatically adapts to the host application's skin template

MAIN POINTS

- Easy creation
- Hot update
- Protected source code
- Shared with WebDev and WinDev Mobile

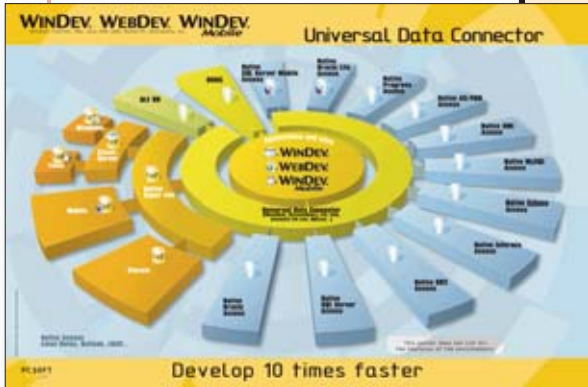
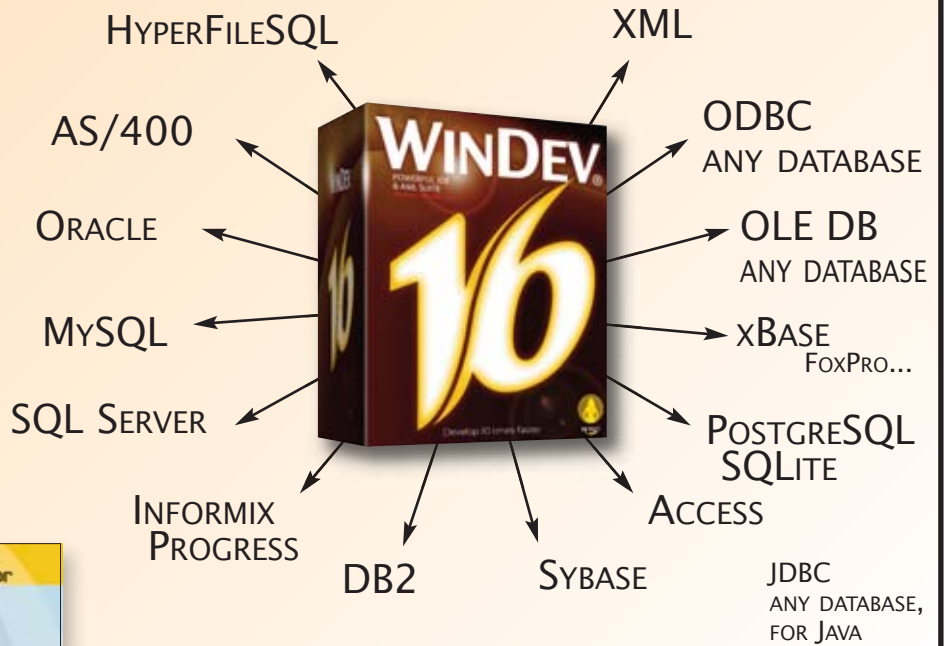


ALL THE DATABASES ARE SUPPORTED

WINDEV 16 lets you use the databases of your choice: HyperFileSQL of course, the powerful database that comes with the product, but also all the other databases on the market through **Native Access** (additional module), **ODBC** or **OLE DB**.

This **total openness** insures that you'll be able to interface with any existing code.

PICK THE DATABASE YOU WANT TO USE



This 70 x 50 cm poster explains universal access to WINDEV 16 data. You can download it from the PC SOFT's site, or request a copy from us.

MANAGER

WINDEV is open to all the databases on the market. The same code is used regardless of the database.

NEW

Native SQLite access

AAF TECHNOLOGY

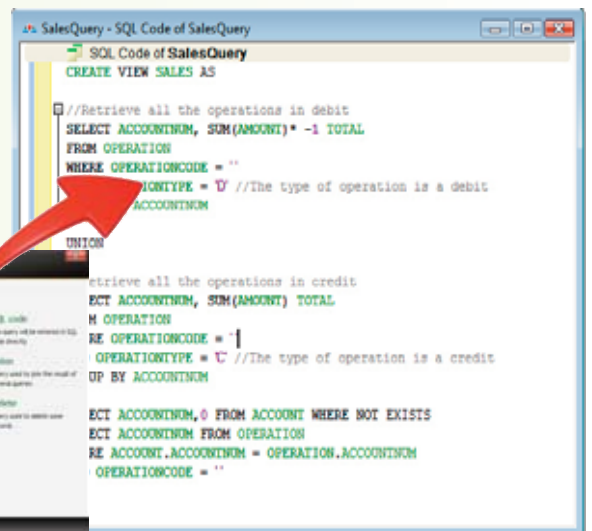
A lot of automatic features are available

MAIN POINTS

Same programming regardless of the database
Use the existing IS databases

GENERATE SQL QUERIES

Illustration of the power of WINDEV 16: it knows your data structures, therefore it knows how to create the corresponding queries.



ALL THE DATABASES ARE SUPPORTED

WINDEV can read and write in all the databases, using native access, OLEDB or ODBC (JDBC in Java).

WINDEV 16 NICELY INTEGRATES WITH YOUR IS

WINDEV 16 is open, and integrates perfectly with your existing Information System, to energize it!

STORED PROCEDURES

WINDEV applications support database stored procedures.

EASY CLIENT/SERVER

Client/Server development is very simple with WINDEV 16, because on top of the SQL commands, the 5GL commands from the WLanguage "HRead*" family are also supported

This makes your source code more independent from the database, and programming more flexible.

WINDEV 16: THE IDEAL TOOL FOR MANAGING DATA

WINDEV 16 is the ideal tool for accessing all kind of data.

The complete integration of the database structure in the development environment allows for incredibly fast development: each module knows the data you're working with.

A REVOLUTIONARY PROGRAMMING MODEL

WINDEV 16 offers a 5th generation language totally suited for managing databases.

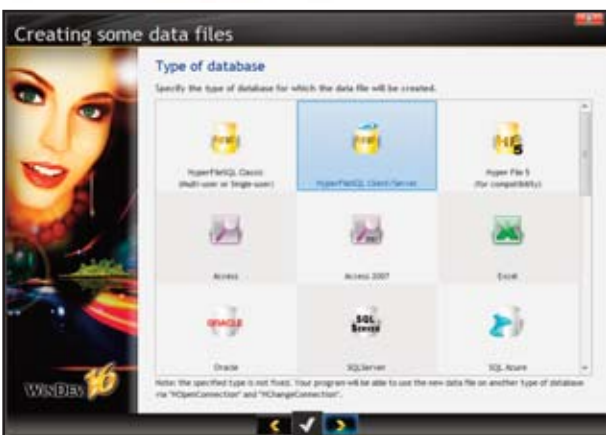
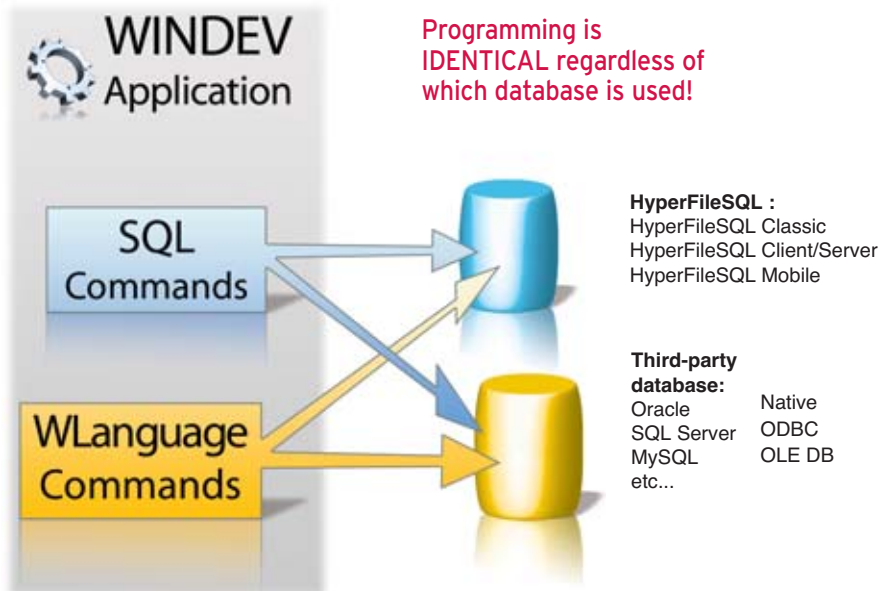
A command such as **ScreenToFile** corresponds to hundreds of lines of traditional code!

ScreenToFile assigns the contents of all the window controls to the relevant database columns without you having to program it control by control. No risk of oversight from the developer, no maintenance needed if the window or database evolves. That's how data should be managed: without any risk.

PERFORMANCE

The WinDev 16 Client/Server mode is implemented in the WINDEV kernel, and therefore is extremely fast.

WINDEV 16 supports all the databases of the market, using the same programming.



Defining or reusing a database is very simple with WINDEV

REPLICATION BETWEEN HETEROGENEOUS DATABASES

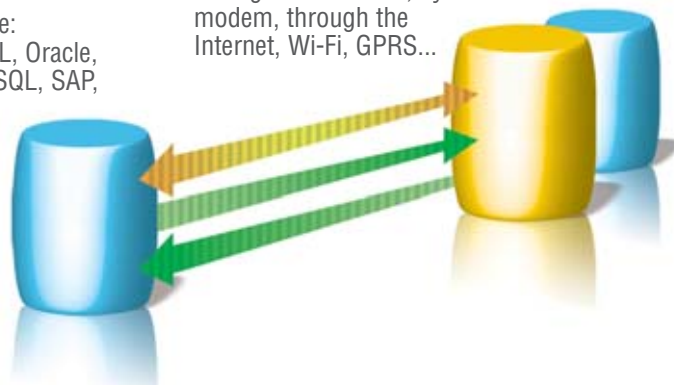
WINDEV 16 provides an assisted replication feature for different databases: this makes it easy to mix data from different databases.

For example, you can easily replicate an Oracle database onto a HyperFileSQL database.

Any database: HyperFileSQL, Oracle, AS/400, MySQL, SAP, mobile...

Any media locally, through the network, by modem, through the Internet, Wi-Fi, GPRS...

Any database: HyperFileSQL, Oracle, AS/400, MySQL, SAP, mobile...





HYPERFILESQL, FREE, UNLIMITED SQL DATABASE

100% Windows

100% Linux

100% Mobile

WINDEV comes with a database **HyperFileSQL**, which is very **powerful**, very **fast** and very **reliable**.

HyperFileSQL is already used on **millions** of computers.

HyperFileSQL works with Windows and Linux, on Mobiles and with networks of any size and any type, and automatically manages hundreds of concurrent accesses.

You can **freely** distribute the HyperFileSQL engine with your WINDEV applications.

| MAXIMUM CAPACITY | |
|-------------------|--------------------|
| Columns per table | 65,535 |
| Index per table | 65,535 |
| Rows per table | 329 quadrillions |
| Size of a table | 4 millions of tera |
| Size of a row | 2 GB |
| Size of a column | 65,535 bytes |

MANAGER

HyperFileSQL is a major asset of WINDEV. Its reliability, its capacity, its speed and its free deployment make it indispensable

NEW

HAccelerateSpeed function
HFreeQuery function

AAF TECHNOLOGY

Automatic management of concurrent access
Automatic reindex after hardware failure
Change history

MAIN POINTS

Truly free deployment
Speed and reliability
Windows and Linux
C/S compatibility, Network, Local, Mobile
Automatic administration
Automatic structure change management

POWERFUL DATABASE

SERVER
MOBILE
7
VISTA (32 BIT, 64 BIT)
XP
2000, 2003, 2008

LINUX
UBUNTU
DEBIAN
REDHAT
...

MAC

TSE
CITRIX

LOCAL ACCESS

LOCAL ACCESS NETWORK, WiFi

MODEM, 3G

ADSL

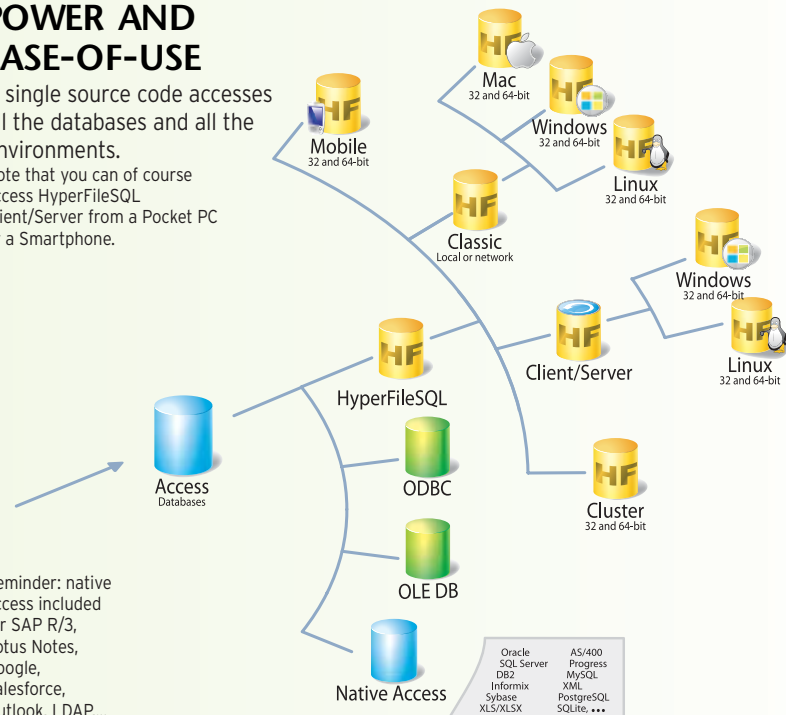
DEDICATED LINE

HYPERFILESQL

POWER AND EASE-OF-USE

A single source code accesses all the databases and all the environments.

Note that you can of course access HyperFileSQL Client/Server from a Pocket PC or a Smartphone.



Reminder: native access included for SAP R/3, Lotus Notes, Google, Salesforce, Outlook, LDAP,...



DETAILED DOCUMENTATION

Discover HyperFileSQL in all its details with this 24-page documentation available on www.windev.com

ALL THE TYPES OF DATA ARE SUPPORTED

HyperFileSQL supports all the types of data in tables:

- character strings (phonetic find is available) and binary string
- numeric (integer, real, currency, etc...)
- dates, times, durations
- text and binary memo (BLOB, LOB, image, sound, video, etc...)
- the "NULL" value is also supported

All types of keys are supported: automatic identifier, text, numeric, date, time, composite key.

FEATURES

128-bit encryption

Referential integrity

Log files

Replication

Transactions

Triggers

Import Export

Cluster

Stored procedures

TECHNOLOGIES

Automatic maintenance (SDD)

Concurrent access management

Zero administration

Resume automatically after incident

Automatic deployment

The free database

16

WINDEV®

A PROVEN ENGINE COMES WITH THE PRODUCT: HYPERFILESQL

The "HyperFileSQL" database engine comes with WinDev.

It is a reliable, robust engine, already used on millions of computers.

HIGH SPEED

HyperFileSQL is extremely fast.

329 MILLIONS OF BILLIONS OF ROWS (RECORDS)...

HyperFileSQL lets you work easily and securely with large volumes of data (up to 329 millions of billions of rows), which allows you to confidently manage the natural increase in data volume of your applications.

TOTAL INTEGRATION

The engine is totally integrated with the development environment.

At any time, in any editor, you have access to the references and to the data dictionary.

The interaction between the user interface and the database allows for easier and faster programming.

SIMPLE YET POWERFUL PROGRAMMING

The power and the simplicity with which the WLanguage 5GL manages databases are amazing. For example, seeking a row and all the associated routines (opening the table, assigning data, etc.) is done in one simple, powerful line of code:

HReadSeek (CUSTOMER, NAME, "DOE")

The source programs are clear, easy to write and especially easy to maintain; this reduces the chance for errors, and makes the applications you develop more reliable, and faster.

Plain English commands makes it easier to use: the code is self-commented.

The **HReadSeek** command can be understood by any developer, even rookies!

You can also program in French: the command becomes **hLitRecherche**.

Of course, you can also program a traditional SQL query for this purpose:

```
SELECT * from CUSTOMER where
NAME= 'DOE'
```

AND THE CODE IS GENERATED!

This very simple, very fast and very reliable routine is generated upon request by RAD or by the different wizards during window or report creation!

OPEN TO OTHER APPLICATIONS

The ODBC and OLE DB drivers, which can be distributed freely with your WINDEV applications, let you read and write HyperFileSQL data from third-party programs.

TOOLBOX INCLUDED

A toolbox including a set of useful tools comes with the product: import data, check database, view data, performance optimizer, and more...

AUTOMATIC SETUP, "ZERO ADMINISTRATION"

HyperFileSQL installs immediately, without requiring any other software. For example, if following a physical problem with the database it should be reindexed, it is done automatically. Database administration is automatic: no need to involve engineering resources!

IMPORT/EXPORT DATA

The WDCONVER module, provided with WINDEV, lets you import data in various format: Access, dBase, Text, Oracle...

HyperFileSQL, which comes with WINDEV 16, is a major benefit. Reliable, fast, secure, free...

continues page 42....

"CONCURRENT ACCESSES": AUTOMATIC

HyperFileSQL 16 automatically supports concurrent accesses to a row, without any coding (also manages integrity and duplicates). In case of access conflicts, a (customizable) window automatically comes up.

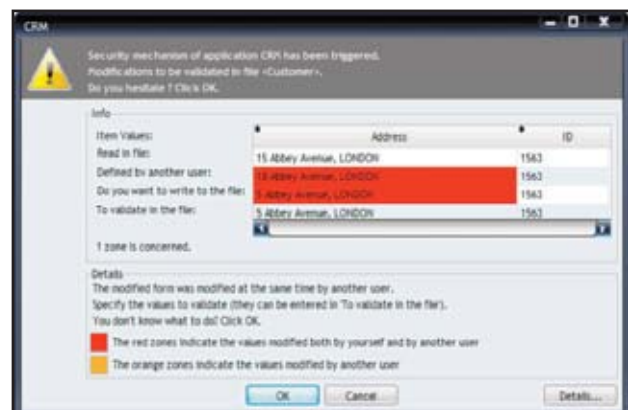
This automated process insures the security and reliability of your applications.

You can also handle concurrent access in your program for special cases.

Here, 2 users are trying to modify the same table row at the same time!

A (customizable) window automatically comes up and asks for the correct value.

No programming is required.





HYPERFILESQL, CLIENT/SERVER WINDOWS AND LINUX

Essential to version 16,
HyperFileSQL **Client/Server**.

Compatible with the "Classic"
and Mobile versions, the
Client/Server version brings the
benefits of remote processing in
Windows and Linux.

Client/Server is made easy with
HyperFileSQL!



32 BIT, 64 BIT

HyperFileSQL works both in 32-bit and
64-bit modes. Servers and clients can be
mixed.

Some of the supported Windows servers:

- Windows Server 2008
- Windows Server 2003
- Windows 2000
- Windows XP, Vista and 7 in all their versions.

MANAGER

The Client/Server version of HyperFileSQL
enables easy and fast remote access. This version
is also free.

NEW

16 new SQL commands
Support for Null value in keys
Primary key other than unique identifier
Support for 64-bit Linux

AAF TECHNOLOGY

Secure access

MAIN POINTS

Remote access
100% free and unlimited
Compatible with HyperFileSQL Classic and Mobile
high level of security
Cluster

LINUX OR WINDOWS: YOUR CHOICE



Some of the supported
Linux distributions:

- RedHat 9
- Debian 3.1, 4.0
- OpenSuse 9.2, 10.3, 11.1
- Ubuntu 7.10, 8.04, 8.10
- Fedora 8, 9
- Mandriva 2008



AUTOMATICALLY RESTORE CONNECTION

AUTOMATICALLY RESTORE CONNECTION

This feature automatically
takes care of dropped
connections.

Usually, this problem occurs
with hardware whose
connection with the server
is not always on: mobile
devices (Wi-Fi, 3G, ...) notably.

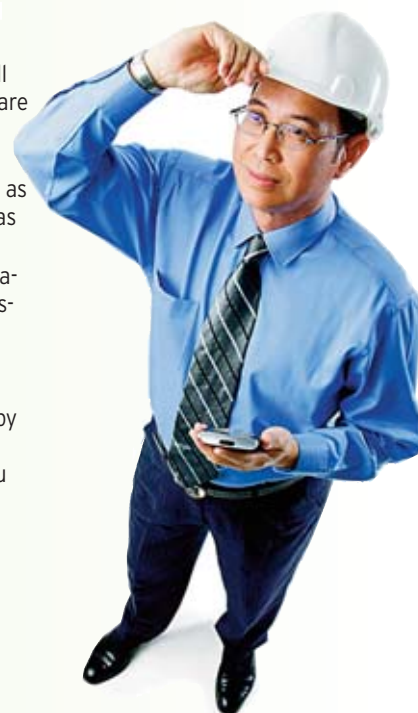
In a Wi-Fi connection for instance,
the link between a
remote device and the server
can be interrupted briefly.

This can also happen on
regular wired networks.
When the application is
reconnected, we need to
resume the application at
the point where the connection
was interrupted, and
make sure the buffers are

accurate.
With the automatic resuming
of the connection, all
the buffers and positions are
stored and reassigned.
The application can
resume without any error, as
if the connection never was
interrupted.

Automatically, your applications
are more reliable, faster
and you have less to
code.

You can also manage the
connection interruptions by
programming, or execute
additional processes if you
want.



HyperFileSQL: robust



DETAILED DOCUMENTATION

Discover HyperFileSQL in all its details with this 24-page free documentation available on www.windev.com

HYPERFILESQL



CLUSTER (SERVER FARM)

Thanks to the cluster feature, a set of physical servers appears as a single server to the clients.

The potential failure of a physical server does not prevent access to the database (high availability, fault tolerance). The read load charge is distributed on all the servers (load balancing for reading).

When a user is connected to a server that fails, the application won't be disconnected but automatically reconnected to a valid server (automatic fail over).

CLIENT/SERVER

The engine for the Client/Server version is available for Windows and for Linux. The compatibility with HyperFileSQL Classic and Network is complete.

The HyperFileSQL engines can be distributed freely with your applications.

IMPROVE THE SPEED OF YOUR APPLICATIONS

The HyperFileSQL Client/Server engine allows for fast query execution speed. The multithreaded server performs automatic load balancing in order to optimize the response times.

REMOTE ACCESS

The communication layer is integrated with the multithreaded engine, which allows access through IP addresses, and very good response times.

FRAME COMPRESSION (DSL, 3G, EDGE, VPN...)

Frame compression enables you to reduce the size of the packets (up to 95%) traveling on the network, by automatically applying a data compression algorithm.

The speed for remote connection is improved. The volume of data traveling over the transmission media is reduced.

SECURITY

The HyperFileSQL Client/Server engine is not affected by untimely client machine shutdowns.

Communications are encrypted.

You can create configurable queries, which prevents server attacks through "sql injection".

RIGHT MANAGEMENT

User account management is automatic and very rich: password, read write access rights, to a database or tables, right to start a backup, groups...

DETAILED STATISTICS

The Control Center lets you display precise statistics about server access: computer, SQL query's content, execution time. Observing this data enables you to better organize your applications.

STORED PROCEDURES

Stored procedures and triggers are available. Programming is done simply in WLanguage.

UNICODE AND INDEX SORTING BY LANGUAGE

HyperFileSQL supports Unicode text and memo columns. Indexes can be sorted by the alphabetical order corresponding to each language (Russian from Russia or Ukraine, Chinese from Singapore, Taiwan, Hong Kong, Macao, ..).

FULL TEXT SEARCH

The "full text" search allows for very fast string searches inside your data.

The index supports rich text (RTF, HTML), ignoring their tags during the indexing process.

Results are offered according to a relevance order (ranking).

HOT BACKUP

You can trigger a database backup while the database is being used. There can be read, write and query database accesses happening. Data integrity of the saved data is insured.

The backup can be triggered by programming (at a certain time for instance) or through an action of the DBA.

MULTI-DATABASE, MULTI-SERVER

The same machine can host several HyperFileSQL servers, and each server can contain several databases.



HYPERFILESQL CONTROL CENTER

The control center lets you monitor all the servers and databases installed on your company's network or remote through the internet.

This center also allows you to:

- view and edit data
- directly execute queries
- manage user accounts (groups), rights, list of current connections
- print precise statistics about server use: computers, que-

ries, logs, parameters...

- user disconnection
- transaction management: view, cancel, ...
- backup management (hot backup)
- view record locks
- scheduled tasks
- ...

SQL QUERIES AND NATURAL LANGUAGE

The visual query editor lets you **generate the SQL queries** that will be used in your programs.

The query will be generated in **natural language** as well, so you can verify that it corresponds to what you intended! There's no risk of error.

Display all OrderNumber, OrderNumberCustomer, OrderDate, CustomerNum, PaymentMethod and InvoiceDate such as InvoiceDate is equal 'InvoiceDate' AND ORDERS.Total is greater than or equal to Amount AND HISTORY.AdminAssistant is equal to 'AdminAssistant' OR PRODUCT.MinQty is equal to MinQuantity AND PaymentMethod contains 'PaymentMethod' AND ORDERS.Observations contains 'Observation'.

A few clicks are enough to create a query, and to check it in natural language

NO NEED TO KNOW SQL TO CREATE POWERFUL SQL QUERIES

Choose the columns to include, specify the selection conditions using the wizard, and the query is built (using optimized SQL code): the editor automatically creates queries on any database, even the most complex queries.

You can, of course, modify the code generated by query editor.

VISUAL QUERIES

The query is also generated both in natural language and in SQL as you make your choices in the editor.

OPTIMUM SPEED

WINDEV 16 detects missing keys in order to provide optimal speed.

QUERIES BASED ON QUERIES

A query result can be a visualization table, a printed report, even a HyperFileSQL table. A query can use the result of another query as its source.

REVERSE ENGINEER EXISTING QUERIES

You already have an existing SQL query? WINDEV 16 presents it graphically!

If you have Access queries, these are automatically imported (see page 45).

QUERIES ON ALL DATABASES...

The data source for a query can be a HyperFileSQL database or a third-party database: Oracle, SQLServer, DB2, AS/400, MySQL, Access...

DISTRIBUTE THE QUERY EDITOR FOR FREE

End users will be able to create their own queries. To prevent errors, deleting and modifying data is not possible with the end-user product (see page 30 and 31).

MANAGER

The WINDEV query editor lets you "draw" your queries for any database. You can distribute it for free

NEW

16 new SQL commands

AAF TECHNOLOGY

Free distribution. "Reports and Queries" lets end users create their own queries.

MAIN POINTS

No knowledge of SQL is required
Distribute it for free with your applications



VB, ACCESS: RETRIEVE LEGACY CODE

EASILY BENEFIT FROM THE POWER OF WINDEV

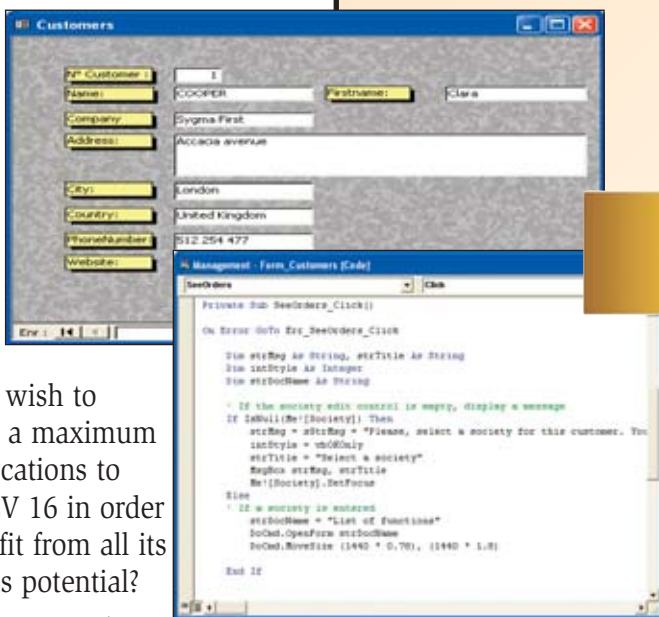
Who doesn't have any legacy code?

Who doesn't wish to migrate a maximum of applications to WINDEV 16 in order to benefit from all its fabulous potential?

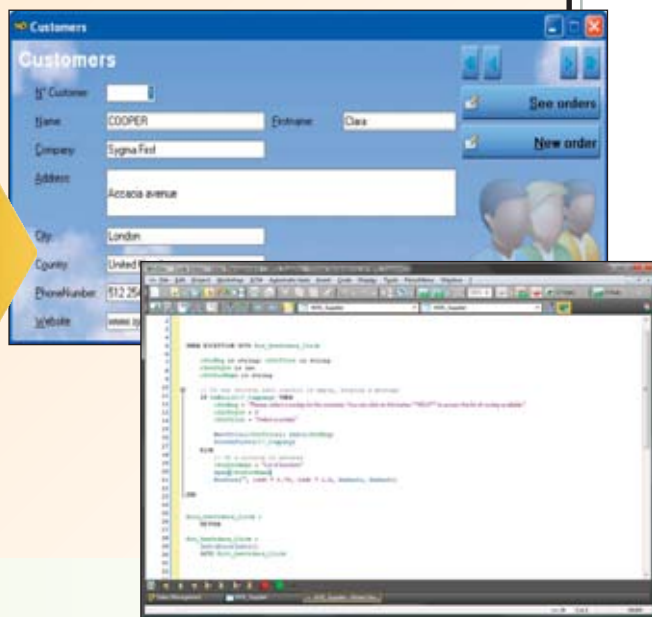
WINDEV 16 assists you with bringing **legacy applications** and UIs **over**.

WINDEV 16 knows how to retrieve VB and Access applications.

WINDEV 16 even offers to retrieve windows from applications in C++, C# and other languages.



Here, an Access application...



... and this application now in WINDEV 16

IMPORTING APPLICATIONS FROM VB AND ACCESS

MS Access and VB applications can be imported into WINDEV 16. The UI and the code come over in the most part; only minor tweaks are needed.

The time saving is really noticeable.

IMPORTING A UI FROM A THIRD-PARTY LANGUAGE

For other languages (C++, C#, and most other ones), WINDEV 16 imports a window

and its "controls", in order to transform them into a WINDEV window.

This is very useful when you want to rewrite an application in WinDev!

The window should simply be opened under MS Windows for the module to retrieve it.

Link with third-party languages, legacy import, WINDEV 16 acknowledges your legacy applications!

MANAGER

Retrieving VB and Access applications in WINDEV 16 is made easier by this import feature

NEW

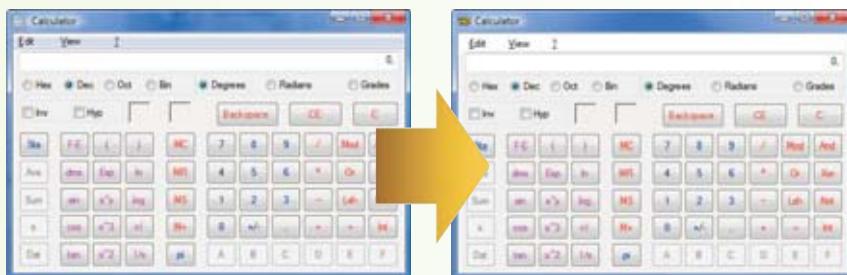
New commands are supported

AAF TECHNOLOGY

The end user benefits from all the AAF of the WINDEV applications

MAIN POINTS

Retrieve a large number of existing elements



Example of UI import: a C++ window retrieved in WINDEV

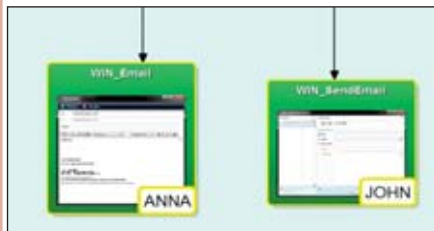
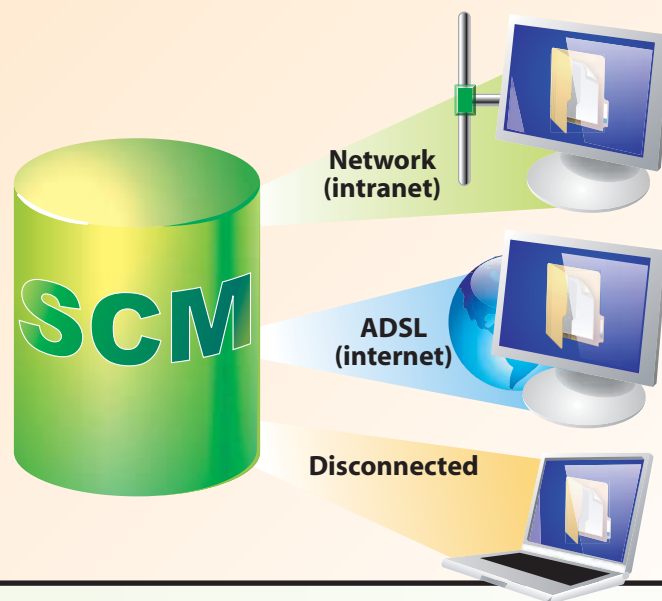


TEAMWORK: INTEGRATED VERSIONING TOOL (SCM)

Totally integrated with the environment, the versioning tool (named SCM – Source Code Manager) provides better **team work**, modification and version **history**, support for **concurrent versions** of an application, and **automates** the **backup** of the development team’s source code and elements.

The versioning tool brings comfort, flexibility, security and speed.

MANAGE DIFFERENT VERSIONS, ALONE OR IN A TEAM, LOCALLY OR REMOTELY



MANAGER

The versioning tool allows for secure team work, the sharing of elements, the management of different versions of a same application and insures that automatic backups are performed.

NEW

Support for branch carry over
Direct access to the shares from the SCM explorer
Various optimizations

MAIN POINTS

Local and remote access
Automated backups
Share elements among a team
Free source code repository
Automated change history

MANAGE YOUR SOURCE CODE POWERFUL FEATURES

- SCM (Source Code Manager - the versioning tool) is totally integrated in the development environment; for example SCM offers to check out an element the first time it is used.
- The database supports several projects; an element can be shared.
- A history of all elements, since their creation, is stored in the repository (a purge can always be performed).
- The project is available on all the development machines; therefore you can work on an offline machine.
- Branch management: you manage several different versions of the same application.

1 TO 100 DEVELOPERS

SCM is meant to accommodate teams of 1 to 100 developers. Even if you develop on your own SCM is useful because it contains your applications' history.

SOURCE DATABASE

SCM uses a source code repository: proce-

dures, collections, classes, pages, reports, components, queries, analyses, dependencies (images,...) This free database can be installed in a few minutes either on a dedicated server, or on a share drive of a network computer.

CONNECTED AND REMOTE

SCM accepts remote connections through the Internet. This way you can work on a project from an agency or from a customer site, without fear of losing your modifications.

SCM can also be used in offline mode (in a train, on a plane,...).

DIFFERENCES BETWEEN 2 VERSIONS: CODE AND UI

You can check the differences between 2 versions of a project element: code, classes, SQL code for queries, procedures, windows and pages, analysis, reports, ... You can apply the modifications from one element to another ("merge" function).

SCM is inescapable.



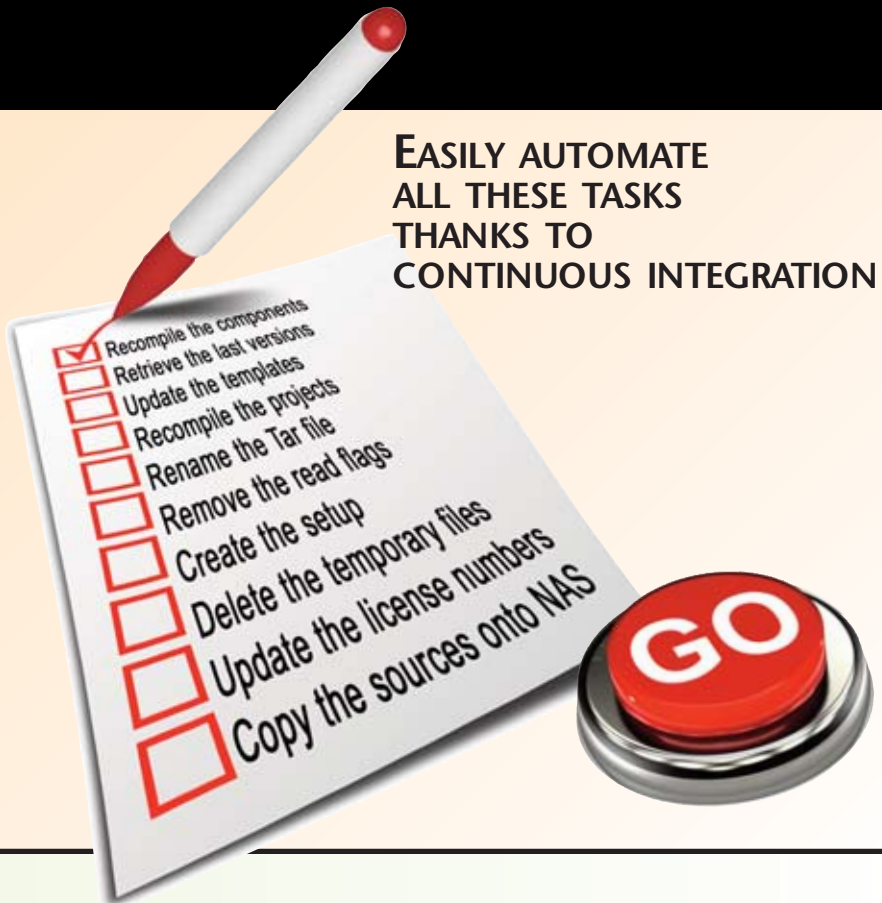
AUTOMATE BUILDS: CONTINUOUS INTEGRATION

The software **factory concept** is used to **automate** the process for creating applications.

The software factory concept allows for instance to set up a **continuous integration** methodology.

Continuous integration means **man/weeks of operations saved** each years. That's without counting the number of errors avoided, the speed of correction and the robustness derived. **Software industrialization** implies software factory, which is made real easy with WINDEV 16.

EASILY AUTOMATE ALL THESE TASKS THANKS TO CONTINUOUS INTEGRATION



MANAGER

The software factory automates hundreds of version creation tasks. This automatically industrializes processes.

NEW

Continuous integration is a new feature of version 16

MAIN POINTS

Saves time
No risk of forgetting something
Automatically increases quality

USE EXAMPLES

There are lots of use examples; we can mention:

- automated project compilation at night: the smallest error, the smallest incompatibility are detected
- use several machines for compilation; at night, all the machines can be used for automated compilation
- guarantee identical compilation of an application at any time
- automate manual tasks: compilation of course, but also updates, flag positioning, deletion of temporary files, file renaming, license number update, create the install program...

A VERY EASY IMPLEMENTATION

Implementing continuous integration is very easy.

Using the various editor modules, simply :

- 1- Define "generic" action plans containing actions to perform (using the action plan editor)
- 2- Deploy action plans on the coordinator (from the environment)

- 3- Instantly trigger action plans, or schedule their execution (at night...) using the software factory administrator
- 4- View the execution status reports

STATUS REPORTS, REPORTS, METRICS

All the execution status reports for the action plans are stored on the coordinator. Run time, potential errors are stored.

Statistics can be edited.

A history of all the builds is kept.

Continuous integration saves you weeks year after year, and automatically increases the quality of your applications.

UML WORKFLOW AND MERISE MODELING

With WINDEV 16, modeling a database is very easy! You can create a "MERISE" analysis (LDM and CDM) without knowing MERISE, and a "UML" model without knowing UML!

WINDEV 16 technology is truly **revolutionary**: it graphically represents the organization of the data and processes.

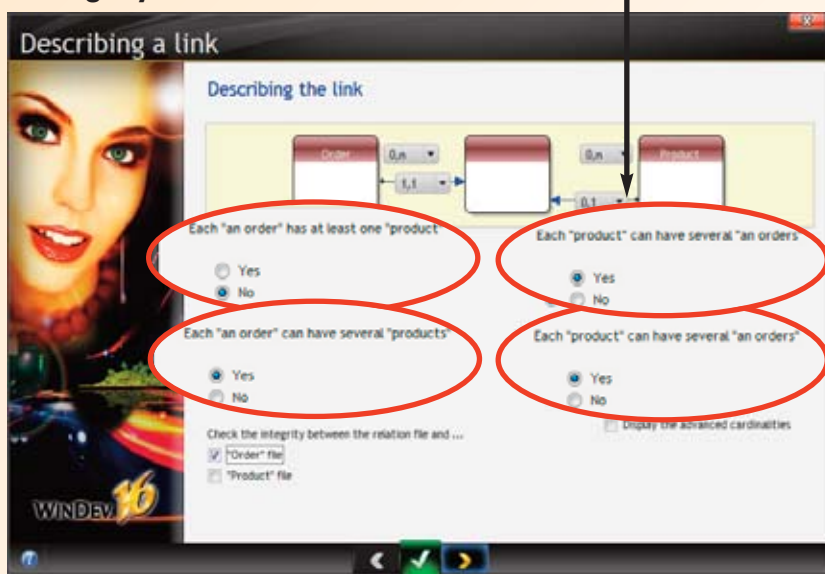
Thanks to WinDev, any developer can automatically create a MERISE or UML analysis.

Impossible to make cardinality errors (1-n, 0-1, and so on)!

Of course, WINDEV 16 also supports all the other data modeling methods.

AUTOMATED MODELING

Answer **4** easy questions to create the relationships and integrity constraints.



RE-USE EXISTING CODE (ORACLE, XML, AND SO ON): AUTOMATIC

HOW TO RECOVER AND USE EXISTING INFORMATION

Linking with third-party databases or file systems (XML, Oracle, SQL Server, MySQL, Access, DB2, Informix, etc.) is

easier. To reuse a database description, simply move this description from the server to the data model editor and specify the selected tables: can't be any easier than that! If the structure of the impor-

ted database evolves, WINDEV detects it and offers to modify the application's analysis!

MANAGER

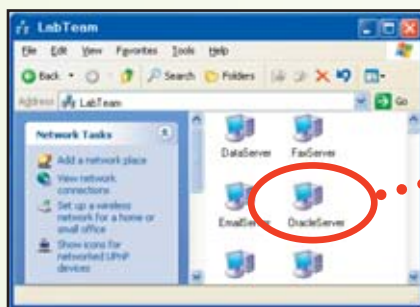
Defining an application and its rules using the modeling tools provided in WINDEV is simple and easy.

NEW

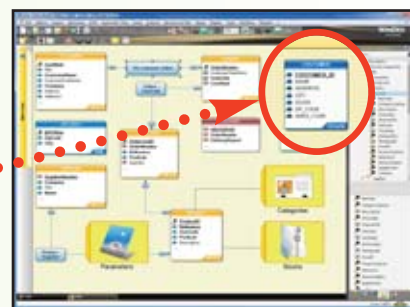
Various improvements
Better link with the code

MAIN POINTS

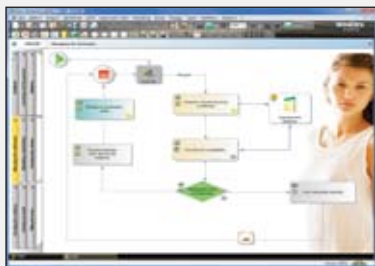
Automatic data dictionary, with bi-directional impact
Generate complete application from the model
Generation, reverse analysis and real-time class synchronization from UML



Here: an Oracle database on the server. Simply slide the server name toward the data model editor of WINDEV...



...to transfer the description in the WINDEV 16 editor. Here, the database itself stays in Oracle format (blue header).



Workflow editor: model without constraints

HOW TO CREATE AN ANALYSIS?

Let's look at a simple but representative example.

1. We simply need to define the structure of the tables that make up the analysis; columns are defined or retrieved from a data dictionary. We specify the type of columns, the type of key, ... Any new column created is fed to the

data dictionary.

You can also use or define metatypes, preset columns.

2. Then we define the relationships between tables. To link tables, simply draw a link with the mouse.
3. WinDev then asks some simple questions, in natural language to automatically determine the type of relationship between the two tables (see opposite page). WinDev will check for referential integrity (can be turned off).
4. WinDev then asks if it must generate the relationship table, use an existing table, or if you prefer to describe it "manually": the relationship is defined.
5. WinDev then asks for the relationship names.

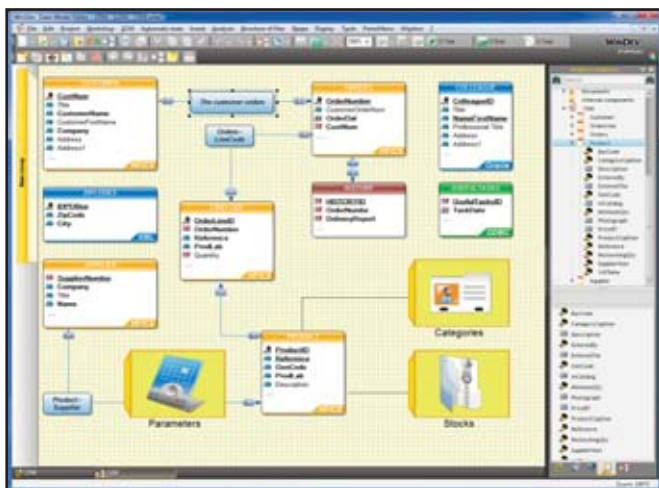
That's it, the tables are linked, your work is done.

All there is to do now, is generate the windows, menus, reports and source code using the RAD tool (or code the old fashioned way), and then print the documentation...

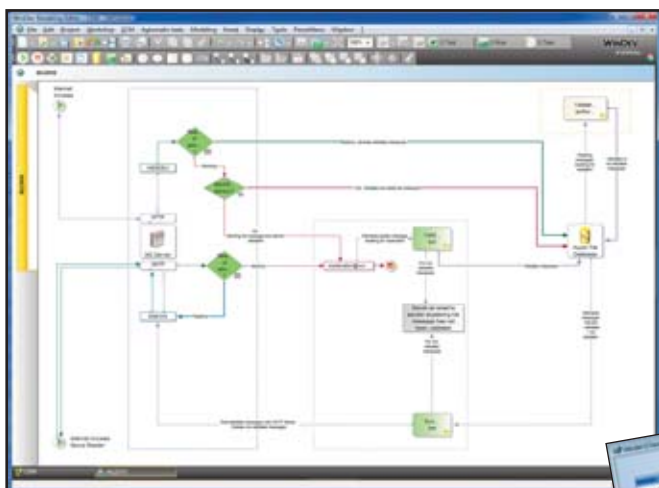
It is that simple.

Note that the different modeling methodologies can be used at the same time in a single project.

WINDEV 16 is a professional IDE, therefore it comes with a very powerful design module.



Modeling an analysis (data schema) is very easy.



The workflow editor lets you define in a realistic fashion processes, organizations, workflows,... without any format constraints.

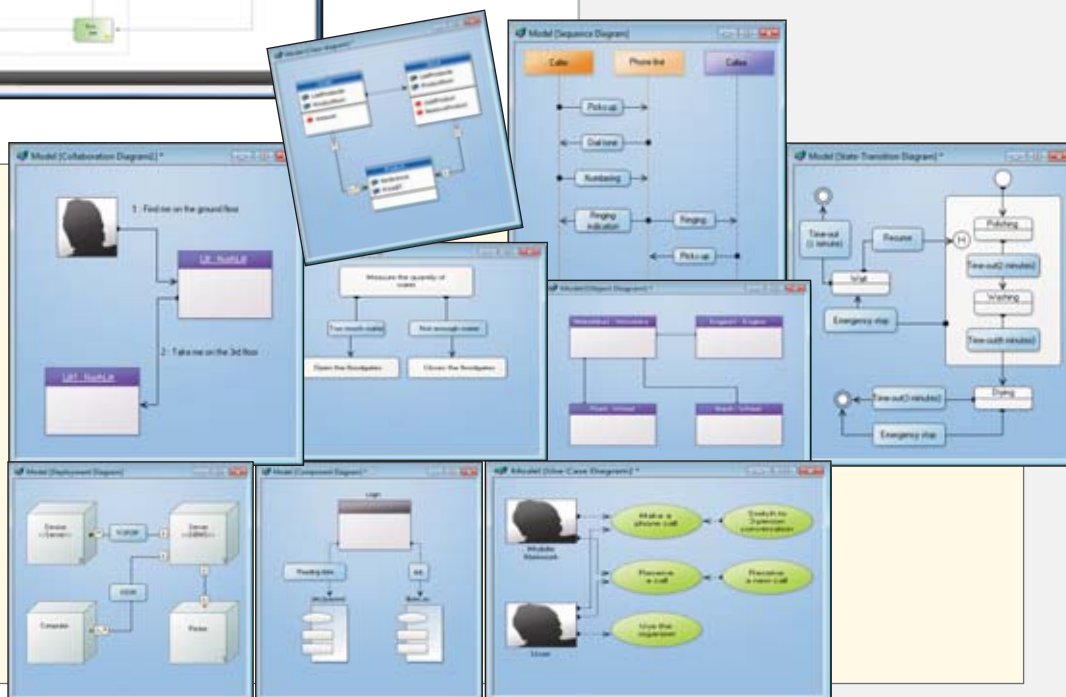
UML

WINDEV supports the 9 UML models.

These models are, of course, edited and documented in the "Program documentation" (see page 62).

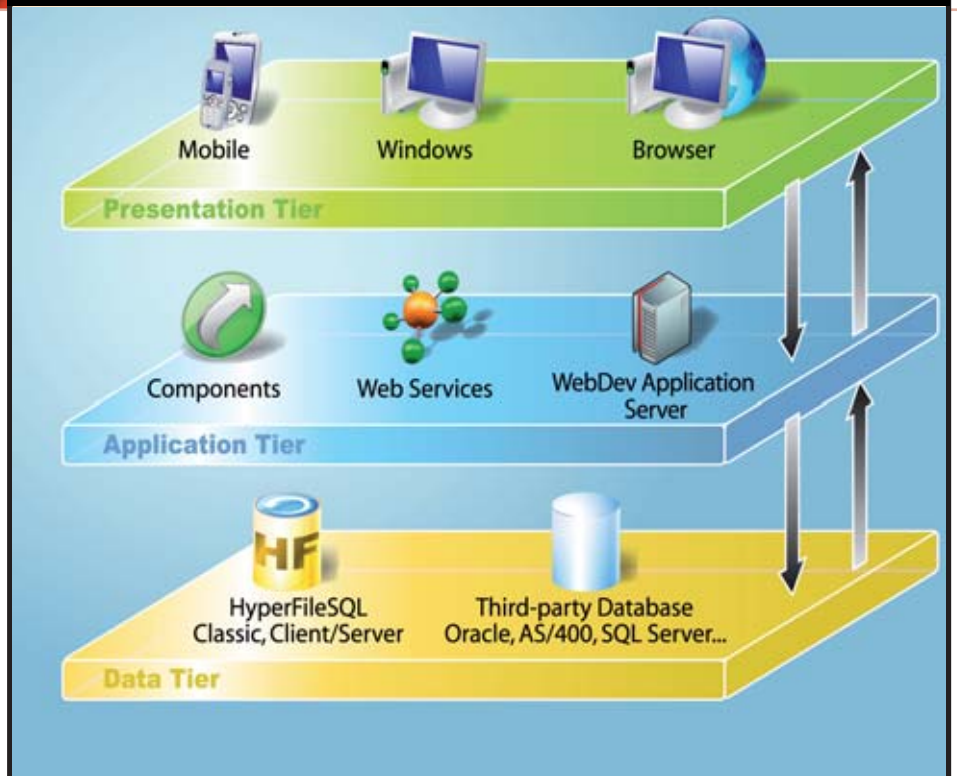
UML GENERATION AND REVERSE-ANALYSIS

WINDEV automatically generates the source code from the class diagrams, and reciprocally, offer reverse-analysis of existing classes.



3-TIER: UI, PROCESSES, DATA ACCESS

3-Tier: this technique is used to separate application code into 3 independent layers. WINDEV 16 supports 3-tier development and **makes it easy for each layer to communicate** through serialization and deserialization, and data binding functions.



REMINDER

You're already familiar with version 15? Please note that there is a 68-page technical document dedicated to the 996 new features in version 16. Available in PDF format upon request at www.windev.com.

MANAGER

WINDEV allows n-tier development

NEW

Even simpler programming: XML, expended data binding, new types...

AAF TECHNOLOGY

UIs benefit from AAF

MAIN POINTS

Serialization/deserialization automatic through WLanguage functions
Real time synchronization

EASY 3-TIER PROGRAMMING

The purpose of 3-tier programming is to separate the 3 layers usually found in an application: UI, processes and data. An application is then made of 3 independent layers:

- presentation layer,
- process layer,
- data access layer,

these layers communicate among themselves using specific functions (APIs in traditional languages, or advanced WLanguage functions).

This separation is meant to make each layer independent from the others in order to provide for easier maintenance and upgrades.

This ensures better security because database access is only authorized by the process layer.

It is also supposed to optimize work in large teams and multi-platform development.

IMPLEMENTATION

The dialog between the layers is done through classes or structures, which are automatically generated by WINDEV.

- 1- Choose the data sources (tables or queries) that you want to use in 3-tier mode.
- 2- WINDEV automatically builds the class diagram corresponding to the classes and structures
- 3- The classes and structures are generated in WLanguage.
- 4- Synchronization between classes and diagram is done in real time.
- 5- Use these classes to transfer information between the "logic" and "presentation" layer.
- 6- In the presentation layer, use data binding to assign data.

For the communication between layers, depending on the communication protocol between the two layers (components, Web Services, HTTP, WEBDEV site,...), the classes can be serialized using XML or binary format, using the `Serialize` and `Deserialize` WLanguage functions.

3-tier is easy with WINDEV 16!

WEB SERVICES SOA



WINDEV 16 lets you easily use, create, deploy and host **Web services**.

A native syntax is offered.

WINDEV 16 makes it easy to set up **SOA** (Service Oriented Architecture) architectures in your projects.

EASY WEB SERVICES

USING WEB SERVICES

It is easy to use a web service from WINDEV. The structures of the WSDL file automatically become native types of WLanguage.

EASY CREATION OF WEB SERVICES

Web services are easily created: simply define the set of procedures that make up the Web service interface.

The complex types (structures, XML content, ...) are supported.

The WDSL description file is automatically generated

EASY WEB SERVICE DEPLOYMENT

Web services are hosted on a computer that has a WEBDEV application server. The installation procedure is automati-

cally generated.

EASY WEB SERVICE HOSTING

The hosting technology is based on the robust WEBDEV standard application server.

This technology allows for insuring the Web service availability as well as its speed.

Requests are executed simultaneously, in separate processes, which ensures security.

Web services can be consumed by any type of application, created in WINDEV, WEBDEV or with any other third-party language.



Need to create **.NET**?

WINDEV 16 offers the .Net features you're expecting.

WINDEV 16 creates executables, and also classes (assembly) that can be used by the other .NET languages (asp.Net for example).

WINDEV 16 knows how to use classes created by other languages, and **can include .Net controls** in WINDEV windows.

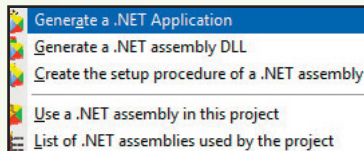
.NET

COMPILE IN .NET

Nothing's simpler, just click the corresponding menu choice. You want to compile a .Net application:

You can create your .NET APIs.

ACCESS .NET API



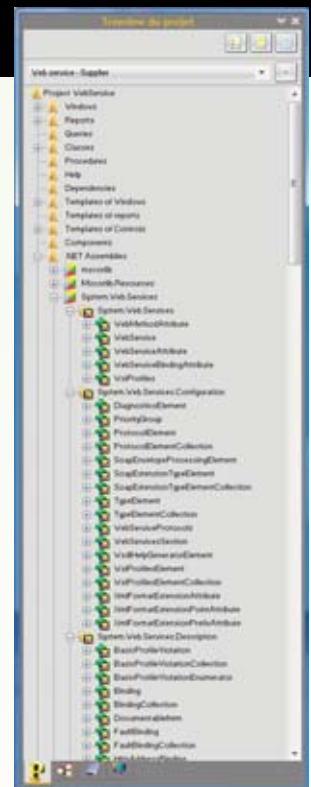
WINDEV 16 enables you to access all the .Net APIs.

SHARE CLASSES WITH .NET: IMPORT & EXPORT

WINDEV classes can be used directly and without any modification to generate .NET applications.

And vice versa, WINDEV 16 lets you use

.NET classes built using other languages as native classes (with all the advantages of the code editor, documentation editor, etc.).





OPEN YOUR APPLICATIONS TO ANY STANDARD

USE ANY STANDARD IN YOUR APPLICATIONS



Openness is fundamental to development: a developer should **never be stuck!**

WINDEV 16 is open to **all the market standards:** this adds simplicity to any action...

With WINDEV 16, you can easily access any standard!

Connect and drive any **device.**

And do this the most easily and naturally in the world, because WINDEV 16 is open to all standards.



MANAGER

WINDEV is open to all the market standards. You'll never be stuck, you'll benefit from all technologies.

NEW

FTP functions compatible with proxies
Simplified support for XML files

AAF TECHNOLOGY

Exports Word, Excel, OpenOffice, PDF, XML...

MAIN POINTS

Total openness

STANDARDS LINKED TO INTERNET

INTERNET

Thanks to the compatibility between WINDEV 16 and WEBDEV 16, easily transform your Windows applications into dynamic Internet or Intranet sites.

All the project's elements (analysis, windows, queries, reports, code classes, etc.) are compatible.

HTTP

Get and Post type HTTP requests can be programmed to retrieve data on an Internet server: submit a form, retrieve a site's page (to automatically analyze its content in your program),...

SOCKETS

Using sockets (including SSL) in your programs offers a lot of freedom in many areas: communication,...

It is easy to create a multi-threaded socket server for instance.

FTP

A family of functions lets you access an FTP server, list the files, send or receive a file,...

RPC

You can create and call an RPC server.

RSS

Your applications can read or write RSS streams natively.

The streams, channels, owners are read/write accessible.

SOAP WEB SERVICES (CLIENT AND SERVER)

SOAP lets you link applications written using different languages. WINDEV 16 lets you easily implement SOAP for the client and the server. REST technology is also supported.

SMTP AND POP

These outgoing and incoming e-mail standards are supported natively by WINDEV 16. IMAP is also supported.





DEVICES

TOTAL OPENNESS

WINDEV 16 is open to all the technologies. You'll never be stuck.

POCKET PC, SMARTPHONE, MOBILE

With WINDEV Mobile, immediately move

your application on to Pocket PCs, Smartphones and mobile devices

Instantly convert your Windows applications to applications for mobile devices: it's the same code!

Share the modeling, windows, reports, components...

PARALLEL PORT

WINDEV 16 also lets you easily manage parallel ports.

USB PORT

WINDEV 16 supports USB ports (USB 1, USB 2, USB 3). An application can list devices, display a hub tree, be called when a device is connected or disconnected, get information about a device (manufacturer, ID,...).

BLUETOOTH

WINDEV 16 lets you manage and list Bluetooth devices, establish connections and communicate with devices.

BURNING CD AND DVD

Your WINDEV 16 applications can burn CDs and DVDs (in Windows XP, Vista and 7).

TWAIN: SCANNERS,...

Most scanners, digital cameras, ... can be controlled by programs that use the TWAIN standard. WINDEV 16 supports this standard easily through ... the Twain commands of WLanguage!

DATA ACQUISITION THROUGH SERIAL LINK (RS 232) AND USB

There are plenty of uses: badge reader, electronic scale connection, robot control etc. With WINDEV it's very easy, a wizard takes care of everything (see p 43).

DOMOTICS

Domotics is supported: X10, CM 11 and CM15 (see page 57).

SNMP

The SNMP standard is used by a large number of network devices: switch, router, PC, network card, network printer... a family of native functions lets you communicate with these devices.

TAPI

TAPI is a standard for communicating with phone devices (PABX,...).

The TAPI function family lets you manage these devices

WINDEV 16 is open to all standards.

THE OVERALL STANDARDS

TSE & CITRIX

Applications developed with WINDEV work in the TSE and CITRIX distributed environments.

CONTROLLING SOFTWARE

It's easy to automatically control Word or Excel. A lot of source examples are supplied.

It's even easy to control tools that have an "OLE" mechanism, such as Outlook, MS Project, Notes, Domino, ... as well as OPC.

OPC

OPC is a communication standard for automation that is used a lot in industrial settings... WINDEV 16 supports OPC (Data Access part).

XML

XML is supported natively.

LDAP

LDAP is a communication standard for accessing directories. the LDAP function family lets you access and perform searches in directories (read, write). ActiveDirectory and OpenLdap are accessible through this family of functions.

PDF

PDF is supported natively, in read, display and document creation mode (see page 30).

BAR CODES

Bar codes are supported in read and write modes (see page 31).

MS OFFICE DOCUMENTS

Documents from the MS Office suite are supported: XLS, XSLX and DOCX in read and write mode.

IMAGE FORMATS

All the image formats are supported (see page 56).

DLL CALL

A WINDEV application can communicate with DLLs.

.NET

It is possible to create .Net applications and assemblies. You can also call .Net assemblies (see page 51).

API

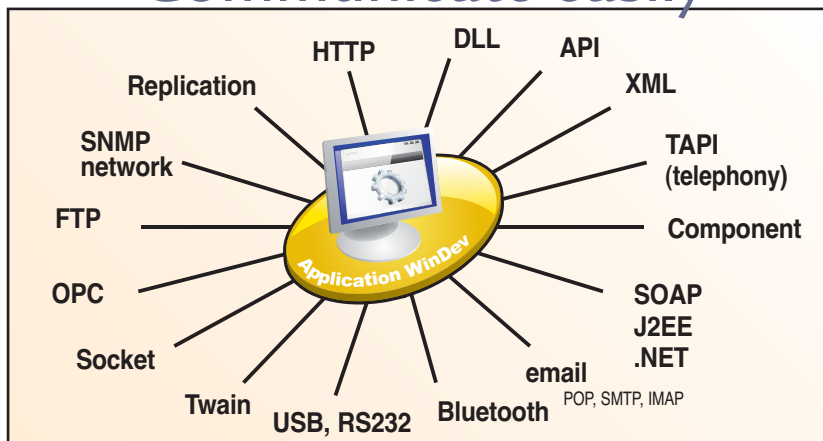
The "API" function lets you manage all the MS Windows APIs.

A wizard manages the structures needed for calling the API.

ZIP, RAR, CAB

The ZIP and CAB compression formats are supported in read/write mode. The RAR format is supported in read mode.

Communicate easily





NATIVE ACCESSES: GOOGLE APPS, OUTLOOK, LOTUS NOTES, SAP, EXCEL, SALESFORCE ...

A large number of companies use standard software such as Lotus Notes, SAP R/3, Outlook, Excel, Google...

Google also provides a large number of applications (Contacts, Maps, Calendar, ...) that you may want to control from or include in your applications.

The link between applications built using WINDEV 16 and these software is easy to implement thanks to the **native access functions** provided with the product.

CONTROL AND COMMUNICATE WITH STANDARD APPLICATIONS



Read and write data in Google Calendar from your applications!

NATIVE LOTUS NOTES SUPPORT

Access to e-mails found on the Lotus Notes (Domino) mail server, in incoming and outgoing modes, is standard in native mode.

Programming is child's play: these are functions you already know from WINDEV! (**eMailSend** family,...).

All you need is to add a line of code to connect to the Notes server:

EmailStartNotesSession.

Lotus Notes usual security is respected, of course, through the Lotus certificate.

Access to contacts, appointments, tasks and documents found on the server is easy. This is made possible, in read and write mode, by a special set of WLanguage functions ("**Notes**" family).

The versions of Notes supported at the date this document was printed are versions 6.5 to 7.0; do not hesitate to contact us to find out the versions currently supported.



MANAGER

WINDEV is open to all the standard software on the market. You can easily interact natively (read, write).

NEW

Increased Outlook support

AAF TECHNOLOGY

Exports Word, Excel, OpenOffice, PDF, XML...

MAIN POINTS

Link to other software

NATIVE OUTLOOK SUPPORT

Access to Outlook mails, in incoming and outgoing modes, is standard

Access to contacts, appointments and tasks is easy, in read and write mode.

Lotus Notes usual security is respected, of course.

The mails are managed using the Express version, e-mails and contacts are managed using version 97.

Versions 2000 and 2007 are fully supported (mails, contacts, groups, appointments and tasks).

Exchange is supported.





COMMUNICATE WITH GOOGLE APPLICATIONS

Google provides a lot of applications, accessible through the Internet, that may be useful.

LINK WITH GOOGLE MAPS

The Google Maps service is an Internet cartography software offered by Google. It lets you display a map or itinerary, with a lot of

viewing options.

Examples of processes that can be implemented natively in WLanguage:

- you can get a map and display it in a window control or a report control, send it by e-mail.
- request the drawing of a route on a map.
- request custom markers on a map.

LINK WITH GOOGLE CALENDAR

The Google Calendar service is an Internet application provided by Google that is used to manage a calendar on the Internet.

The native WINDEV 16 functions let you for instance, create an application for synchronizing a calendar with an already existing application: use of a meeting room, vehicle, ...

These functions also allow you to build specific interfaces (for specific business needs, more user friendly, ...) and add specific processes (print,...).

LINK WITH GOOGLE CONTACTS

Google Contacts lets you manage contacts over the Internet.

The WLanguage functions let you retrieve your contact list, groups of contacts, as well as the details of each contact: name, notes, IM address, telephone, address, e-mail,...

LINK WITH GOOGLE ADWORDS

The Adwords advertising service allows you to manage your ad campaigns on Google.

The link with Adwords lets you build WINDEV applications such as auction management, keyword definition for a set of ads, or analyze sites from which the ads are clicked.

It is also easy to create a program excluding the ad display from unwanted sites or sites with no link to the ad.

LINK WITH PICASA

Picasa is an online image and photo management application offered by Google.

The features offered by version 16 let you create rich clients, automate actions,...

LINK WITH GOOGLE EARTH

The Google Earth mapping service is an Internet satellite mapping software offered by Google.

Native access (via an ActiveX in this case) to Google Earth is also possible.

NATIVE SUPPORT FOR SAP R/3

SAP access through native BAPI calls

SAP is a widely used ERP. A large number of SAP users implement add-on applications on top of their software.

Native SAP support by WINDEV allows you to do so with our famous ease of use.

A BAPI (Business API) is a function that interacts with an SAP system. Some BAPIs are provided with SAP, other are written by other developers or software publishers.

A family of functions enables you to establish a connection (with authentication) and call BAPIs and pass them parameters. A wizard helps import automatically the structures used.

You don't need to install the SAP UI module.

This access through BAPI allows the database security to be respected (no need to create an account with database modification rights). Access to the database is managed directly by SAP, respecting the priority management.

WINDEV (and WEBDEV) UI in SAP!

"Report and Queries" type reports in SAP!



NATIVE SUPPORT OF SALESFORCE

Salesforce is a very popular CRM software worldwide. It is sold as a SaaS (Software as a Service), that is, the application and the data are hosted on Salesforce's server farms.

However, specific requirements are often created by this type of software.

The development of additional modules is a big benefit when using and cus-



tomizing this type of software.

Thanks to WINDEV 16 native functions, your applications can now interface with Salesforce.



IMAGES, SOUND, VIDEO: AUTOMATICALLY SUPPORTED

WINDEV handles images with surprising power and ease-of-use.

Support for **all formats** is standard without the need to code anything.

Sound and video are also supported as standard.

TODAY MULTIMEDIA IS PRESENT EVERYWHERE



- BMP
- RLE
- WMF
- ICO
- SVG
- PCX
- JPEG
- TIF
- ION
- GIF
- Animated Gif
- PCD
- PSD
- PNG
- TGA
- PDF
- ...

- AVI
- MP3
- WMF
- WAV
- MPEG
- DIVX
- ...



MANAGER

Today, multimedia is everywhere. Thanks to WINDEV, it's automatic in your applications.

NEW

Support for extended svg format
Support for Windows sound constants

MAIN POINTS

Integrated and automatic
Support standard formats
Read and write

FORMATS: ALL!

WINDEV 16 supports various image formats.

An image can be stored as an independent file, or directly in a table row of a HyperFileSQL database.

AUTOMATIC DISPLAY

Managing images with WINDEV 16 is child's play; it's even automatic in most cases.

- General case

Assign the name of the image file to the name of the image control, for instance:

PART="VALVE.JPG"

It is that simple.

- Image linked to a table row

The display will be automatic. No coding needed.

IMAGE AND VIDEO CAPTURE

WinDev enables you to dynamically capture an image or a video.

This image can be saved in a file (BMP, JPEG, PNG, and so on), enhanced, emailed,...

SAVING IMAGES

WINDEV 16 allows you to handle, modify, enhance and store images on disk. This feature enables you to change the image format (switch from BMP to JPG for example) by programming, or to store annotated images, or to read and modify their EXIF parameters.

EFFECTS ON IMAGES

WINDEV 16 enables you to add effect to images: scrolling, display from the center,... these effects can be defined in the editor or by coding.

SOUNDS

All the sounds (.WAV, .MP3 and all the formats whose MCI driver is installed) are supported. Programming is child's play: simply type:

Sound(Sound_name)

VIDEOS ON PC

With WINDEV you can easily drive your video sequences (tutorial, advertising, movie, etc.) WINDEV supports files in AVI, MPEG, DIVX, format, and so on.

DOMOTICS



Managing electrical appliances via the **existing wiring** paves the way for easy remote control by programming.

Control electrical equipments through applications created with WINDEV 16.

Simply use a plug or switches compatible with the **X10** standard.

Switching on a lamp, closing shutters, turning off equipment or getting its state (on, off), and so on is easily done from a WINDEV 16 application.

This can be done **remotely**, from an Internet site, from a Pocket PC, or even by sending and receiving SMS from your mobile phone.

CONTROL ELECTRICAL DEVICES



From her Pocket PC, this young woman turns on her Jacuzzi, opens the electrical blinds, and adjusts the air conditioning in the entire house...

SUPPORT FOR THE X10 STANDARD CONTROL YOUR ELECTRICAL DEVICES

THE "DOMO" TYPE FUNCTIONS TO CONTROL EVERYTHING

These commands let you control devices and find out their state using regular

power lines.

DomoSend lets you send a command such as: turn on, turn off, dim, to one or more electrical devices at the same time.

DomoState lets you find out the state (on or off) of a piece of equipment.

DomoOpen lets you initialize the dialog between the application and the interface module (physical bi-directional communication module of CM11 or CM15 type).

MANAGER

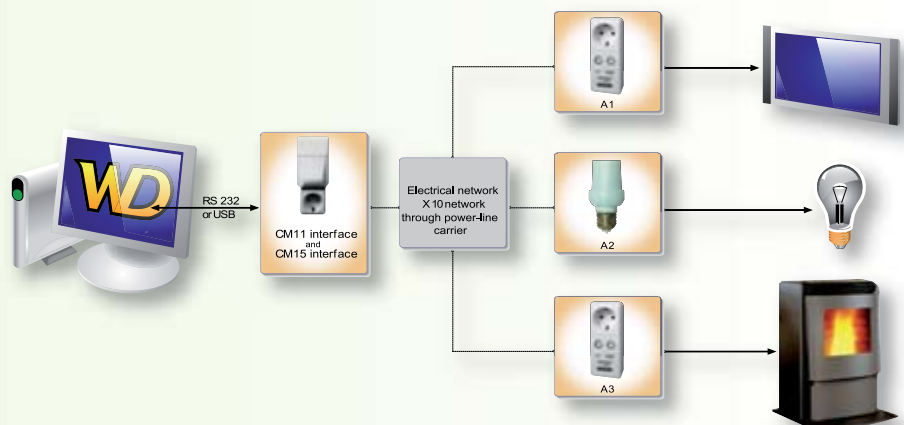
Domotics functions in WINDEV 16 let you control electrical equipments using existing wiring

NEW

Miscellaneous changes

MAIN POINTS

Programming in WLanguage
Use existing wiring



A VERY RICH CATALOG OF EXAMPLES AND WIZARDS

REUSE THESE EXAMPLES
LET WIZARDS GUIDE YOU
USE COMPONENTS



LIST OF PROVIDED EXAMPLES

Here is a selection of examples provided with the product that can be reused in your applications or can be used as learning tools.

- Complete CRM
- Complete accounting application
- Secure remote access to data via Internet
- Click area in an image (geographic map)
- Operations using XML functions
- Using ZIP type compression functions
- Use of a Web camera
- Using SOAP
- Using RPC
- Secure remote access to data via Internet
- Using sockets
- Using threads
- Trigger
- Multiwindowing
- Treeview
- Transferring files by FTP
- Drawing curves
- Remote monitoring through a web camera via Internet
- Use of a Web camera
- Telephony (CTI): auto-dial, display caller ID on PC, etc.,...
- Synchronize data files
- Data replication via email
- Statistics
- Service: application without UI running in background task on a server
- Scanner controlled by TWAIN
- Puzzle: moving images with the mouse
- Using queries

- Optimized search using composite keys
- Task list
- Internet search from a Windows application without displaying a browser
- Network: find out who is locking a table record
- Custom setup
- Link to Palm Pilot
- Graphic slider
- Configuring POP3
- Managing 3D shapes with the mouse
- Graphical schedule manager
- Management of Holiday and Flex Time
- Phonetic search, without using the exact spelling
- Control Outlook
- Spell a number out
- Instant messaging
- Mathematical management of matrices
- Mailing by email
- Mailing by fax
- Line smoothing
- Reflexive link
- Report examples: different types
- Printing by programming without using the report editor
- Direct print to a printer (using ASCII code); useful for industrial printers
- Print preview
- Automatic import into an application of the content of an Internet page (entire or partial content); get price list, financial information, schedule, ...
- User groupware: define specific rights depending on user groups
- Stock chart
- Managing computer hardware
- Using OLE DB to access data-

- bases
- Automatically generate test data for an application
- Financial functions
- Advanced Excel management features
- Close Windows by programming
- Programmed table export: addition to the automatic export function
- Keystroke simulation
- Screen saver
- Drag and drop between windows, applications and Windows
- Dictaphone
- Draw from a program
- Encrypting data
- Dynamic compilation: how to create code that will be compiled and executed on demand by an application
- Calendar
- Calculations on dates and times
- Euro calculator
- Automatic image animation: Parameters illustration
- Alarm
- Create assistants (similar to WinDev's wizard) for your own applications
- Use of DCOM and COBRA (older protocols)

SUPERCONTROLS

You can create your own supercontrols, to share them among your applications or among developers. Numerous ready-to-use supercontrols are provided.

- RTF toolbar, to create text edit areas
- Find/Replace function in a text
- Screen capture, to perform hard

- copies by programming or when clicking a button
- Counter
- Spelling checker (using the Word dictionary, which must be installed on the computer)
- Industrial type graphic unit
- Progress bar
- Assisted input of a date range
- File and directory picker
- Check the validity of a credit card number
- Check the validity of a RIB number
- Check the validity of a SIREN number (France)

COMPONENTS

- Image annotation
- Managing a MS agent
- Protect the information displayed in a window
- Manage a BalloonTip
- List of French zip codes
- SQL connection wizard
- Managing and sending emails
- Managing and sending faxes
- User management
- Network and system information
- Holidays management
- Managing a tips and tricks window
- Application protection (number of users, number of computers, duration)
- Managing a search engine
- Secure payment
- GMT SOAP server
- Display the content of a memory zone
- Manage Socket client and server

WINDEV 16 comes with an impressive set of examples.

These examples serve a double purpose: **tutorial** first, **financial** second. Retrieve a single example and save entire days of programming.

Reuse them in your applications!

Before you start writing code, check that it doesn't already come with WINDEV!



WIZARDS

Wizards are very useful: they generate for you the code required for building your application.

To do so, the wizard asks questions and generates the corresponding code (and windows if necessary) according to your answers.

The generated code is clear and of course can entirely be customized.

A wizard can help you with an area you are not familiar with! For example, performing a RS 232 serial link data acquisition only requires 3 minutes, timed! (see page 35)

- Acquiring information about the serial port
- Calculating the key of an INSEE number
- Calculation of the date corresponding to the Monday in a given week
- Calculate a deadline
- Center a window in the screen
- Load a dynamic link library (DLL)
- Time a process
- Compress a file
- Check the existence of a disk
- Conversion between decimal and hexadecimal numbers
- Convert a HFSQL table into a text file
- Convert a text file into a HF table
- Convert a xBase file into a HF file
- Convert a date into words
- Transform a date into a string of a given format
- Convert an angle measurement
- Create an HTML page from the table data (memory or browsing table)
- Trigger a process at a given time
- Decompress a compressed file
- Last day of the month
- Determine the number of mouse buttons

- Determine whether the mouse button are reversed
- Status of the mouse buttons
- Status of a control key
- Create a hard copy of the window
- Functions for print layout
- Manage sounds via multimedia
- Manage an audio CD via multimedia
- Manage multimedia Windows animations
- Insert a string into another string
- Run the control panel
- Limit the mouse movements
- Input mask for a real number with an exponent
- Modify the window background
- Number for the day in the year
- Open the dialog box used to format a diskette
- Open a window where the mouse cursor is located
- Browsing two nested tables
- Control Word
- Control Excel
- Find a file or a directory
- Retrieve the word that was clicked
- Retrieve the selected elements in a list
- Retrieve a disk error
- Transfer the content of a HFSQL view to an Excel file
- Transfer the content of a HFSQL view to an HTML file
- Transfer the content of a HFSQL view to a text file
- Transfer a HFSQL view to the clipboard
- Spell a number out
- Check the Luhn key
- Check whether a year is a leap year
- Check whether a SIREN code is valid
- Check whether the mouse is connected
- Check whether a program is already running
- Check a RIB key
- Zoom on an image

"FUNCTION" WIZARDS

These wizards generate parameters for functions.

For example, the RGB color wizard directly proposes the name of the colors and then

changes them into the corresponding RGB values...

- TreeAdd
- TreeModify
- LoadImage
- BuildBrowsingTable
- CreateShortcut
- Encrypt
- CursorPos
- DateSys
- dCopyBlt
- Uncrypt
- dPixelColor
- dSaveImage
- dSaveImageGIF
- dSaveImageJPEG
- EmailSendMessage
- EmailStartSession
- EmailStartSMTPSession
- EnumControl
- Event
- ExelInfo
- ExtractString
- dCrypt
- fUncrypt
- fDriveInfo
- fWrite
- fWriteLine
- WinSize
- fExtractPath
- FinRedemption
- FinDecreasingRedemption
- FinLinearRedemption
- FinPeriodInterest
- FinPaymentNb
- FinInterestRate
- FinCurrentVal
- FinNetCurrentVal
- FinFutureVal
- FinRepayVal
- fRead
- fReadLine
- fOpen
- fDir
- fSelectDir
- fSelect
- fImageSelect
- FTPConnect
- grCreate
- HAlias
- Random
- HChangeName
- HChangeRplDir
- HCreateView
- HDeclare
- TimeSys
- HFilter
- HImportText
- HReadFirst
- HReadSeekFirst
- HOpenAnalysis

- HIndex
- iPreview
- iBorder
- iCreateFont
- iPrintReport
- iPrintImage
- iMargin
- BitmapInfo
- INIWrite
- INIRead
- iParameter
- ExeRun
- ListSeek
- NumToString
- NetworkConnect
- NetworkDisconnect
- NetworkDirName
- RGB
- SelectColor
- sParameter
- sOpen
- StatCorrelation
- StatCovariance
- StatAverageDeviation
- StatStandardDeviation
- StatStandardDeviationP
- StatMax
- StatMin
- StatAverage
- StatSum
- StatVariance
- StatVarianceP
- SysColor
- SysEnvironment
- CurrentTitle
- Confirm
- Error
- Info
- Password/Login
- OK/Cancel
- YesNo

To develop faster, an example is always useful!

ONLINE RESOURCES (FREE ACCESS)

Before starting any new development, run a search in the examples!

You will probably find pieces of code that can be reused in your application!

This feature may save you hours, days or even weeks of development.

The www.windev.com site offers a large number of

development resources.

You can download these resources freely.





CREATE AND REPLAY AUTOMATED TESTS

Usually, the **quality and security** of an application depends on many parameters: complexity or ease-of-use of the language, complexity or intuitiveness of the environment, need or not to use third-party software, combination of professional and non-professional versions, UI generator limiting the number of user errors, etc...

Automated testing is only one of the phases that ensure your software's high quality, but it is an important one. WINDEV 16 also offers regression tests, unit tests, integration tests and load tests.

By simply saving your actions, **test scenarios** are created that can be **replayed** later.

AUTOMATED TESTS



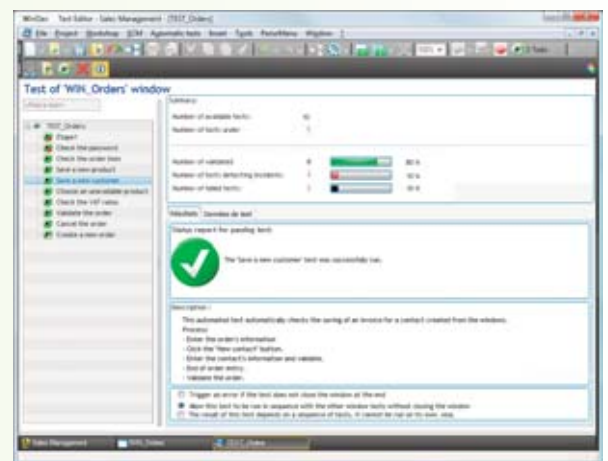
TEST SCENARIO IN WLANGUAGE

An added benefit of these test scenarios is that they are created in WLanguage. Using WLanguage as the scripting language makes it a lot easier to modify these scripts. The "Emulate" family of functions are available in WLanguage for this purpose.

This makes it easier to modify the scenarios, to add or change a value to test for example, or to add a column, or to change the name of an external database...

The use of WLanguage also enables you to easily perform loops on actions to test in a given scenario. Load testing is easy.

Note that these tests use "smart renaming"; if one of



the control name changes in the project, the test continues to work automatically!

Test the executable

In the environment, tests automatically run on the element being updated. The tests can also be run on an executable to validate it before distributing an update for instance.

MANAGER

The ability to create unit tests for code and UI directly from the environment lets you improve the quality of the applications

NEW

Miscellaneous improvements

MAIN POINTS

Integrated with the development environment
Scenario generated in WLanguage
Execution without leaving your code
Automated UI tests, without coding

WINDEV 16 offers to perform unit tests and integration tests.
The creation of test suites is made extremely simple.

WINDOW TEST

A set of recording buttons comes up when requested, and allow you to start and stop recording a test scenario.

All the tests related to one window are grouped into the same script file, which is saved with the project.

UNIT TEST FOR PROCEDURES AND CLASSES

To directly test a procedure or a class, simply use the popup menu that offers to create (and then replay) a new unit test.

APPLICATION VALIDATION RATE

The testing center displays the list of existing tests, the version of the application on which each of these tests has been run and the result of the test.

This information is also displayed in summary mode in the project Dashboard.

THE TEST SCENARIO EDITOR

When running a test, if an error is found in the application, clicking the script error positions you directly where the error occurred in the code.

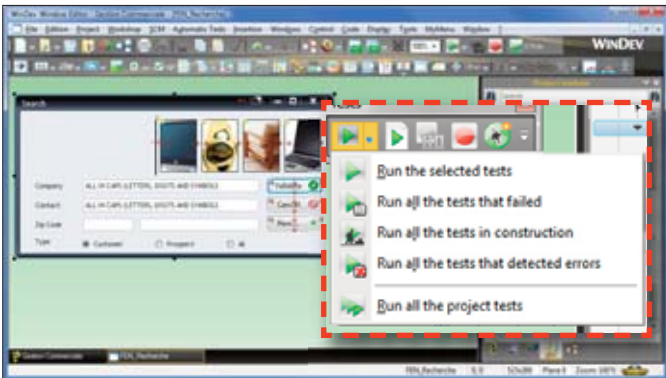
TEST VERIFICATION DURING CURRENT OPERATIONS

Each time a client version is created, WINDEV 16 shows the application's validation rate and notifies you if it is unacceptable (this can be configured).

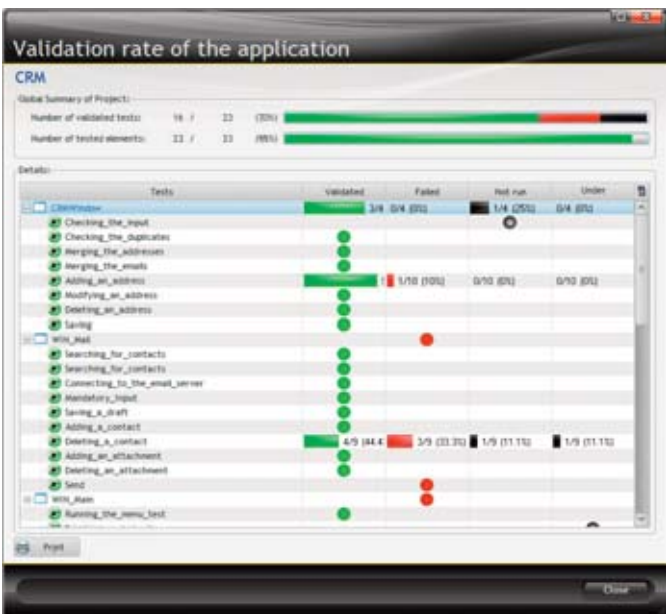
Each modified element that has not been tested and for which a test exists is flagged. If there's no test for a window that has been modified, the Testing Center indicates whether this window has been run at least once since the last compilation.

A history of the validation rate is automatically stored, which allows the application's quality to be tracked over its life cycle.

This verification is also performed when you check in elements in the source code manager.



*Record button to record and play a scenario.
When performing a "GO" operation, tests are also offered*



List of tests available per window, status of each test, and summary

A FULLY INTEGRATED TOOL

Test management is fully integrated with the development environment: window editor, code editor, executable creation ...

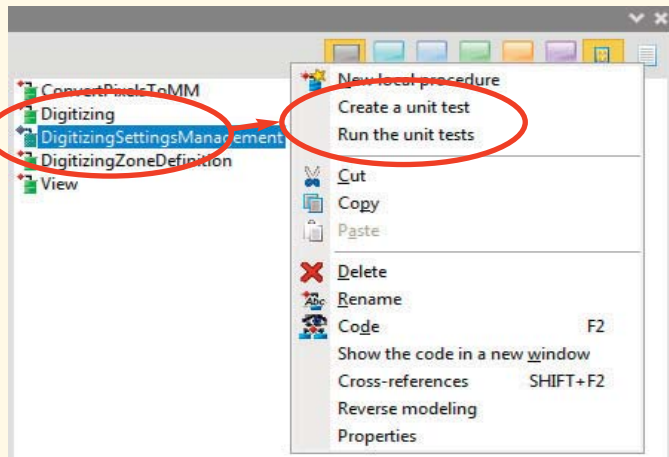
The dashboard displays test results and lets you run tests as well.

The tests and their results are automatically available to all the members of the development team.



Excerpt from the dashboard: the red light indicates that the tests have failed or have not been run. Click to open the list

In the environment: creating a unit test for a procedure is done by right clicking





TECHNICAL DOCUMENTATION IN 1 CLICK

WINDEV 16 includes an analysis and program **documentation** generator as part of the product.

AN ALWAYS UP-TO-DATE DOCUMENTATION

A complete documentation contains 12 sections

1• Cover

2• Project description

3• Dashboard

4• Schedule

5• Business rules

6• Data schema

7• UML models

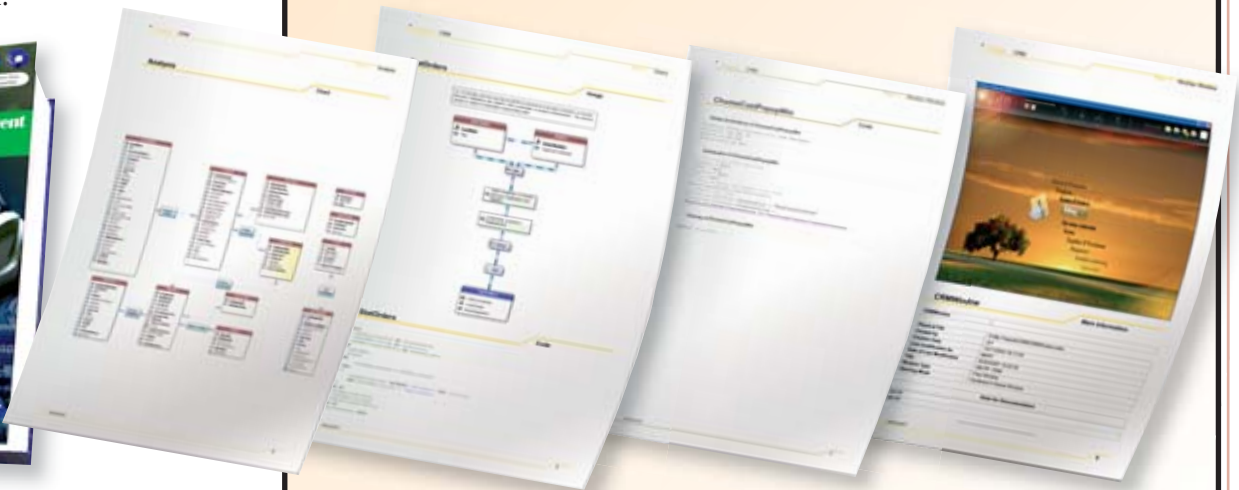
8• Window description

9• Report description

10• Query description

11• OOP classes and Web Services description

12• Main index and appendices



A complete documentation usually contains several hundred pages

The full documentation is created in one click by **reverse-analysis** of your project and can be edited at any time, it will always be up-to-date.

This documentation generator will save you days.

MANAGER

A technical documentation is fundamental for a subroutine, or simply to help a new member join the team. Here the documentation is automatically created.

NEW

Miscellaneous new features

AAF TECHNOLOGY

AAF can be printed with the documentation

MAIN POINTS

Always up-to-date documentation
Print to paper, HTML (for Intranet), PDF, Word, OpenOffice...

DOCUMENTATION? 1 CLICK!

THE WHOLE DOCUMENTATION IS ALWAYS UP-TO-DATE IN ONE CLICK

With WINDEV 16, you always have a complete, up-to-date documentation that is really useful, thanks to the reverse-documenting technique used.

And this only requires one mouse click...

SIMPLIFIED MAINTENANCE

The documentation is essential for easy maintenance. New developers assigned to a project can easily get familiar with its features and architecture.

This, in turns, makes it easier for them to join the team, and allows them to be productive much sooner.

CONSULTING FIRM: MAKE SIGNING CONTRACTS AND COLLECTING A LOT EASIER

For a consulting company, an analysis documentation is often required by the client when signing the contract, and later when taking delivery of the application. At each revision of the documentation,

you save days thanks to WINDEV.

And the documentation is always up-to-date...

EASILY DISTRIBUTE THE DOCUMENTATION: HTML, PDF, WORD...

You'll be able to easily distribute the documentation: in paper format, on your company's intranet (using HTML), by integrating it into a word processor (Word, Open Office, etc.), or in PDF format, to attach it to an e-mail for example...

CUSTOMIZABLE DOCUMENTATION

You can customize many parts of the documentation: fonts, size, images, etc. Several documentation templates are available.

SHARED RESOURCES

The documentation is part of the shared resources necessary for working as a team.

Documentation is a requirement for any professional development. This is of course a standard feature of WINDEV 16.

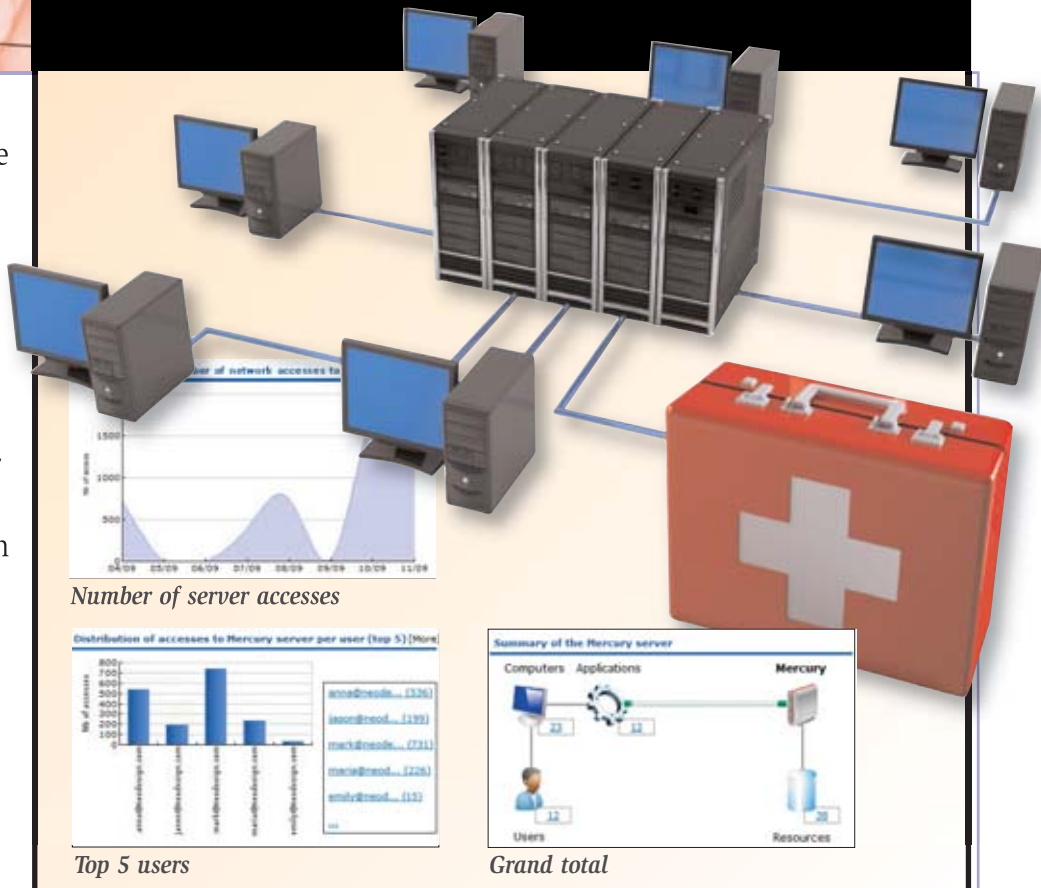
INCREASE YOUR NETWORK'S SPEED

The "Software Infrastructure Supervisor" (SIS) lets you follow the status of your **Information System**.

SIS keeps you informed on the volumes used, the users, the applications.

SIS **automatically** performs **security audits**, to alert you of potential problems: different versions of the same application in use, non-optimized data server, access to data located on unusual servers ...

The Infrastructure Supervisor lets you size and increase the speed of your network.



INFRASTRUCTURE AUDIT

A network audit can be started at any time.

This status report applies to one specific resource (an application, a server, a computer, etc.) and contains 2 parts:

- potential problems
- a summary of the resource's settings.

This way you can easily optimize the use of your software on the infrastructure you have.

IF I STOP THIS SERVER, WHAT WILL HAPPEN?

Every developer, every project manager, every IT engineer would like to get the instant and reliable answers to these questions:

- If I stop this server, what will happen?
- What applications are running on this server?
- Are some servers hosting applications whose version is outdated?
- What are the details of the errors that occur during applications' execution?

- How can I get an error dump on a live application that restarts on its own?
- This application uses which server(s)?
- This application uses which resources (component, web services, data files, ...) found on which servers? Sometimes, in "real life", an application uses components that access unknown resources...
- Which application, which user, which machine use a lot of resources?

The summary report of SIS displays links that immediately answer these questions (and dozens more).

The Infrastructure Supervisor is going to change your life!

Your applications' implementation is secured. The quality offered to your end user increases.

! Potential problems detected on the NeoDesign appl

- ✘ One or more fatal errors have been detected wh
- ⚠ The application accesses one or more network fil We recommend that you use the resources local Type(s) of resource accessed: INI file, Query, Ana
- ⚠ The application accesses a HyperFileSQL Classic d recommend that you use a HyperFileSQL Client/S an easier maintenance of the database.

SIS has detected some potential problems

MANAGER

SIS enables you to ensure seamless operating for your applications on the company's hardware.

NEW

Data deletion

MAIN POINTS

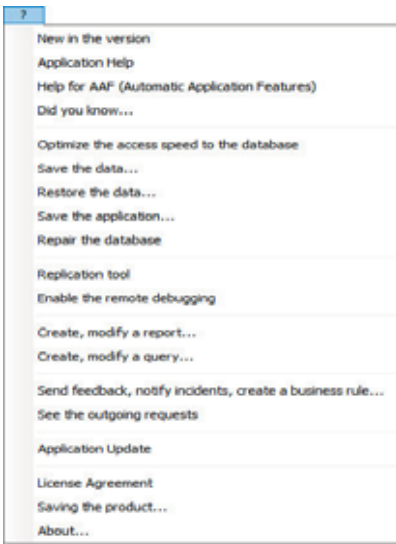
Application security
Hardware monitoring
Security audit

DELIVER A HELP SYSTEM WITH YOUR APPLICATIONS

WINDEV comes with a help generator in "HLP" and "CHM" format.

This generator enables you to **provide a professional help** with your application, which will improve your users efficiency.

Upon request, WINDEV 16 also inserts a **"?" menu** in your application, which contains the link to the help system, a link to the list of all the new features, backup options...



MANAGER

An online help lets you make better use of an application and therefore makes it more profitable

NEW

Miscellaneous changes

AAF TECHNOLOGY

The end user benefits from an online help

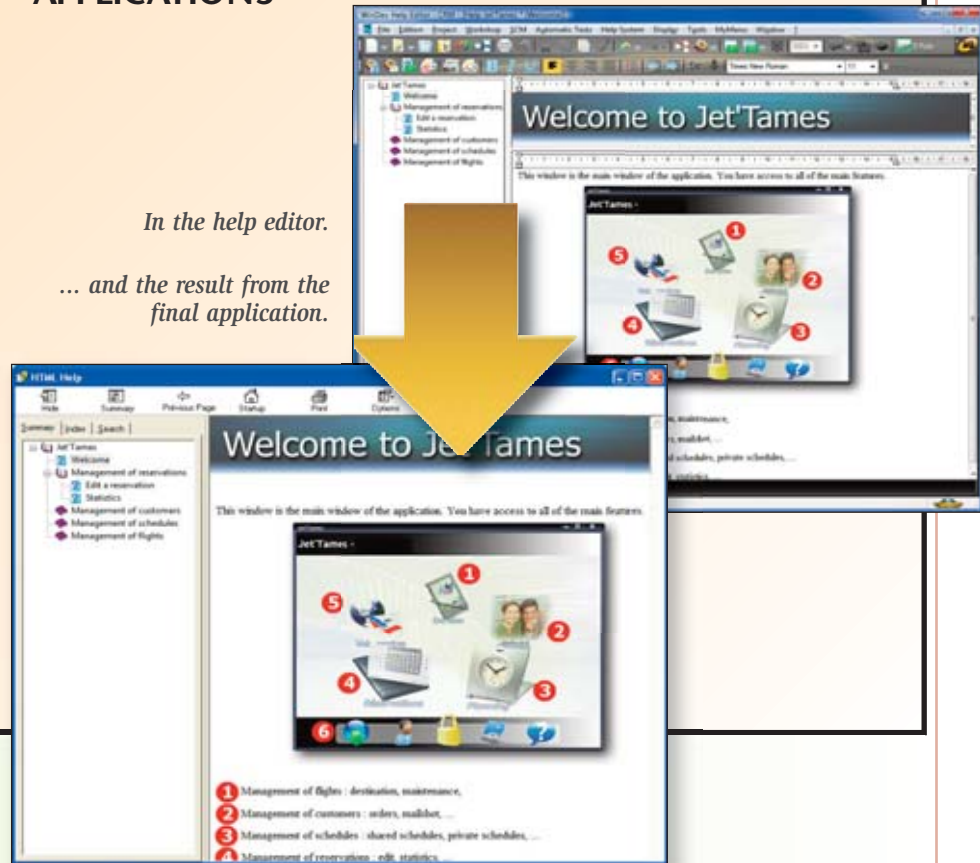
MAIN POINTS

Integrated with the environment
Automatic structure

HELP USERS TO BETTER USE YOUR APPLICATIONS

In the help editor.

... and the result from the final application.



CREATE YOUR APPLICATION'S HELP

WINDEV 16 lets you easily create 4 levels of help in your applications:

- WinHelp and CHM help (HTML help)
- tooltip
- status bar
- help related to a control

Tooltip, status bar and control help are created directly in the development environment through the "7-tab".

The CHM or WinHelp help is created by using the help editor.

AN EASY-TO-USE EDITOR

The help generator automatically creates:

- help pages
- screen copies of the application
- links to the corresponding processes of the calling application.

Several elements can be configured (colors, buttons, background image, and

so on).

SOME OF THE AVAILABLE FEATURES

The help generator offers features that allow you to easily build help systems:

- create link with keywords
- detection of broken links
- adding information to an image arrows, text,...
- text style management
- link to Internet page
- link between different CHM help systems

The help generator lets you easily create an interactive help system.

With WINDEV 16, the help generator comes as standard.



TRANSLATE YOUR APPLICATIONS AUTOMATICALLY

Development of multilingual applications has become more and more of a requirement.

There are of course countries that use several official languages: Belgium, Switzerland, Luxembourg, Canada etc

And then there's Europe of course! WinDev offers an innovative and powerful solution for **supporting foreign languages** (Latin character sets, non-Latin character sets -**Unicode** UTF8-, left-to-right and right-to-left writing).

For applications targeted for the North American continent, English, Spanish and French ensure the largest possible distribution of your software.

And there're the emerging countries as well: China, Russia
Translate your applications into several languages, distribute them all over the world!

UP TO 64 LANGUAGES PER APPLICATION

UP TO 64 LANGUAGES PER APPLICATION

Multilingual support (up to 64 languages per project) is automatic for your applications: specify the languages to use, and translate texts, labels, etc. Unicode is supported.

USE AN AUTOMATED TRANSLATION SOFTWARE

You can call a translation software or site to translate your controls' labels in real time directly from the editor.

The multilingual support takes into account the specificity of each language: input/display mask (date,...), centering,...

DIRECT INPUT IN DIFFERENT LANGUAGES

Can it be any easier!

The input is directly performed in each language (Russian, Chinese, ...) This feature is available for the screens, reports, code messages, and more...

AUTOMATIC TEXT EXTRACTION

The WDMMSG tool, available separately, lets you extract all the "text" in a project, and reintegrate it after translating it. Useful if you want your application to be translated by a translation agency or a software!

CREATE YOUR OWN DICTIONARY

WDMMSG also creates a database containing the source texts and the translated texts, and automatically proposes a translation whenever possible.

Developing multilingual applications, it's child's play with WINDEV 16!

MANAGER

Translating an application for a new market has never been this easy. WINDEV 16 offers all the tools needed as standard

NEW

Up to 64 languages per application

AAF TECHNOLOGY

Combine all the languages into the same EXE or limit an EXE to one language

MAIN POINTS

64 languages per application

A single executable

Instant visualization in the editor

Your own terminology dictionary that grows automatically

Install
2,500 Computers



Automatically create setup procedures

DEPLOYMENT, VERSION MANAGEMENT AND MAINTENANCE: AUTOMATIC

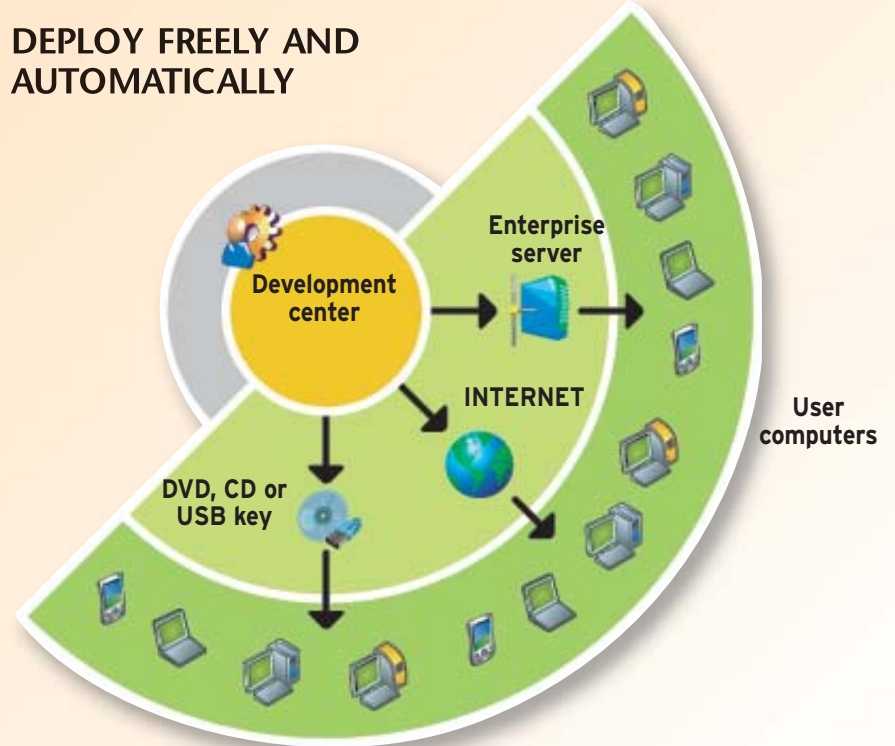
WINDEV 16 automates the deployment phases in all the possible cases: software publisher, consulting company, internal IS department, Internet distribution, etc.

The setup program generator automatically creates the program adapted to your case. Everything can be modified and customized.

After its development and deployment, an application starts evolving. WINDEV 16 also automates the maintenance tasks, including database maintenance.

WINDEV 16 manages the complete application life cycle.

DEPLOY FREELY AND AUTOMATICALLY



MANAGER

Automatically managing the installation and the maintenance of applications make them more reliable, more accessible. Time saved is also quite impressive.

NEW

Support for both 32-bit and 64-bit in the same setup program
Creation via software integration

AAF TECHNOLOGY

Automatic update of table structures by comparison with the application's version
Remote control of applications and connected users

MAIN POINTS

Install push
The application manages its updates by itself

AUTOMATICALLY CREATE SETUP PROGRAMS

Opposite, an example of the interface for creating setup program: hard to be simpler, everything is visual. Everything can also be easily configured.



- Allow the end users to create they own reports and queries and to modify the reports whose source code is supplied
- Intall help for user macro-Code
- Display user license during installation
- Display a readme file at the end of the installation program
- Selecting the optional tools to include in setup
- Include uninstaller
- Set the automatic data file modification
- Customize the data files path during installation
- Customize the groupware files path during installation
- Include MDAC in the installation
- Install ODBC driver for Hyper File

Deploy in one click



Execute your application directly from a key

One click: the setup program is automatically created.

Every time an application is run, it verifies that there isn't a more recent version.

Automatically checks the version number: if the user skipped one or more updates, it is handled by the update.

Minor update? A patch!

Automatic database update: no more "hack jobs"!



Version management: roll back to a previous version of your application in one click.

AUTOMATIC INSTALLATION

The integrated environment knows your project, the databases it uses... therefore, it knows how to automatically create a full setup program.

Of course, you can modify this program, set up parameters, etc.

As with all the other modules, this module comes with WinDev.

Note that the setup programs are multilingual.

ASSISTED CUSTOMIZATION

The elements to install are easily picked from lists; By default WinDev offers elements from the modules you used in the application.

All the elements can be customized: title, background image, logo, end-user license text, readme, etc.

The program group(s) will be created automatically using the icons you specify.

NETWORKED MACHINES ALWAYS UP-TO-DATE AUTOMATICALLY

Just install the new version on the server and each user computer will be updated automatically on its own, through the company network or through the internet (live update). This way you can rest assured that all the machines are always up to date.

LIVE UPDATE, CD, DVD, USB KEY, INTERNET, ...

The setup program generator allows for flexible deployment. It creates programs on CD, DVD, USB key, HTTP, and any media.

INSTALL PUSH

In this mode, instead of each user starting the installation himself on his machine, a remote software administrator will do it for him.

You install without having to go anywhere!

MULTI-SITE INSTALLATION THROUGH RELAY SITE

This mode lets you deploy an install using relay servers in order to not overload the main server (can be combined with "push"). The client applications refer to the relay servers then.

SINGLE USE PASSWORD

This feature lets you manage the remote activation of a program or an update.

A key is generated on the client computer.

The client sends an activation request (via Internet), receives an activation key, then can activate its application.

APPLICATION PATCH

For a minor application update, you can also provide additional resources (windows, reports, etc.) as patches or as independent objects.

VERSION MANAGEMENT

WinDev automatically manages the different versions of your application (internal and customer-facing).

You can rollback to a previous version of your application in one click if required.

WINDEV manages the complete development life cycle. The industrialization of the development process is automatic!

AUTOMATIC APPLICATION UPDATE, AUTOMATIC DATABASE MAINTENANCE

NO MORE "HACK JOBS"!

Which developer hasn't had the thankless task of writing quick and dirty hack to increase an item size or add an item to an existing table?

The problem is even more complex when several versions of the application are in use: the application version as well as the database version have to



be checked as well.

Writing those hacks is always tricky because they alter the data.

No more of this with WINDEV 16!

WINDEV will automatically create the procedure to update the file and will automatically install it and execute it when updating your application. This procedure will have all the old versions of the application (up

to 100), and will update the "old" HyperFileSQL databases if necessary.

AUTOMATIC UPDATE

Here, we're launching an application on a computer. A new version has been detected on the reference server. This version is offered automatically. Everything is automatic

ROBOT : IT MONITORS YOUR APPLICATIONS AND YOUR SERVERS

WINDEV 16 comes with a monitoring robot.

The goal of this engine is to **check that an application or a server works**.

If the monitored element fails (hardware problem, broken Internet access, system down, ...), the engine's mission is to **send the preset warnings**.



Warning message sent to a cell phone

MANAGER

The monitoring engine insures uninterrupted service for applications, file servers or Internet sites.

NEW

Miscellaneous changes

MAIN POINTS

Service continuity
Rich and easy configuration
Easy implementation

THE ROBOT MONITORS YOUR APPLICATIONS AND YOUR SERVERS



MONITORING: POWERFUL AND EASY

WHAT TO MONITOR?

The engine lets you monitor the following elements for instance:

- http server
- NMTP server
- SNMP server
- file server
- email server
- WEBDEV application server
- HyperFileSQL server
- WINDEV 16 application (1 line to add in the application)

WHICH WARNINGS?

The server warns, by (your choice):

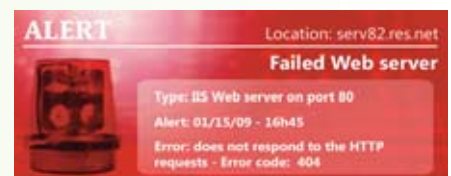
- sending a configurable e-mail message to the specified addresses (up to 20 addresses)
- message sent to a specific application (internal messaging,...)
- message sent to the integrated messaging system

- control screen (visual warning and/or sound)
- starting a WLanguage procedure
- third-party program (this program can for instance, send a configurable message via SMS to chosen numbers).

Of course, you can choose a combination of these warnings.

Among the monitoring parameters that can be specified, you'll find:

- the frequency: run the test every X, from 1 second to 1 day
- repetition: in case there's no answer from the monitored element, how often to retry and how long before triggering the warning
- text of the message to send
- the message's medium (SMS, e-mail, ...).





MANAGE USER FEEDBACK

How to manage **user feedback**? The bugs they report and their suggestions?

WINDEV 16 comes with a component that can be included in your applications, and that manages **structured customer feedback** (through an internal network or through Internet).

The requests are then managed by the Project Monitoring Center which can **store** them and **assign** them to a team member. If it is a bug, the request is turned into an issue and stored in the Quality Center (see p 11).

Users are guided in filling out their requests which are therefore structured. Information doesn't get lost anymore and your **applications' quality improves**.

MANAGER

The feedback component, included in your applications, enables users to send back their suggestions and requests automatically.

NEW

Miscellaneous changes

AAF TECHNOLOGY

FeedBack is an AAF component.

MAIN POINTS

Be responsive and analyze your users' requests
Automatic integration to Control Centers

LEARN FROM YOUR USERS' EXPERIENCE!



THE USER COMMUNICATES

From the "?" menu of the application (generated by WINDEV 16 upon request), the end user can send a message to the software creator (or to the I.S. department). If the application runs into a bug, the wizard can be started automatically.



MESSAGE ENTRY

The end user describes his problem or need. The hardware and software configuration is automatically added to the message.



ANNOTATE SCREEN COPIES

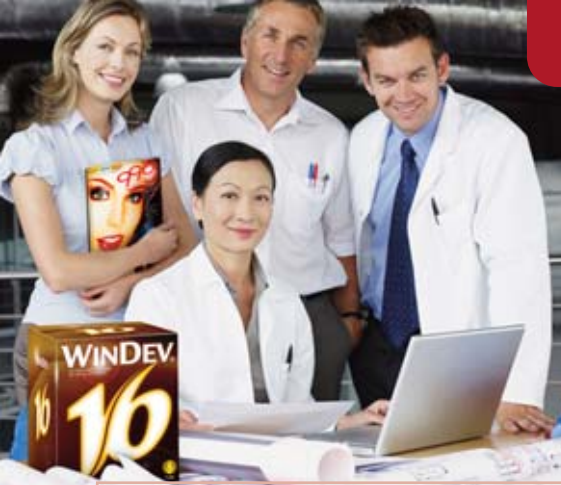
The copy of the current screen is automatically attached to the message. The user can annotate the image using the integrated editor. Other screen copies or attachments can also be included.

IMPORT INTO THE CONTROL CENTER

Here we see the user message in the development team's Quality Control Center. It is ready to be acted upon!



With WINDEV 16, keep in touch with your end users.



WINDEV 16: YOUR COMPANY'S ALLY

WINDEV 16 is the only development environment that allows for such a fast professional development.

1

SATISFACTION

The developer concentrates on the business needs and not on the code: applications finally meet user needs

2

RESPONSIVENESS

Up to 20 times fewer code lines: development and update times melt!

3

COMPETITIVENESS

Time to market is reduced, which allows for market share gains

4

RELIABILITY

Your software is easier to build: it is more reliable

5

SPEED

The code is streamlined, the software is faster

COMES WITH EVERYTHING!



4 MANUALS INCLUDED, TUTORIAL ON DVD

WINDEV 16 comes with 4 manuals: programming guide, concepts, report editor and tutorial (with exercises on DVD).

Community-contributed online help

Of course a powerful online help is available as well as a large number of educational examples.

The online help can be accessed through Internet in a community-based format, which means that developers can add their own comments, details about each topic.

Get started in 1 week

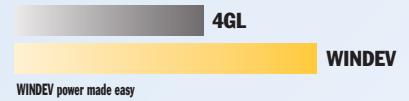
Usually it only takes about one week for a developer to become comfortable with WINDEV 16.

More time saved!

COMPARE FEATURES!

low < > high

Power



Development cost



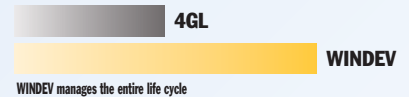
Development time



Ease of use



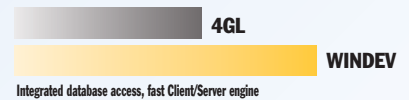
Feature rich



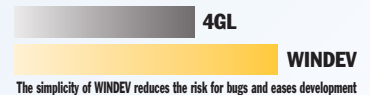
Execution speed



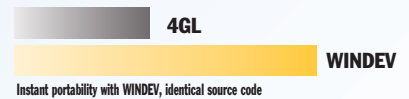
Data access speed



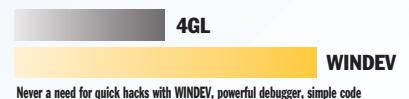
Robustness of the created applications



Internet and Mobile portability



Ease of maintenance and changes



WINDEV, PLAIN COMMON SENSE: 10 PROOF POINTS

Here are some testimonials from our customers. Check them out in the special issue of "01 Informatique" dedicated to WINDEV and WEBDEV.

Customer testimonial*

"Since we've installed WinDev, the department hasn't stop growing. New contracts keep coming in, and it's not unrelated"

Customer testimonial*

"It took only one week for our team to become fully productive which really illustrates how simple developing with WinDev is"

Customer testimonial*

"WinDev is the best choice in terms of productivity and reliability"

Customer testimonial*

"The WinDev IDE is the only product on the market to offer such development productivity"

Customer testimonial*

"The productivity that WinDev brings us in our development projects gives us the means to execute all our ideas and improves our market exposure"

Customer testimonial*

"WinDev offers a set of rich features well suited for complex projects. Without WinDev we would have never been able to carry out such project, especially in the required time frame"



Find testimonials on www.windev.com

- 1 your clients are in a hurry: they demand short project cycles** Develop 10 times faster with WINDEV. You'll meet your deadlines.
- 2 you're not part of an experimental lab: your projects must come to an end** Use the RAD tool, the wizards, the components and bring all your projects
- 3 power comes from simplicity** WINDEV is easy to use. Your teams will be successful with WINDEV.
- 4 developers should concentrate on their trade, not on the tool** The time of the techies that can only produce code by the mile is over.
- 5 your clients want to keep their current systems** Applications built with WINDEV work on all the versions of Windows.
- 6 a project should be documented** The documentation guarantees a long life for the application.
- 7 deploy without any constraints** Freely deploy your applications and your databases with WINDEV. No worries.
- 8 teams perform better in English** Clear, easy to read English commands improves code readability and makes maintenance easier.
- 9 only one language should be used for all systems** The "single language" approach is the perfect answer to heterogeneousness.
- 10 budgets must be respected** Rapid development with WINDEV 16 results in measurable gains.

COUNT YOUR SAVINGS



WINDEV is a complete development environment. Its very **competitive price** is made possible by its success and the large volume of sales. The first **quality** of WINDEV is its **power**.

Its second quality is its **reliability**.

Its third quality is its **ease-of-use** now stuff of **legend**.

Its fourth quality is its **openness**.

The fact that the price of WINDEV 16 is so low is only one of the elements that make it a **success**.



A day without WINDEV is a day lost: order WINDEV 16 today!

MANAGER

The very low price of WINDEV and its very low learning curve are nothing next to its reliability and its power. But a reasonable price is always a plus.

NEW

More than 996 new features in version 16

MAIN POINTS

All in English
Everything is included and integrated
Very short training time

| FEATURES | WINDEV® | Other tools |
|--|-----------------|-------------|
| MERISE, UML modeling tool | included | |
| Complete application RAD | included | |
| Unlimited database <small>Price/server x # of servers</small> | included | |
| Cluster <small>Price/computer X # of computers...</small> | included | |
| Software Infrastructure Supervisor | included | |
| Report generator <small>Price per computer x # of computers ...</small> | included | |
| PDF document printing <small>Price/computer x # of computers....</small> | included | |
| Bar code printing (QR Code, EAN, ...) | included | |
| Fax sending (single ones or as mailing) | included | |
| Query editor <small>Price per computer x Number of computers ...</small> | included | |
| 5GL language | included | |
| Remote debugger | included | |
| Performance profiler | included | |
| Data acquisition/Sending through RS 232, USB and // links | included | |
| Versioning tool (SCM) | included | |
| Static audit, Dynamic audit | included | |
| Software integration | included | |
| Link to external languages: Java, C#, C++, VB, Cobol, ... | included | |
| Translation in 64 languages | included | |
| Online help generator | included | |
| Setup program generator (including "push") | included | |
| Monitoring robot | included | |
| Control Centers: Scheduling, Quality, Requirements | included | |
| Maintenance procedure generator | included | |
| Analysis and program documentation generator | included | |
| Regression test editor | included | |
| User feedback management center | included | |
| Self-training time | 1 week | |
| Custom hot line (telephone and e-mail, 15 inquiries) | included | |
| Version 100% in English (product, documentation, help, examples, wizards,...) | included | |
| Development time | | |
| Product price list (with manuals) | | |
| | TOTAL | |

KEEP ON BUDGET, WIN CONTRACTS

WINDEV 16 is a complete and very powerful tool that is easy to use and with a short learning curve.

With WINDEV 16 you will meet all your objectives.

Its incredibly low price in relation to its

feature set and extended services, is only made possible by our large number of customers.

You will save a lot of money by using WINDEV 16, while bringing total satisfaction to your most demanding users.

The ROI is immediate.

At your side for 25 years



PC SOFT AT YOUR SERVICE FOR OVER 25 YEARS



YOUR FREE TECHNICAL SUPPORT

For 25 years, PC SOFT has been helping professional developers develop their **strategic applications** better and faster.

Who else has such **confidence** in its products that it **offers** free technical support?

The **ease-of-use** of our environments and their reliability allow us to offer you this service, which is fundamental for your efficiency, free of charge.

MANAGER

PC SOFT answers all your requests. Our free technical support (we have total confidence in our products) is real guarantee for your teams.

NEW

WINDEV, WEBDEV and WINDEV Mobile are all up to version 16, and share projects

MAIN POINTS

Free, personalized, technical support
Quality training
Intervention on site

In order to help you reach your objectives faster, PC SOFT provides you with more than 25 years of experience in the professional development market.

SERVING DEVELOPERS SINCE 1984

PC SOFT has been creating development tools since 1984. This is why we know what we're talking about, and above all, it's why we know you.

Several millions of applications developed using PC SOFT tools are running worldwide, in all kinds of fields.

GET YOUR TEAMS QUICKLY UP-TO-SPEED ON WINDEV 16

Many simple, efficient, and accessible ways are available to get you trained quickly on WinDev:

- Tutorial (500 page manual included), examples
- PC SOFT training seminars
- Consulting services

FREE HOT LINE

Development tools, more than any other type of software, require that qualified technical support be available. A simple email or phone call can save you hours or days!

We are so confident about our product

that we offer free support: it is free (15 inquiries).

Free support is accessible by Internet and fax.

Note that the hot lines of most of our competitors are more expensive than the cost of WinDev itself.

PROFESSIONAL NEWSGROUPS

PC SOFT offers exchange forums for developers: the "Newsgroup". PC SOFT newsgroups are moderated, which means that their content is technical and professional, "flame" messages are not accepted. Access to these newsgroups is free.

AN EXPERIENCED PC SOFT CONSULTANT IN YOUR OFFICE

PC SOFT can make an experienced engineer, who is familiar with your field, available to you in your offices, for a duration of 1 to 5 days.

The PC SOFT consultant will help you so you can maximize your investment in WinDev for your specific project, will audit existing code and will guide you in your strategic choices.

WINDEV 16 enables you to easily reach your objectives.





PRESTIGIOUS REFERENCES

Go to the www.windev.com site to read several detailed testimonials from companies that are using WINDEV, WEBDEV and WINDEV Mobile.

Several customers among PC SOFT's tens of thousands share their experience.

You'll be able to see for yourself the variety of use WINDEV can be put to.

WINDEV & WEBDEV: a driving force for Porsche France SA

Project leader

New remedy at Bristol-Myers Squibb: WINDEV Mobile

Project leader

Test beds at John Deere: master analyses with WINDEV

Project leader

PLAYMOBIL France: Your children too can thank WinDev!

Project Manager

(cacharel)

From manufacturing to ordering, WinDev & WebDev are the perfect fit

Project leader

WINDEV Mobile pumps up BRIDGESTONE-METIFIOT sales

Project manager

WINDEV & SEGAFREDO ZANETTI Help in making express decision!

Project leader

WINDEV Mobile pumps up BRIDGESTONE-METIFIOT sales

Project manager

WINDEV & SEGAFREDO ZANETTI Help in making express decision!

Project leader



YOU TOO, MOVE TO WINDEV!

Reusing your legacy code is very easy.

You can retrieve the UI (windows), the SQL queries, use your current database or migrate your data automatically to HyperFileSQL.

You distribute your applications without paying any royalties, without changing your hardware or software, and your applications automatically benefit from cutting-edge features, from Internet and mobile device portability.

WINDEV is a professional product. Non-contractual document. All trademarks are registered trademarks of their respective owners. * Free technical support: 15 free inquiries on the current version. WINDEV Mobile and WEBDEV are sold separately. Don't hesitate to contact us



DEVELOP ANY TYPE OF APPLICATION

While you are reading these few lines, millions of PCs in the world are running applications built using WINDEV. Software with over 200,000 deployed copies, that manage billions of dollars, that work with tables containing several dozen millions of records, or on networks with thousands of remote machines in real time, ...

You too, like them, build your software more easily with WINDEV.

BUSINESS

- CRM, ERP, EAI, EDI, mail order, KM, CAPE, CAM, sales, accounting, payroll, management, amortizations, portfolio, budget...
- Various business applications: auto sales and auto repair; trade, food, match making, hair salon, fashion, photo stores, airline fret agent, city IS departments, cemetery, fresh produce warehouse, workers' council, marina, dry cleaner, spa, oil distributor; home owner associations, optician, express shipper; temp agency, maritime company, airport, cosmetic industry; publishing house, toy industry, newspaper publisher; etc...
- Genealogy software
- Applications linked to ERP, SAP, Mapix, Sage...
- Management of computer inventory, helpdesk
- Industrial packaging
- Real-time inventory management, with laptop and PDA linked by radio and GPRS
- Complete management of a 500 food store chain, with connection to cash registers, to the headquarter mainframe,...
- Real-time management of ID cards
- Organization and optimization of stores
- Worldwide logistics management for a car manufacturer
- Tool for optimizing inventory in the fashion design industry
- Census and poll
- Work time management
- Print giant labels (with bar code)
- Personnel management using picture
- Crop optimization based on quotas and type of culture
- Statistics, reporting
- Consumption billing debited from a smart card
- Account receivable management
- Athlete management (Olympic games)
- Entry and management of classified ads for a daily newspaper
- Geographical and historical atlas
- Process and prevention of work-related accident, with printing of legal documents
- Repair planning and train circulation...

MEDICAL

- Automatic analysis of medical samples
- Management of: Hospital, Clinic, Medical building, Doctor, Dentist, Nurse, Pharmacy, Chiropractor, Emergency technician
- Ultra sound optimization
- Management of thousands of employees for "Médecine du Travail" (work health department)
- Measure the volume/pressure of internal organs...

SPACE

- Stellar seismology study (software loaded on a space probe)
- Calculation of comet orbits
- Editing the sky maps
- Automatic generation of an airplane flight log
- Interface for the defense system of a large country
- Monitoring a stratospheric balloon...

EDUCATION

- WINDEV is used in a lot of engineering schools
- Tutorial including 3,000 windows
- Student self evaluations
- CAL training for a banking software running on mainframe and distributed at 50,000 copies...

FINANCE

- Financial transaction management for clients on 15,000 computers spread over 400 connected networks
- Banking back office
- Insurance premium and claims
- Stock price retrieval
- Banking terminal interface (men/computer, computer/central site) (ATM)
- Commercial land management, on laptop, connected to main system via Client/Server...

INDUSTRIAL

- Supervision software
- Control of an automatic feeder for livestock
- Airbags testing
- Engine testing management
- Monitoring of tests for train braking system
- Monitoring and simulation of flow for dams
- Data entry in a vineyard of the ripening stage of grapes, with GPS positioning
- Real-time entry of veterinary procedures

- Controlling an electronic microscope
- Monitoring of printed circuit presses
- Calculation for building design
- Control of automatic industrial wood cutting operations
- Control drilling/milling equipment
- Control of a viscosity measure instrument
- Analysis of mechanical chocks
- Control of automated paint mixing equipment
- Controlling an interactive vocal server
- PABX and PCBX Management
- Modeling of a drinking water network
- Creation of artificial images of mechanical parts
- Remote surveillance of sensitive areas
- Remote surveillance of a network of water reservoirs
- Monitoring of car making robots
- Access control to nuclear central areas
- Send/receive message on a laptop from a boat
- Acquisition and process of weather related data
- Remote control of an extended network of diode display panel
- Automation of adhesive film cuts
- Examination of combustible radioactive chips
- Interactive terminal issuing transportation tickets
- Interactive information terminal in a department store
- ISO normalization programs
- Technical construction calculations
- Help pre-cabling a building
- Technical documentation management (aviation)
- Workshop Management...

ETC...

This list is not exhaustive of course, but it gives you a good idea of the power of WINDEV and how our customers use it.

Don't let your competition get ahead, choose the best development environment to build your application: WINDEV 16.



WINDEV

WEBDEV

WINDEV
Mobile

DEVELOP 10 TIMES FASTER

WINDEV®

INTEGRATED DEVELOPMENT
PLATFORM



www.windev.com

PCSOFT