

WINDEV® NEW VERSION

INTEGRATED DEVELOPMENT PLATFORM

924
NEW FEATURES

- Dockable Panel control
- Token control
- Clickable switch control
- UUID
- 3D Pyramid chart
- Webification of applications
- Integrated Business Rule picto
- OAuth + OpenID
- SCM : silent check-out
- Native JSON
- Asymmetric encryption
- HFSQLDrive
- Organizer control on mobile
- Printing from Android
- Web Pane control
- Deployment without FTP
- Dynamic site updating
- 300+ WLanguage functions for Windows, iOS, Android, Web, Java, PHP...

24



DEVELOP 10 TIMES FASTER



24

**ORDER
VERSION 24
TODAY!**

**924
NEW FEATURES**



Version 24 offers an incredible amount of new, instantly useful features.
**New controls, new WLanguage functions, new cross-platform improvements...
 Your teams will be even more efficient!**

Version 24 brings your teams 924 immediately useful new features.

Build on your existing experience while taking advantage of new technologies: this is the benefit provided by version 24.

Operating modes are further simplified, the new functionalities meet your current needs.

WINDEV 24, WEBDEV 24 and WINDEV Mobile 24 are your work tools. The main objective of our teams is your satisfaction and success, on all environments and hardware platforms.

Version 24 will quickly become your favorite version!

Legend
 WD WB WM : the legend indicates the product in which the new feature is available.
 This documentation only presents the new features of version 24. To discover the thousands of features of each program, please go to the documentation (online on WINDEV.COM or request the print version).

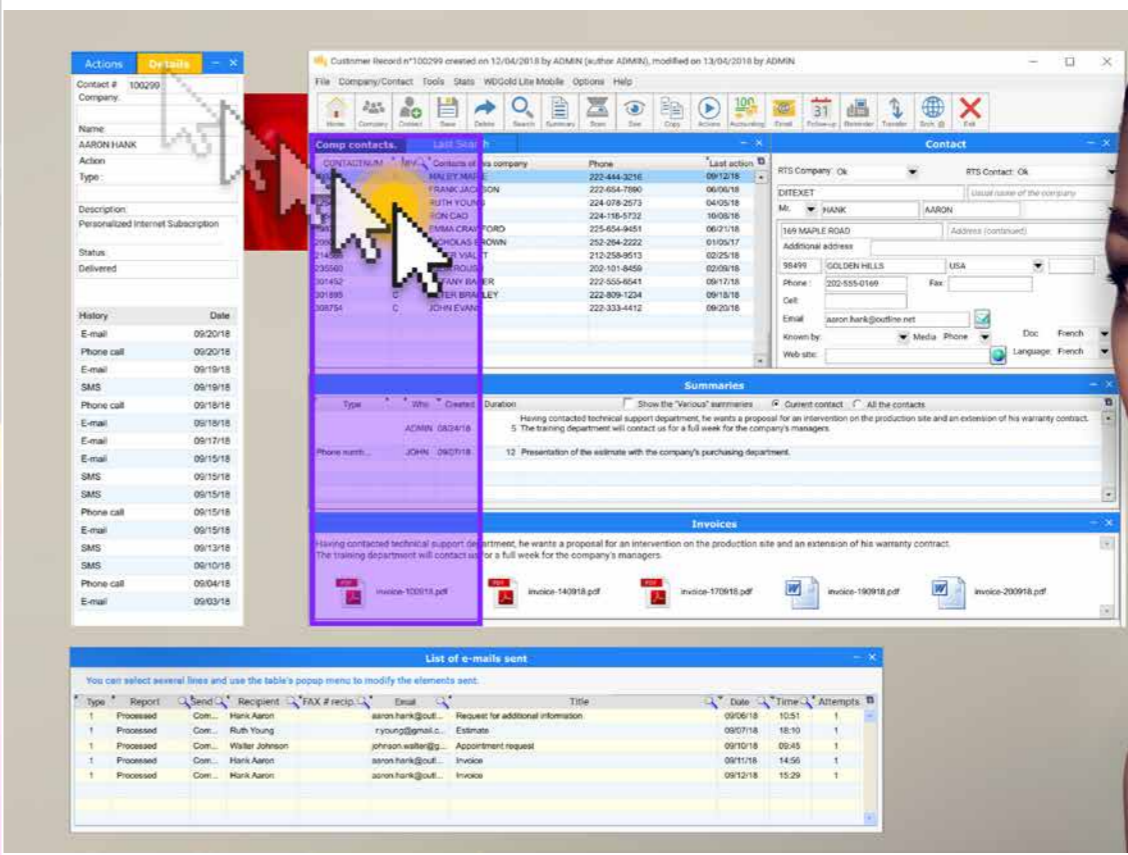


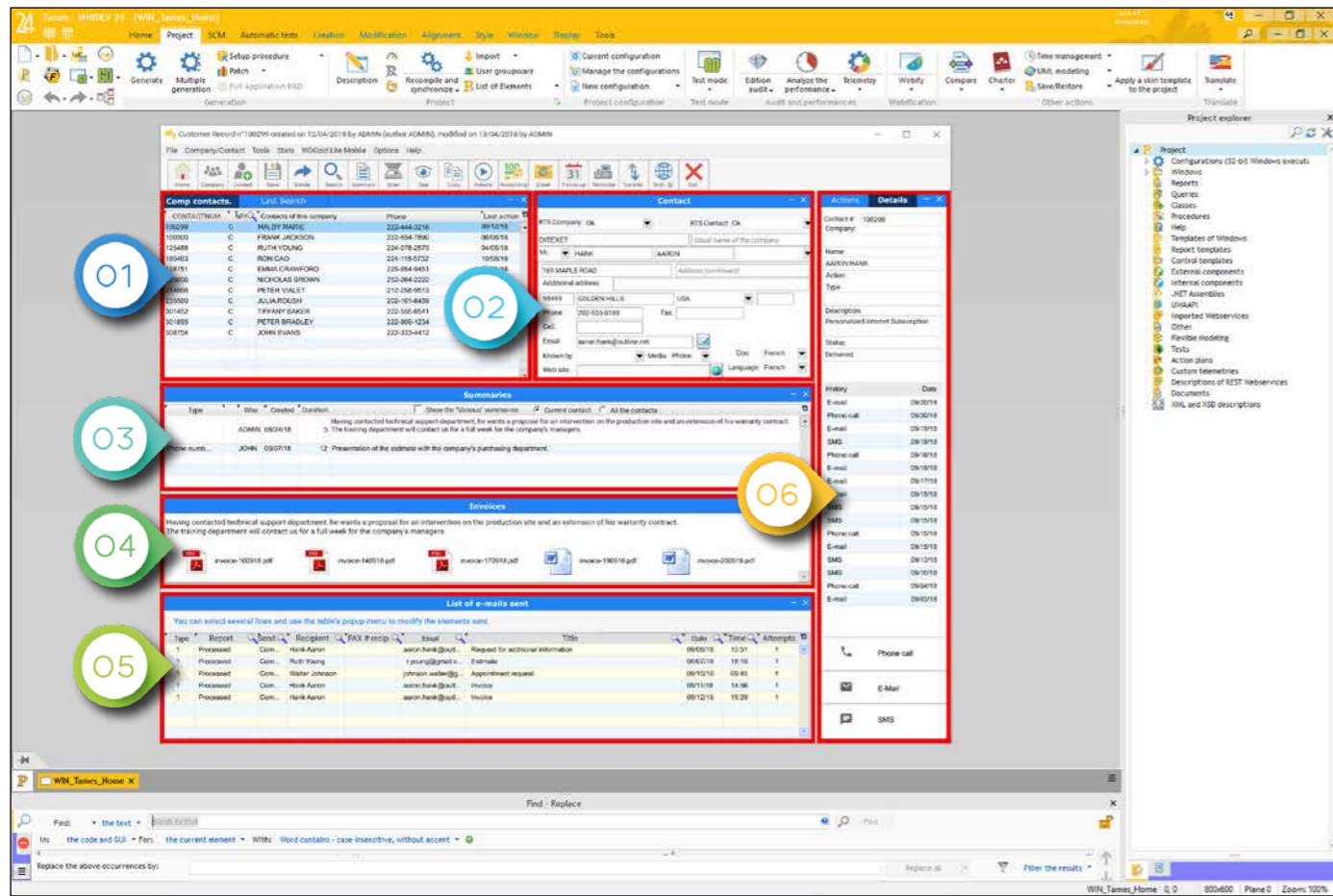
NEW CONTROLS IN VERSION 24

001 New feature WD WB WM **NEW CONTROL #1 NEW CONTROL DOCKABLE PANEL**

The new Dockable Panel control in WINDEV 24 will help you save lots of time .
 You can organize the interface of your application into zones that the user can freely move around.

Dockable Panels allow creating sophisticated interfaces with ease.
 End users will be amazed by the customization possibilities available to them.
 And for your teams: no code required!
Benefit provided by this new feature of version 24 :
A incredibly powerful, yet easy-to-implement control





Dockable Panels being created in the editor. Below, the unmodified window at runtime. On the next page, the window panels are relocated.

002 New feature WD WB WM DOCKABLE PANEL CONTROL : HOW DOES IT WORK?

Dockable Panels (DoPa) can be moved around by the end user of your application.

A DoPa can be docked on the left, on the right, at the top or at the bottom. Magnetism between panels is supported. A panel can be dragged out of a window, for example, to work on a second screen.

Several DoPas can be grouped vertically.

Several DoPas can be grouped in one single area, and be displayed like tabs.

A popup menu allows (among other options) re-displaying deleted DoPas.

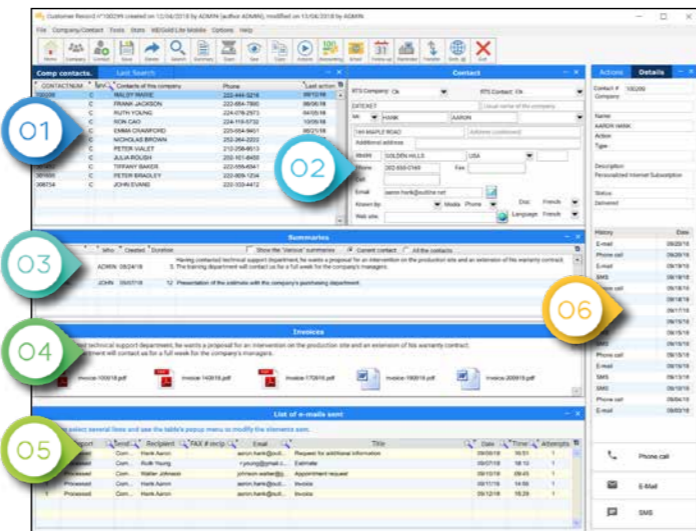
If necessary, different layouts can be defined in a DoPa, which allows using it vertically and horizontally.

Benefit provided by this new feature of version 24 :
Organizational freedom for the end user

003 New feature WD WB WM DOCKABLE PANEL CONTROL : CREATION

Dockable Panels (DoPas) are easy to define in the editor. It can be a set of controls, or an internal window.

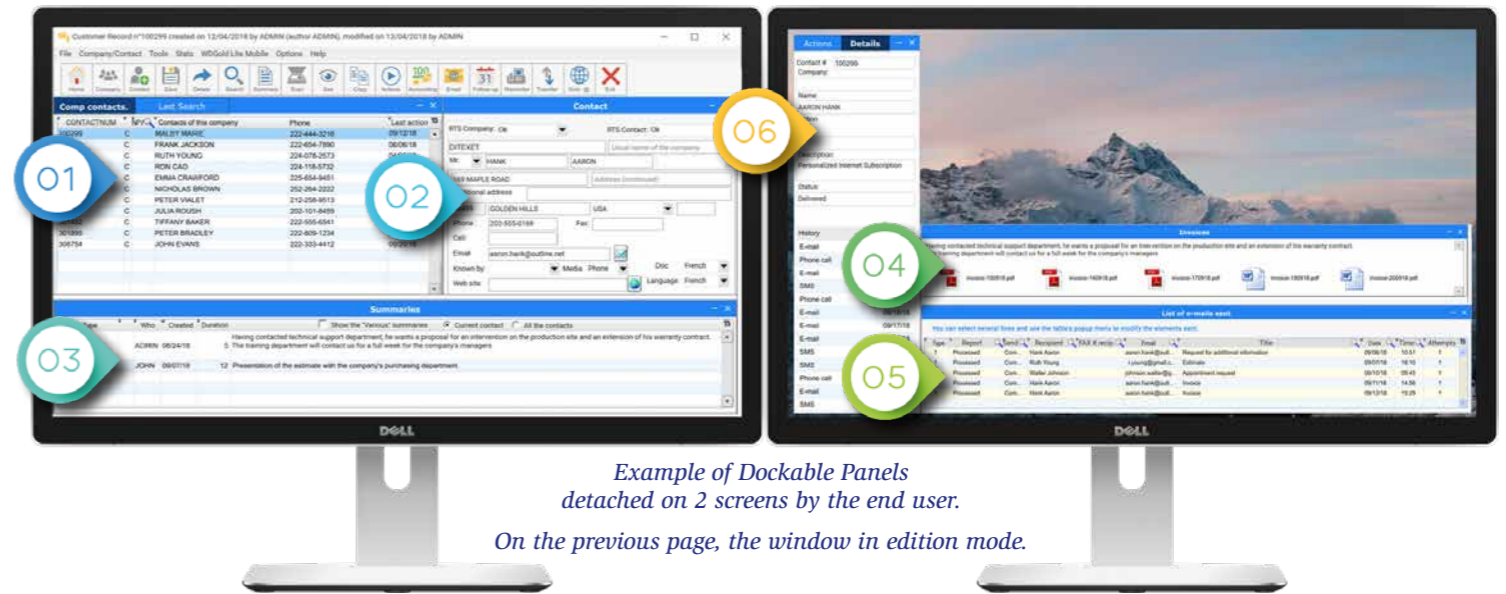
To create a Dockable Panel, you have two choices :



- you can create a DoPa and fill it with controls,
- or you can select a set of controls, and declare it is a DoPa via a simple right click (refactoring)

A WINDEV window can contain as many DoPas as desired.

Benefit provided by this new feature of version 24 :
It is extremely easy to create a Dockable Panel



Example of Dockable Panels detached on 2 screens by the end user. On the previous page, the window in edition mode.

004 New feature WD WB WM DOCKABLE PANEL CONTROL : PROGRAMMING

By default, no programming is needed to take advantage of DoPa's powerful functionalities.

But if you want, all the functionalities aimed at the end user are available through programming.

Anything the end user can do is something you can program! For example, docking and undocking by programming (WLanguage functions of the `Panel` family), make visible or invisible (.. `Visible` property), change the title or the icon (.. `Title` or .. `Icon` properties), etc..

It is even possible to create an entire DoPa dynamically (`PanelCreate` function).

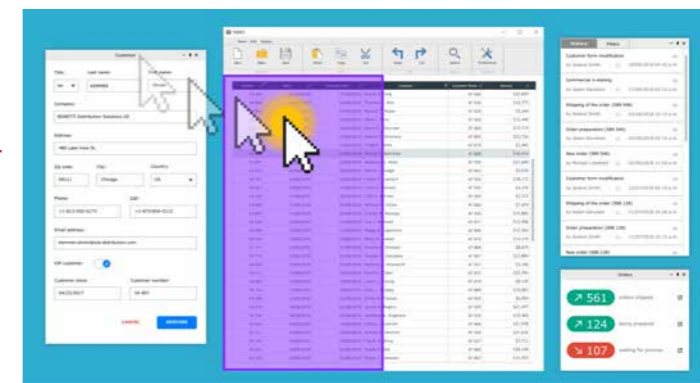
Benefit provided by this new feature of version 24 :
It doesn't get easier and more powerful than that!

005 New feature WD WB WM DOCKABLE PANEL CONTROL : USE EXAMPLES

There are hundreds of examples on how to use DoPas! Imagine: a message area, a notification area, a list to be permanently displayed, an order history, a real-time sales graph, stock market prices, ...

The end user can freely organize the main window of your application or process. Easy and effective.

Benefit provided by this new feature of version 24
We all need need Dockable Panels



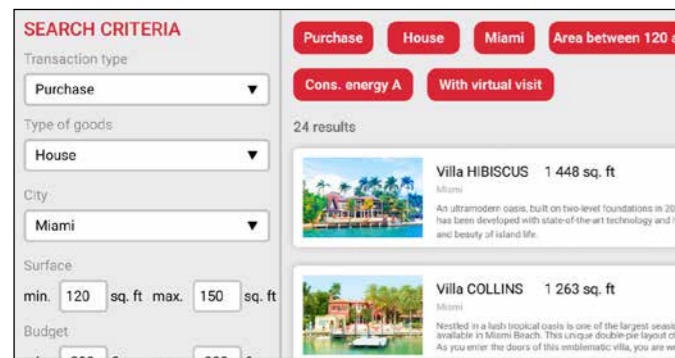
Benefit provided by this new feature of version 24 :
Functionalities that are attachable... and detachable

006 New feature WD WB WM DOCKABLE PANEL CONTROL : KEY TECHNICAL INFORMATION

- Dockable Panels (DoPas) work in MDI and non-MDI.
- Dockable Panels can be undocked, either on the same screen or on a second one.
- They can be docked on the left, on the right, at the top or at the bottom.
- They can be resized just like a splitter (anchoring is used in MDI and non-MDI).
- Magnetism is managed.
- You can insert all types of controls in a Dockable Panel. They can be positioned anywhere.
- It is possible to use an Internal Window in a Dockable Panel. In this case, the layouts of the Internal Window are used when resizing the Dockable Panel.
- 2 or more Dockable Panels can be docked on the same side.
- Vertical Dockable Panels can be placed side by side, horizontal panels can be one above the other.
- Dockable Panels can be overlapped: in that case, tabs are created.
- Even when Dockable Panels are floating, they can be docked together: this creates a tabbed window.
- The configuration of the Panels can be saved, restored.

007 New feature WD WB WM NEW CONTROL #2 "TOKEN" CONTROL

Interfaces that use token controls are becoming more and more common. A Token control contains variable amounts of information in a limited area. When numerous multiple choice options (e.g. selecting several colours among dozens) are available to the end user, a Token control is an easy way to present these choices in a clear way. When the user chooses a new criterion, it is added into the control. If a user decides to delete a criterion, they must simply click on the "X" next to such criterion. In version 24, token management is automatic, programming is extremely simple.



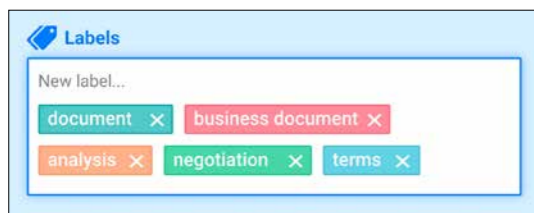
Here, tokens are criteria for selecting a property

The Token control is filled :

- by the end user's direct input,
- by programming, for example, after the end user clicks on a list of choices.



Here, tokens are cities



Diverse tokens

Benefit provided by this new feature of version 24 :
Tokens are a winning bet

008 New feature WD WB WM "TOKEN" CONTROL : INPUT

The Token control is based on the Edit control. The token control can be used for input, or only for display. When input is enabled, it is possible to define the key (character) that triggers the creation of a token: CR, space, ",", ";", ":", TAB key... It is possible to define an input mask: email, numeric... Assisted input is available. It can be a single-line or multiline control (most common case).



Example of direct input in a Token control

Benefit provided by this new feature of version 24 :
Direct input available

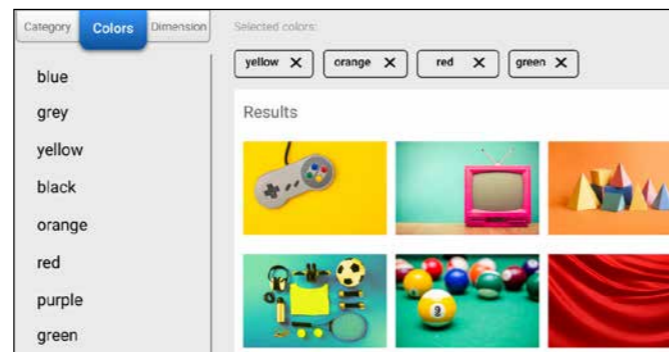
009 New feature WD WB WM "TOKEN" CONTROL: INPUT MASK

When direct input is enabled in a Token control, it is possible to choose an input mask, just like in every Edit control. The end user is guided: email, uppercase characters, numeric values, zip code...

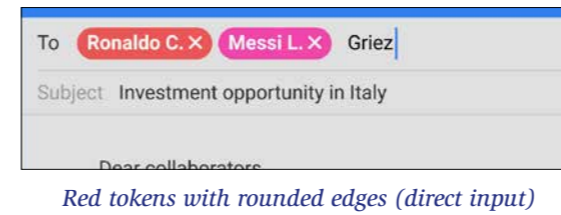
Benefit provided by this new feature of version 24 :
Ease of input

010 New feature WD WB WM "TOKEN" CONTROL: STYLE EXAMPLES

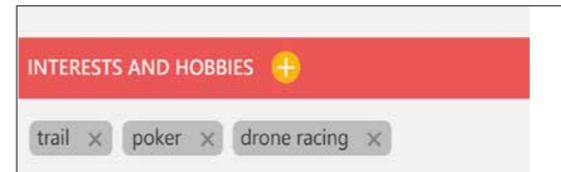
Token styles are defined in the style via the 7 tabs. Color can be modified by programming.



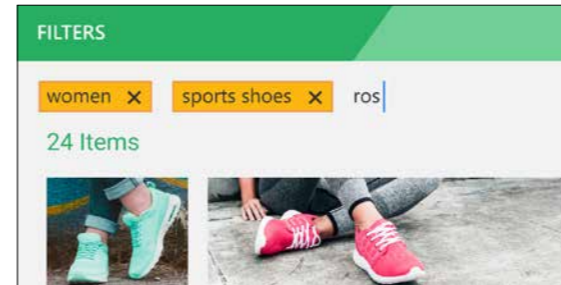
Here, tokens represent chosen colors



Red tokens with rounded edges (direct input)



Rectangular gray tokens



A different token style

Benefit provided by this new feature of version 24 :
Tokens are stylish

011 New feature WD WB WM "TOKEN" CONTROL: PROGRAMMING

Token management is automatic, programming is extremely simple.

EditToken, a new WLanguage function family, makes it easy to program all operations:

- list tokens.
- add tokens.
- delete tokens.

3 new processes also appear in the code editor:

- click token.
- add token.
- delete token.

WLanguage is enriched with a new type: the Token type.

The Token type has the following properties :

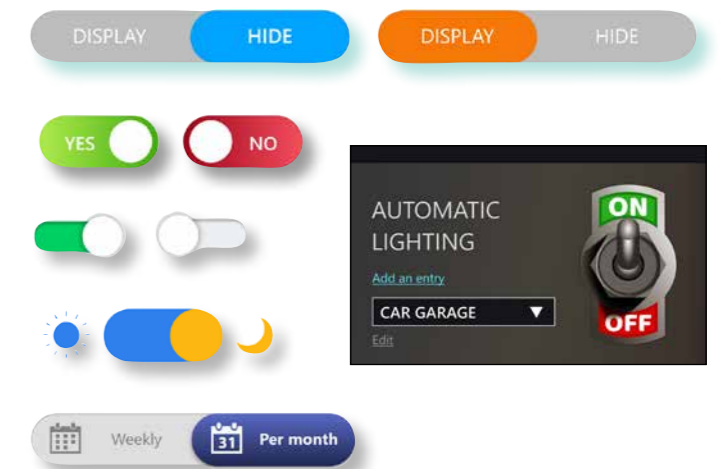
- `..Color`, to change the text color of a given token.
- `..BackgroundColor`, to change the background color of a given token.
- `..Caption` to retrieve and/or to modify the text displayed in a token.
- `..ToolTip` to specify a different tooltip for each token.

The `..Token` property allows for a subscribed access to the tokens in the Edit control.

Benefit provided by this new feature of version 24 :
Simple, clear and powerful programming

012 New feature WD WB WM NEW CONTROL #3 CLICKABLE SWITCH CONTROL

"Clickable" switch controls are increasingly used in interfaces. Clicking on the control visually moves a cursor. It is also possible for the end user to move the cursor with the mouse. On touch screens (smartphones, etc.), the control reacts in a natural way (finger slide). In version 24, this type of control is available for WINDEV, WEBDEV, and WINDEV Mobile.



Examples of clickable switch controls in both possible positions

Benefit provided by this new feature of version 24 :
A very popular and user-friendly control!

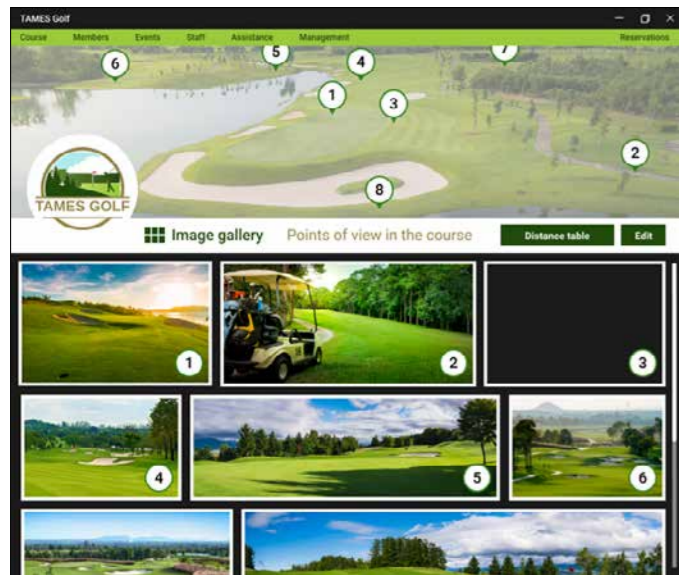
013 New feature WD WB WM NEW CONTROL #4 THE IMAGE GALLERY CONTROL IS NOW AVAILABLE ON WINDEV AND WINDEV MOBILE

The Image Gallery control, which appeared in the last version of WEBDEV, is also available on WINDEV 24 and WINDEV Mobile 24.

The operation and numerous automatisms of this control are identical in the 3 products, which facilitates portability.

Display and navigation management in an image gallery is fully and automatically managed, including the detailed display of a clicked image.

It is possible to enrich the automatic processes by programming: displaying additional information,...

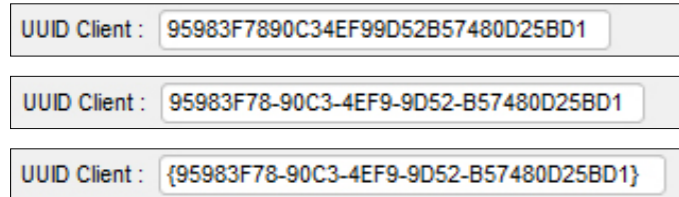


Use of an Image Gallery control

Benefit provided by this new feature of version 24 :
This control allows for advanced image display and management without programming

014 New feature WD WB WM UUID MASK FOR EDIT CONTROL

In version 24, new UUID (unique identifier) input masks will appear for the first time : UUID 128, UUID 256...



New UUID input masks

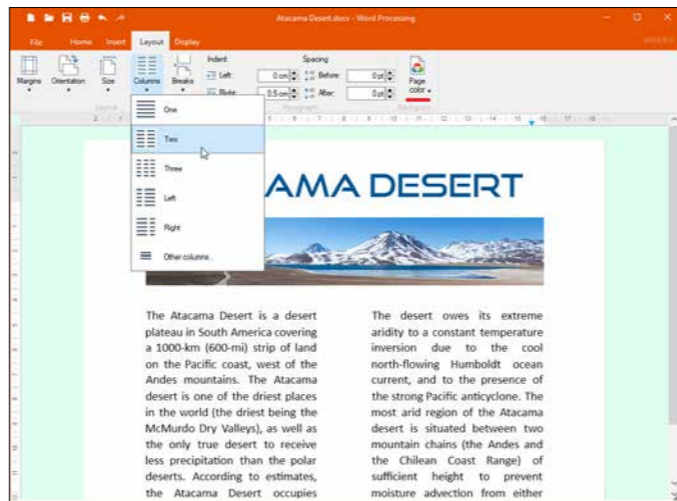
Benefit provided by this new feature of version 24 :
A mask that doesn't hide anything...

EVOLUTIONS OF THE WORD PROCESSING CONTROL (WP)

The Word Processing control evolves favorably in version 24.

015 New feature WD WB WM WORD PROCESSING CONTROL (WP): MANAGEMENT OF COLUMNS

Columns are now managed in WINDEV's Word Processing control.

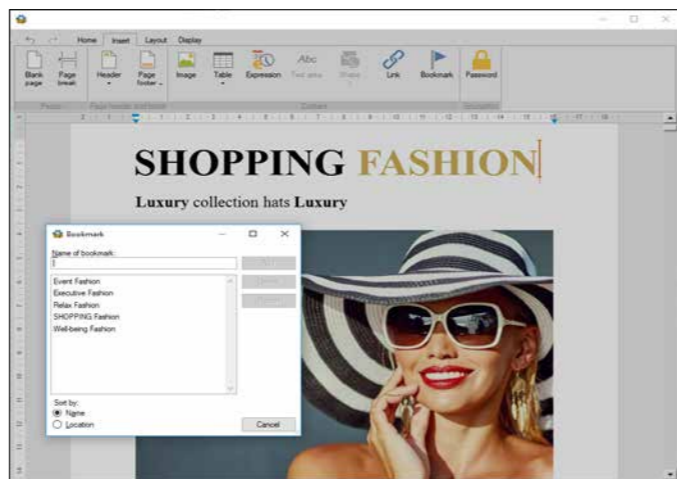


Above, 2 columns in a part of a document

Benefit provided by this new feature of version 24 :
Multiple columns available!

016 New feature WD WB WM WP CONTROL : BOOKMARK DISPLAY

Bookmarks are displayed in version 24: it's more practical, to say the least!



Bookmarks are listed in the window

Benefit provided by this new feature of version 24 :
Bookmarks are essential in professional documents

017 New feature WD WB WM WP CONTROL : IMAGE EDITING WITH AN INTEGRATED IMAGE EDITOR

Images inserted in a document can be edited directly in the control, thanks to the integrated image editor.

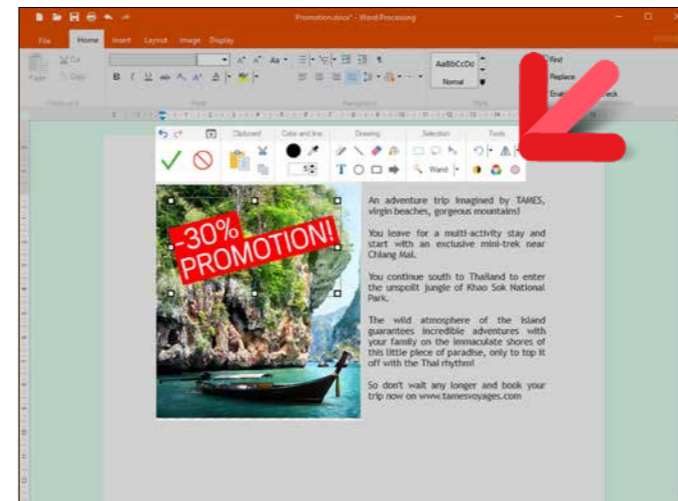


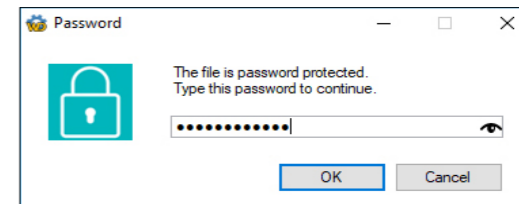
Image editing directly in the document

Benefit provided by this new feature of version 24 :
Image editing is easy and fully integrated

018 New feature WD WB WM WP DOCUMENT : PASSWORD MANAGEMENT

In version 24, it is possible to open and save DOCX files with password, and to add (or delete) a password to an existing file.

In programming, WLanguage functions of the DOC family allow manipulating documents protected by passwords, and also to add passwords to existing documents.



Password input

Benefit provided by this new feature of version 24 :
Better document confidentiality, GDPR compliance

019 New feature WD WB WM WP CONTROL : POPUP MENU AVAILABLE ON ALL THE ELEMENTS

In version 24, the popup menu becomes available on all the elements : image, table row, page footer...

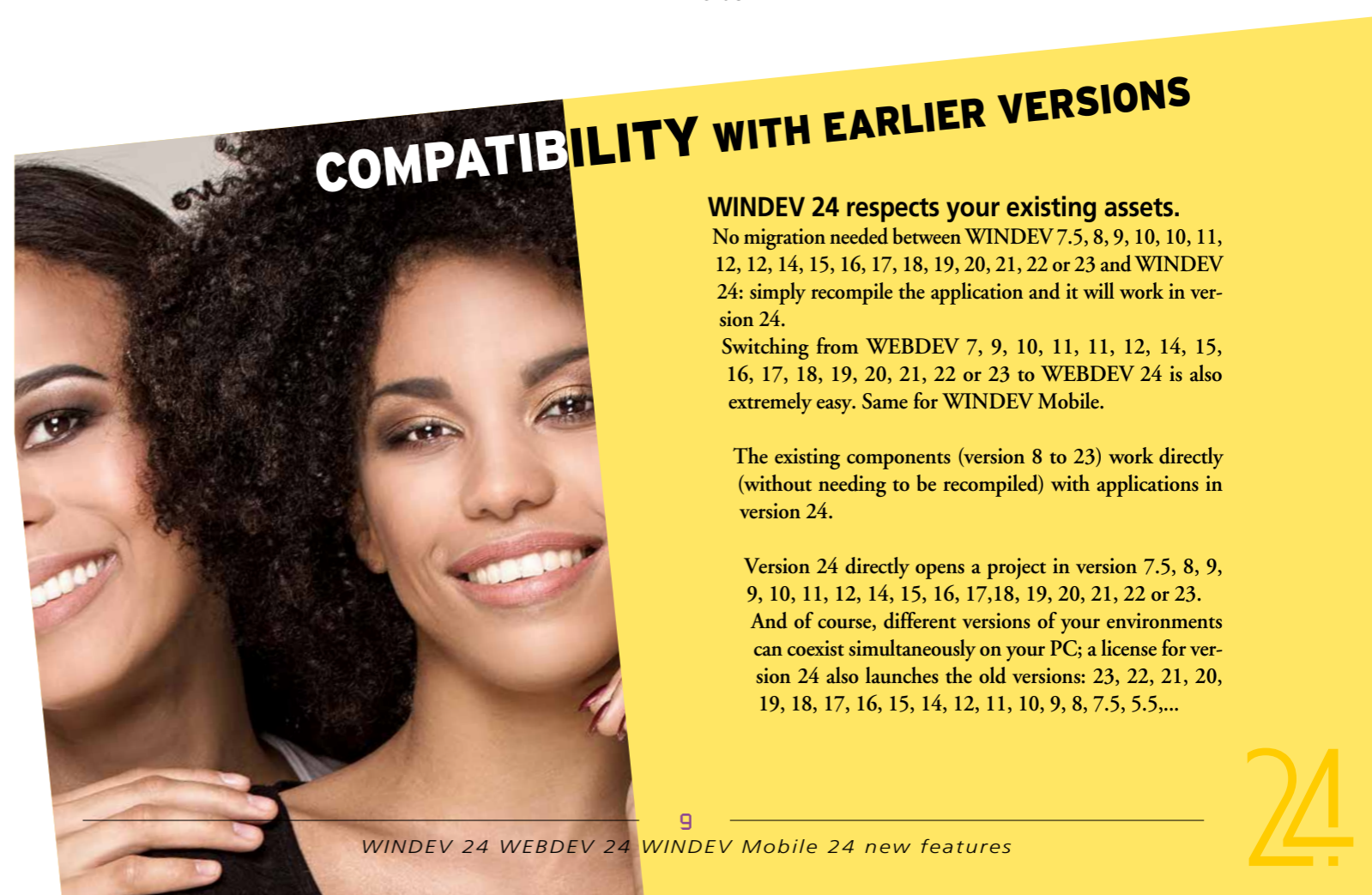
Benefit provided by this new feature of version 24 :
Edit more easily

020 New feature WD WB WM WP CONTROL : MANAGEMENT OF Z-ORDER OF BLOCKS

In version 24, it is possible to manage the z-order (altitude) of texts and images.

For instance, it is easy to overlap images regardless of the order in which they have been manipulated!

Benefit provided by this new feature of version 24 :
Order!



WINDEV 24 respects your existing assets.
No migration needed between WINDEV 7.5, 8, 9, 10, 10, 11, 12, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22 or 23 and WINDEV 24: simply recompile the application and it will work in version 24.
Switching from WEBDEV 7, 9, 10, 11, 11, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22 or 23 to WEBDEV 24 is also extremely easy. Same for WINDEV Mobile.

The existing components (version 8 to 23) work directly (without needing to be recompiled) with applications in version 24.

Version 24 directly opens a project in version 7.5, 8, 9, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22 or 23.
And of course, different versions of your environments can coexist simultaneously on your PC; a license for version 24 also launches the old versions: 23, 22, 21, 20, 19, 18, 17, 16, 15, 14, 12, 11, 10, 9, 8, 7.5, 5.5,...

021 New feature WD WB WM WP CONTROL : SELECTION OF A TABLE ROW

In version 24, new intuitive operations are available to select zones of a table : click on a row, a column...

Benefit provided by this new feature of version 24 :
Telling you about the table is not the best part... modifying it is!

022 New feature WD WB WM WP CONTROL : FASTER DISPLAY

In version 24, the general display of document areas is much faster, which is very convenient when handling large documents or documents containing many objects. The speed of text selection, input and Drag/Drop is also increased.

Optimized editing on 4K-resolution screens.

Benefit provided by this new feature of version 24 :
Finally a speed worthy of this super control!

023 New feature WD WB WM WP CONTROL : INSERTION OF SECTIONS BREAKS

In version 24, it is possible to insert section breaks easily.

Benefit provided by this new feature of version 24 :
Easier operations

024 New feature WD WB WM WP CONTROL, PROGRAMMING : DOCINSERT & DOCADD

WLanguage `DocInsert` and `DocAdd` functions return the content of the inserted fragment.

This avoids having to go through the document again.

Benefit provided by this new feature of version 24 :
Easier advanced programming

025 New feature WD WB WM WP CONTROL : MISCELLANEOUS

- The WLanguage `DocReplace` function works on a fragment.
- The page background color can be specified: it makes choosing the text color and images easier...
- The "paste without formatting" option is available (CTRL Shift V)

Benefit provided by this new feature of version 24 :
Simplified programming

026 New feature WD WB WM WORD PROCESSING IN 1 LINE OF CODE: OPENDOCUMENT FUNCTION

You know the powerful Word Processing, Spreadsheet, Image Editor and PDF Reader controls (images and documents in docx, xlsx and pdf formats).

In your applications, when you wanted to propose the editing of a document in one of these controls, it often involved the creation of a dedicated blank window, containing only this control.

In version 24, everything becomes more simple : a single line of code such as `OpenDocument ("invoice.docx")` is all it takes to open a window containing the word processing control with the document.

Benefit provided by this new feature of version 24 :
Office controls in 1 line of code



EVOLUTIONS OF THE SPREADSHEET CONTROL

027 New feature WD WB WM SPREADSHEET CONTROL: IMAGE EDITING WITH AN INTEGRATED IMAGE EDITOR

Images inserted in a spreadsheet (logo, etc.) can be edited directly in your application, thanks to the integrated image editor.

Benefit provided by this new feature of version 24 :
Image editing is easy and fully integrated

028 New feature WD WB WM XLSX DOCUMENT : PASSWORD PROTECTION

In version 24, it is possible to open and save XLSX files with a password, and to add a password to an existing file. The WLanguage functions of the `XLS` family allow manipulating documents protected by passwords, and also to add pass-

words to existing documents.

Benefit provided by this new feature of version 24 :
Better document confidentiality, GDPR support

029 New feature WD WB WM A SPREADSHEET IN 1 LINE OF CODE: OPENDOCUMENT FUNCTION

In your applications, when you want to propose spreadsheet editing in a Spreadsheet control within a dedicated window, all you need is a simple line of code : `OpenDocument (invoice.xlsx)`

Benefit provided by this new feature of version 24 :
The Spreadsheets control in 1 line of code

NEW FEATURES IN CONTROLS

030 New feature WD WB WM IMAGE EDITOR CONTROL

The Image Editor control benefits from the new features of the Image Editor itself: ellipses, arrows, rectangles, Edit-in-place...

See new features 086 to 092.

Benefit provided by this new feature of version 24 :
An increasingly powerful control

031 New feature WD WB WM AN IMAGE EDITOR IN 1 LINE OF CODE: OPENDOCUMENT FUNCTION

In your applications, when you wanted to propose image editing, it often involved the creation a dedicated blank window, containing only this control.

In version 24, everything becomes more simple : a single line of code is all it takes : `OpenDocument (Logo.jpg)`

Benefit provided by this new feature of version 24 :
An image editor in 1 line of code

CHARTS IN VERSION 24

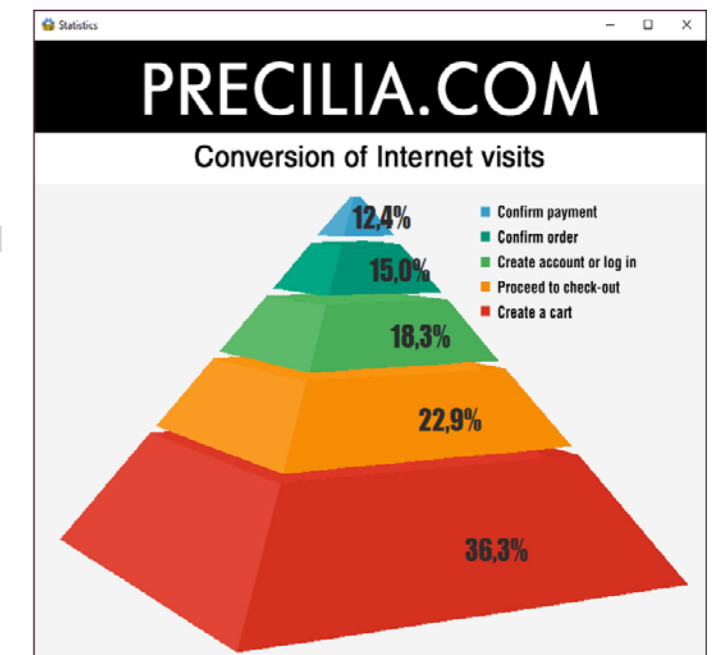
032 New feature WD WB WM NEW 3D PYRAMID CHART CONTROL

A new type of chart has been added to the family in version 24 : the 3D Pyramid chart.

This 3D interactive chart (it can be handled with the mouse) allows visualizing descending data.

Each section represents a percentage of the lower section. For example, the first section represents the percentage of Web users who fill their shopping cart, the second section represents the percentage of those users who have validated their shopping cart and who enter their contact information, etc..

As its name suggests, it is represented in the form of a pyramid.



The new pyramid chart

Benefit provided by this new feature of version 24 :
Highly appreciated chart, in Egypt but also in the 140 other countries that use WINDEV...

033 New feature WD WB WM NEW PYRAMID CHART CONTROL : FEATURES

Section colors are generated by default, or can be configured by programming.

It is also possible to choose the characteristic of the pyramid slice that is proportional to the data: volume or height.

Benefit provided by this new feature of version 24 :
Advanced features for this chart

034 New feature WD WB WM NEW PYRAMID CHART CONTROL : PROGRAMMING

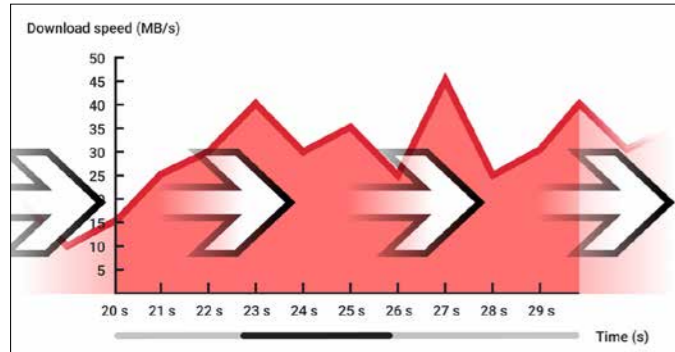
The Pyramid chart is filled like the other charts, either by programming or by automatic binding.

It is possible to define the orientation of the pyramid by programming.

Benefit provided by this new feature of version 24 :
Regular programming

035 New feature WD WB WM NEW TYPE OF CHART : REAL-TIME DISPLAY

This new type of chart allows for real-time representation of permanent data flow.
The chart moves automatically according to the data received in real time.



The chart updates constantly

Benefit provided by this new feature of version 24 :
A chart that keeps up with the times

Directly from the WINDEV environment, in the project creation or configuration menu: choose among Windows, Site, Android, iOS...

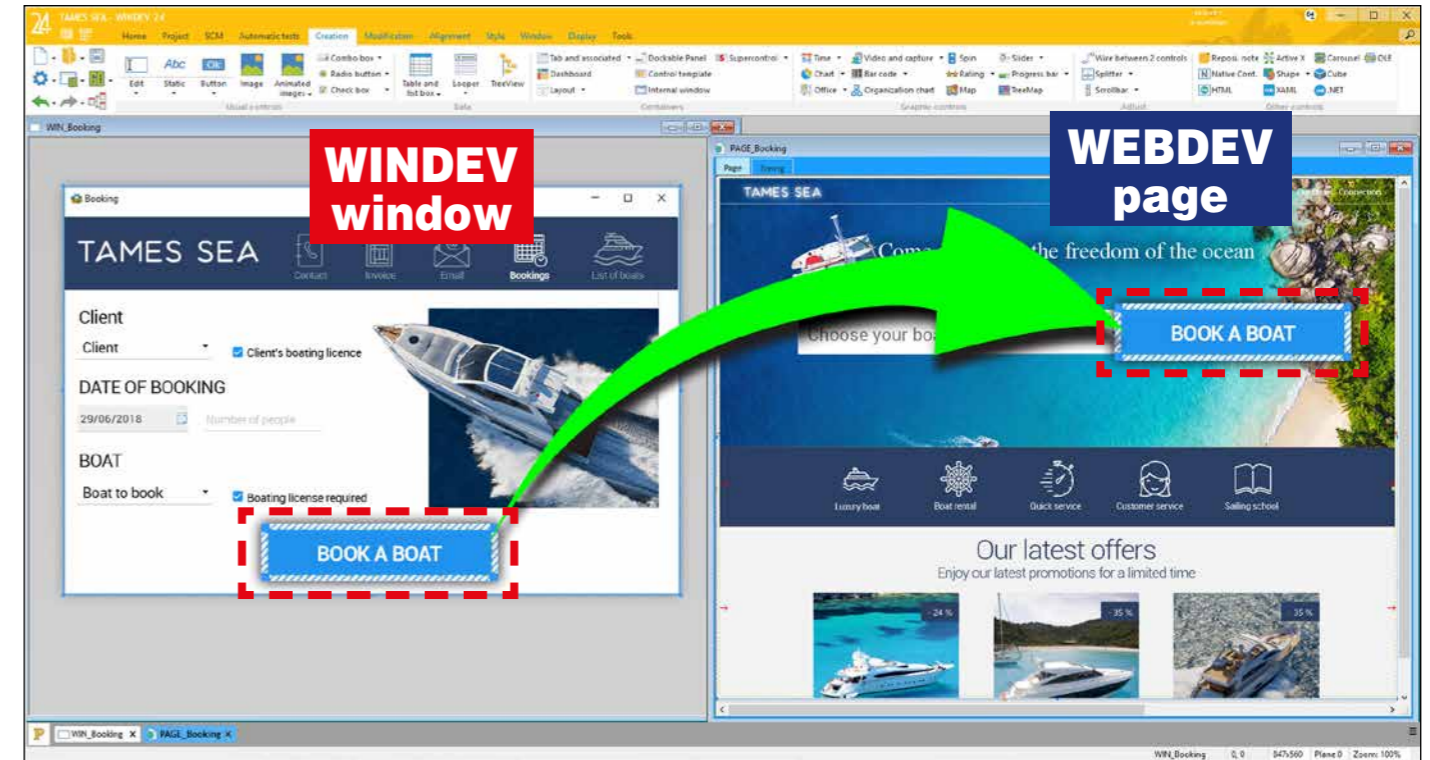


Benefit provided by this new feature of version 24 :
One for all, all for WINDEV

WEBDEV IN WINDEV : IT SIMPLIFIES EVERYTHING!

036 New feature WD WB WM WINDEV, WEBDEV AND WINDEV MOBILE IN THE SAME ENVIRONMENT: CROSS-PLATFORM RAISED TO THE POWER OF 24

In version 24, it is possible to use WINDEV, WEBDEV and WINDEV Mobile in the same environment.
Project elements are immediately common to all 3 platforms: analyses, queries, reports, procedures, classes, code,...
These elements open directly in the WINDEV environment.
This allows for easy portability and maintenance of a WINDEV application to the mobile and to the Web, without having to import or duplicate what already exists, or to change the environment.



A copy/paste of a control (a button, in this case) from a WINDEV window to a WEBDEV page.
Note that the button keeps the same aspect, which saves even more time!

037 New feature WD WB WM NO NEED FOR SEVERAL PROJECTS, ONLY 1

In version 24, it is possible to create configurations of all types in a single project on the WINDEV environment:

- WINDEV application,
- WEBDEV site,
- iOS app,
- Android app
- ...

It is possible to switch immediately from one configuration to another.
All configurations continue to evolve for all 3 platforms within the same project.

Benefit provided by this new feature of version 24
No need to multiply projects

038 New feature WD WB WM MODIFY A CODE, RUN A GO OF THE APPLICATION AND A GO OF THE SITE AND A GO OF THE MOBILE APP

An advantage of this new feature of version 24 is that it allows you to immediately test a modification that has just been made: business logic, query, procedure, class, report...
A double-click is all it takes to select the configuration to be

tested and then click on GO!
You can immediately test the desired platform.
You can easily imagine how many operations you avoid!
And remember: there is no need to duplicate the code in each project!

Benefit provided by this new feature of version 24
GO, GO, GO

039 New feature WD WB WM COPY A WINDEV CONTROL DIRECTLY TO A WEBDEV PAGE

In version 24, it is possible to open WINDEV windows, WEBDEV pages and WINDEV Mobile windows simultaneously within the same environment.

Of course, it is possible to automatically transform an entire window into a web page (or a mobile window) in a single operation.

It is also possible to transform only one element from a window to a page.

You can copy and paste controls between different pages and windows.

The control copied into WEBDEV keeps its original characteristics and look.

Reminder: it is necessary to have a license for each product.

Benefit provided by this new feature of version 24
Simplified operations



WINDEV'S ANGELS

AN INDISPENSABLE AND INSEPARABLE TEAM !

WEBIFICATION OF YOUR WINDEV APPLICATIONS: INCREDIBLY EASY IN VERSION 24

A widespread need today is to transform Windows applications (or parts of applications) into dynamic websites. As you already know, WEBDEV allows you to retrieve the code, the queries, the reports, the classes, the windows... of a WINDEV application. Version 24 goes much further.

040 New feature WD WB WM A NEW WAY TO DEVELOP

The old project conversion method was to duplicate the WINDEV project in WEBDEV. It worked, but we had everything twice.

Then came the possibility of opening the same project with WINDEV and WEBDEV. However, it required constantly switching from WINDEV to WEBDEV to perform the operations, and it took a long time.

In version 24, it's a revolution!

All operations can be performed from the WINDEV environment. That's already huge, but there is more: besides, you benefit from:

- a migration wizard.
- transforming a window into a page while keeping its initial look.
- more common WLanguage functions that improve compatibility; especially the OPEN function which is available in WEBDEV.

Benefit provided by this new feature of version 24
The development method is simplified

041 New feature WD WB WM STARTING WEBDEV DIRECTLY FROM THE WINDEV EDITOR

In version 24, being able to open WEBDEV in WINDEV is an unparalleled advantage to webify your applications, as well as to keep your Windows and Web applications in line with each other. Having the elements in common within the same project allows you to save lots of time.

Of course, it is necessary to have a license for WEBDEV in order to launch it from WINDEV.

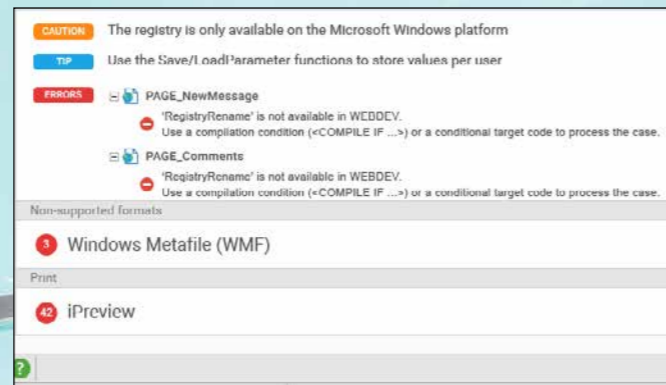
See new features 036 to 039.

Benefit provided by this new feature of version 24
One within the other, it's a winning move!

042 New feature WD WB WM WINDEV TO WEBDEV MIGRATION WIZARD

To help migrate existing WINDEV applications to WEBDEV sites, a wizard analyzes the WINDEV application and generates a precise report with the modifications to make in the code.

This report saves a lot of time.



Capture from the webification help window: click on a line to go to the corresponding element

For example:

- if the WLanguage fSelect function (which opens a file picker and returns the entire path of the file selected by the end user) is used in the WINDEV application, the wizard immediately indicates that this concept does not exist in Web, and that this part should be modified accordingly. Indeed, an Internet browser does not have the right to explore the disk of the user's computer. Here the wizard will recommend using an "Upload" control, which allows it to select a file and read its content from a browser.
 - If the Registry is read, the report indicates that this cannot be done from a browser: this operation must be deleted, or its code must be replaced.
 - if the application runs Word, the report indicates that a browser is not allowed to launch another application.
 - if the application writes directly to the PC disk, the report indicates that browser is not allowed to write to the

disk of the Web user's computer.

- ...
- Simply click on each line to correct the problem.

Benefit provided by this new feature of version 24:
You are assisted.

043 New feature WD WB WM WINDOW TO PAGE TRANSFORMATION IN 1 CLICK

In some cases, it is not an entire application that is passed to Web, but only some windows.

Version 24 also helps you in this operating mode.

The operations to transform a WINDEV window into a WEBDEV page are simplified: now all you have to do is right-click on a WINDEV window, select "convert to WEBDEV page", and that's it!

Benefit provided by this new feature of version 24:
Operations are significantly simplified

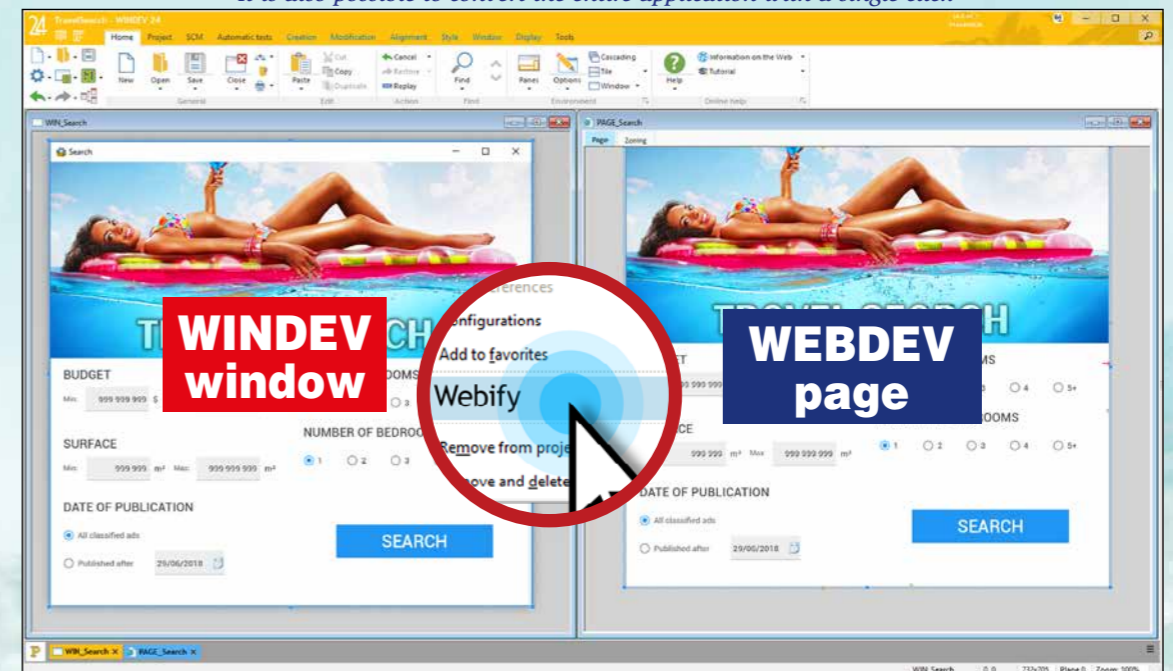
044 New feature WD WB WM WINDOW TO PAGE TRANSFORMATION: 180 GUI CONVERSION IMPROVEMENTS

Version 24 improves the automatic transformation of controls from WINDEV to WEBDEV:

- the number of control properties taken into account increases significantly; for example, in version 24 a button is migrated with its look.
- if a control to be migrated does not exist on the Web, it is converted into a control type that operates in the same way. For example, a WINDEV Ribbon control will be converted to a WEBDEV Tab control, with an equivalent look and size.

Benefit provided by this new feature of version 24
Keeping initial look

One click is all it takes to transform a WINDEV window into a WEBDEV page, directly from the WINDEV editor. Then simply launch the conversion wizard to adapt the code. It is also possible to convert the entire application with a single click



045 New feature WD WB WM WINDOW TO PAGE TRANSFORMATION: INCREASED NUMBER OF WLANGUAGE FUNCTIONS SHARED BETWEEN WINDEV AND WEBDEV

There are more WLanguage functions compatible between WINDEV and WEBDEV in version 24. Nearly 100 new functions have been added. In particular, the WLanguage OPEN function is now supported in WEBDEV.

Benefit provided by this new feature of version 24
The more, the better

046 New feature WD WB WM "OPEN" AND "CLOSE" IN WEBDEV: THE EXISTING WINDEV CODE WORKS DIRECTLY

To facilitate the transition of WINDEV applications to WEBDEV sites, and to maintain programming habits, the WLanguage functions OPEN and CLOSE are now recognized in WEBDEV (in server code, Ajax or not). In version 24, it is therefore no longer necessary to modify the page opening code.

It should be noted that the Open function has the same properties in WEBDEV as in WINDEV: it is blocking: the code after Open is not executed until the opened page has been closed.

Benefit provided by this new feature of version 24
Keeping the same code

047 New feature WD WB WM IMPORT OF "CONTROL/WINDOW" TEMPLATE, WHILE KEEPING INHERITANCE

If a WINDEV window is based on a Template, when the window is transformed into a WEBDEV page, the Window Template is transformed into a Page Template.

The inheritance is kept between the converted page and the converted template itself.

If another window is converted from on an already-converted template, the page will automatically be based on that template.

GUI conversion is performed at a high level.

Benefit provided by this new feature of version 24 :

The inheritance is kept, as well as your GUI construction

METHODOLOGY : SPLITTING GUI CODE FROM YOUR EXISTING CODE (MV METHOD)

A powerful new feature of version 24 regarding the architecture of your applications is the presence of a help system to split the business logic and the GUI code.

This new feature, described in detail below, makes it possible to "take" the Business Logic out of a window to make it independent of the interface, and therefore to be able to share it or port it to other targets, and to maintain it more easily.

048 New feature WD WB WM SPLITTING BUSINESS/GUI?

When it comes to methodology, some development teams decide to separate the business logic from the GUI code.

This allows a better porting of large applications in cross platform.

Version 24 provides innovative solutions for both new and existing projects that need to be split.

- One option allows differentiating between business logic and GUI code. In the code editor, a different background color identifies each type of code.
- Attributes to include in the code make it possible to refine the highlighting.
- A choice in code editor allows you to extract the business logic in a class (OOP) or in a set of procedures (procedural programming).

You have all the tools you need to set up the architecture of your choice, without constraints or obligations.

The same project can have different architectures: for example, in an existing project, you can decide to separate business

logic from GUI code only for future changes, or for some windows.

Benefit provided by this new feature of version 24 :

Each on its own side

049 New feature WD WB WM COLORS GUIDE YOU

In any existing project, with years of evolution and maintenance, the sushi dish can gradually become a spaghetti bolognese...

Capture from the code splitting help window

In version 24, the option "enable Business/GUI highlighting" allows you to have a quick and synthetic view of how the code is interlocked.

Business logic will have a blue background and GUI code will have a green background.

These colors are configurable. Some lines may include both business logic and GUI code.

These lines will have an orange background.

background.

The calls to procedures are even colored according to the content of the procedures!

When the code has an alternation of colors, it certainly means that everything is mixed! It's not necessarily a poorly written code, it's just a code that doesn't respect this architecture.

To respect the splitting architecture, all you have to do is group the identical codes, i.e. of the same color.

Benefit provided by this new feature of version 24 :

Distinguish the types of code immediately

050 New feature WD WB WM SPLITTING : HELP FOR STRUCTURING THE EXISTING CODE

If you want to extract a code block of the same color to make a new procedure, simply :

- select the block of lines of code,
- right click and click on Refactoring, then select "Create a local procedure" or "Create a global procedure".

A new procedure will be automatically created and will contain these lines of code. Just specify the name of the procedure to be created.

EASILY SEPARATE BUSINESS LOGIC FROM GUI CODE

Existing code

```
// checks the input
IF EDI_Invoice ~="" THEN
  Info("The invoice number seems incorrect.")
  ReturnToCapture(EDI_Invoice)
END

// Find the invoice
Invoice is int = EDI_Invoice
HReadSeekFirst(Invoice, InvoiceID, Invoice)

IF HFound(Invoice) = False THEN
  Info("The invoice number seems incorrect.")
  ReturnToCapture(EDI_Invoice)
END

// Retrieves the VAT rate associated with the invoice
HReadSeekFirst(VAT, VATID, Invoice.VATID)

// Calculates the amount IOT
VAT is real = VAT.VATID
TotalBT is real = Invoice.TotalBT
EDI_Total_IOT = TotalBT * VAT
```

"GUI" code

```
// Checks the input
IF EDI_Invoice ~="" THEN
  Info("The invoice number seems incorrect.")
  ReturnToCapture(EDI_Invoice)
END

// calculates the amount IOT
cyTotalIOT is currency = calcIOT(EDI_Invoice)

// Checks the errors
IF ErrorOccurred THEN
  Error(ErrorInfo(err_Summary))
  ReturnToCapture(EDI_Invoice)
END

// Shows the total to the user
EDI_Total_IOT = cyTotalIOT
```

Business logic

```
PROCEDURE calcIOT(LOCAL InvoiceNumber is string)

// Find the invoice
HReadSeekFirst(Invoice, InvoiceID, InvoiceNumber)
IF HFound(Invoice) = False THEN
  ErrorThrow(500, "Invoice not found")
END

// Retrieves the VAT rate associated with the invoice
HReadSeekFirst(VAT, VATID, Invoice.VATID)
cyTotalIOT is currency = Invoice.TotalBT * VAT.VATID
```

If passing parameters is necessary, the parameters expected by the procedure are automatically detected and generated.

A call to this procedure (with the appropriate parameters) is generated at the original location of the lines .

That's some power!

Benefit provided by this new feature of version 24 :

A click is worth countless operations

It is therefore easy to apply the architecture to only one part of a project.

Benefit provided by this new feature of version 24 :

You are informed by the compiler

051 New feature WD WB WM PROCEDURE ATTRIBUTE : BUSINESS OR GUI?

In version 24, it is possible to specify if a procedure should only contain business logic or GUI code via an attribute.

```
Local procedure CalculateMotorEfficiency
PROCEDURE CalculateMotorEfficiency(UsefulPower, AbsorbedPower) <business>

// local variables
Efficiency is real
```

Definition of the "Business" attribute

This attribute can also be used with variables, in particular the global variables of the window. This allows you to categorize the variables in a window to help split the code.

When these attributes are used, the compilation detects attribute violations.

When GUI code is used in a business procedure, a compilation error is generated.

Calling a procedure that executes business logic in a procedure that has a GUI attribute generates a compilation error.

This allows you to check the code structure of an element. Attribute error detection can be requested either for specific windows or for the entire project.

052 New feature WD WB WM AUTOMATIC SPLITTING

Simply choose how to extract the code

Once the attributes are positioned (and there are no more errors detected!), simply ask WINDEV to extract the Business logic.

For procedural programming enthusiasts, WINDEV generates a set of procedures containing the Business logic, and for OOP enthusiasts, WINDEV generates a class and its members, containing the Business logic.

In both cases, GUI code stays in the window.

Benefit provided by this new feature of version 24 :
WINDEV (and WEBDEV and WINDEV Mobile) help you!

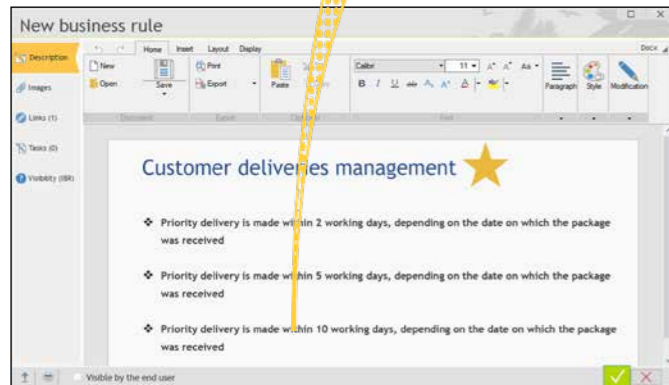
With version 24, teams that want to split Business Logic and GUI Code have everything they need.

BUSINESS RULES : THEY TURN INTO HELP IN YOUR APPLICATIONS

Reminder: WINDEV allows you to enter "Business Rules". These are explanations on the processing rule to be applied to a control, code, window.
For example: "Please note that the total price includes the additional tax on top of VAT".
In version 24 these Business Rules can be used automatically as an aid to end users.

053 New feature WD WB WM ENTERING BUSINESS RULES IS EASIER

In version 24, Business Rules are entered in Word Processing mode, and no longer in RTF mode: it's easier and its presentation is richer.
It is easy to insert images, tables, graphics, workflows...
A new option makes it possible to indicate whether each Business Rule is visible or not to the end user (Distributable Business Rule).
A Business Rule can be associated with one or more controls.



Example of a Business Rule on delivery management

Benefit provided by this new feature of version 24 :
Powerful formatting

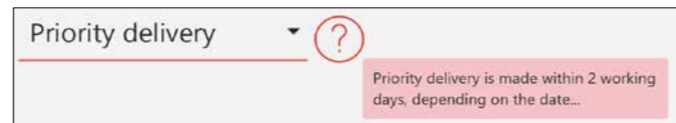
054 New feature WD WB WM A PDF IS GENERATED AND CAN BE INCLUDED IN YOUR APPLICATION

All the Distributable Business Rules of a project can also be automatically grouped in a PDF document. This document is installed with the application.
The end user can see it via the "?" menu.

Benefit provided by this new feature of version 24 :
An automatic technical aid

055 New feature WD WB WM BUSINESS RULES : ABILITY TO AUTOMATICALLY DISPLAY THEM NEXT TO THE CONTROL AS AN "AID" FOR THE USER

When a Business rule is distributable and that it is associated with a control, a (customizable) "?" picto automatically appears next to the control.
Clicking on this picto displays the Business rule.
It is possible to remove this picto, and to customize the way it's displayed (see new feature 218).



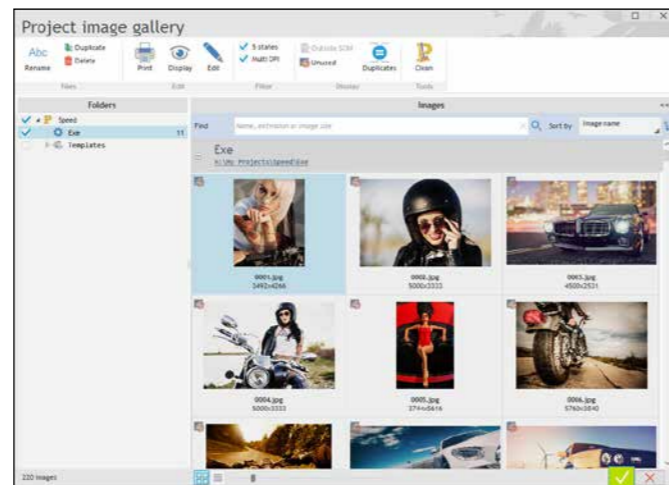
The picto and the help are automatically generated

Benefit provided by this new feature of version 24 :
User-friendly help in one click

ENVIRONMENT

056 New feature WD WB WM PROJECT IMAGE GALLERY: FOR AN OVERVIEW OF THE IMAGES USED

In version 24, it is possible to view all the images of a project with a single click.
This gallery is viewed from the "7 tabs".



Overview of all images used in the project

Benefit provided by this new feature of version 24 :
Getting to see the big picture

057 New feature WD WB WM PROJECT IMAGE GALLERY: LIGHTEN YOUR PROJECTS : UN- USED IMAGES, DUPLICATES ...

When an image is present in the project directory (and subdirectories) but it is not used, it is marked.
If necessary, you can delete it.
Duplicate images are marked: totally identical images of course, but also binary identical images with a different name, or stored in different subdirectories.
Deleting images makes it possible to reduce the size of projects.
Images that are not integrated into the SCM are also marked.

Benefit provided by this new feature of version 24 :
Clean. Save space

058 New feature WD WB WM PROJECT DASHBOARD : NEW "TEMPLATES" WIDGET



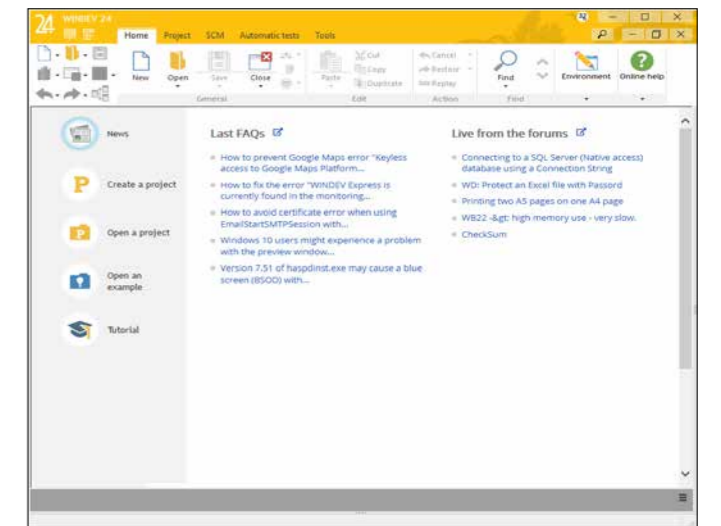
Here: 24 elements to update

A new Widget joins the project Dashboard.
This Widget displays an overview of the templates used in the project: The widget allows you to update the templates (red button).

Benefit provided by this new feature of version 24 :
Red makes your templates look even better.

059 New feature WD WB WM DISPLAY OF NEWS AND UPDATES

The editor now shows information and news about your products: new version available, new downloads online, etc...
This display is customizable.



Benefit provided by this new feature of version 24 : Useful news

060 New feature WD WB WM QUICK ACCESS TO "MY PROJECTS"

In editors, when opening the file picker, the "My Projects" (or "My Sites") directory appears in the list of preselected directories.
A very useful feature.

Benefit provided by this new feature of version 24 :
Convenient

061 New feature WD WB WM PROJECT EXPLORER POPUP MENU : "DUPLICATE" OPTION

The project explorer popup menu is enhanced with a new practical option: duplication.
This feature allows you to quickly duplicate a window, a class, a query, a page...

Benefit provided by this new feature of version 24 :
Double



WINDEV 24 WEBDEV 24 WINDEV Mobile 24 new features

062 New feature WD WB WM XML TEMPLATE : TRIGGER THE UPDATE

In a project, you can use "Template" XML documents. These templates allow the compiler to know the structure of the XML that will be manipulated by programming. These models allow for automatic completion, detection of compilation errors, ...

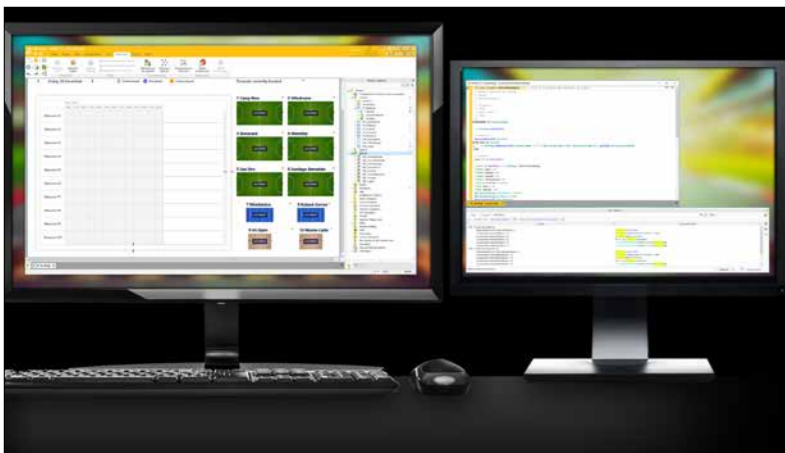
In version 24, when the "template" XML file is updated on the disk, a menu option is available to update the "template XML" in the environment.

Benefit provided by this new feature of version 24 :
The compiler will detect XML programming errors

063 New feature WD WB WM MULTI-SCREEN AND DIFFERENT DPI

As you know, the environment supports multi-screen mode. This working approach is very comfortable, if you can adopt it our tip is: go for it! (almost 70% of you are already working in this mode).

Version 24 now supports screens with different DPI on the same PC.



All screen combinations are supported!

Benefit provided by this new feature of version 24 :
All the configurations are supported

064 New feature WD WB WM UPDATED ENVIRONMENTS

Your editors are updated to the latest version thanks to the "automatic update" option (unless you have unchecked it). In version 24 it is also possible to update to the latest version with a single click.

There is no longer a series of successive updates to be performed as it may have been in the past.

Benefit provided by this new feature of version 24 :
Up to date with one click!

065 New feature WD WB WM EXAMPLES ALWAYS UP TO DATE : IN THE CLOUD, DOWNLOADED ON DEMAND

WINDEV comes with 294 examples: 37 complete projects, 101 training projects, 156 unit examples.

These examples are in constant evolution: new features, new legislative constraints, correction of malfunctions, addition of new languages...

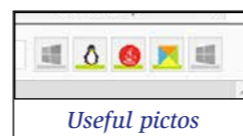
In order for you to always have the latest version of the examples, the editor will automatically search the cloud for the latest version of the example you are loading.

The project is then copied to your computer.

Benefit provided by this new feature of version 24 :
You are sure to use an up-to-date example!

066 New feature WD WB WM DISPLAY OF A PICTO FOR THE PLATFORM OF THE EXAMPLE

For each example, the editor displays a picto indicating the platform(s) on which the example is based.



Benefit provided by this new feature of version 24 :

You know at a glance the target that the example works on

067 New feature WD WB WM ONLINE HELP FOR THE ENVIRONMENT

In version 24, the online help that your teams use on a daily basis includes more features and becomes more practical.

- The Tutorial, which is supplied in printed form, is also available online.
- Another practical detail: a click on an image in the Online Help displays the image in high definition. This comes in handy to see the details!

Benefit provided by this new feature of version 24 :
Good help is fundamental to productivity

DATA MODEL EDITOR

068 New feature WD WB WM DATA MODEL EDITOR: ANTI-WRINKLE CREAM

In version 24, the Data model editor is rejuvenated! Editing items is far more simple and more fluid than in earlier versions.

Benefit provided by this new feature of version 24 :
Your teams will be more efficient

PROJECT MONITORING CENTER

069 New feature WD WB WM COMPONENT FOR ACCESSING THE MONITORING CENTER DATA

The information of the Project Monitoring Center (requirements, tasks, bugs, contributors, etc.) is accessible in programming through a component provided.

This component allows you to reprocess this data, for example to edit specific statistics, or to share the data with another tool.

Benefit provided by this new feature of version 24 :
Openness

070 New feature WD WB WM MANAGER OF A REQUIREMENT

A requirement is divided into tasks.

Tasks are assigned to the team members.

It is now possible to indicate which team member is responsible for the requirement.

A manager cannot set a task as "completed" until the tasks of the other members are completed.

The manager will be notified each time a team member completes his or her task.

Benefit provided by this new feature of version 24 :
You know who's in charge!

071 New feature WD WB WM TIME TRACKING: LISTING OF WORK TIMES

Work times can be listed for one or for all the requirements in a list of requirements.

Benefit provided by this new feature of version 24 :
Information at an atomic level

AUTOMATIC AUDIT

072 New feature WD WB WM STATIC AUDIT: ANALYSIS WITHOUT LINKS

In version 24, Static Audit indicates if an analysis that doesn't have defined links between data files (tables).

The lack of defined links does not allow for automatic management of referential integrity, which is detrimental to the quality of the application.

In version 24, when you resume an application, you will be alerted about this problem.

Benefit provided by this new feature of version 24 :
Verification of referential integrity is a guarantee of quality

PROGRAM DOCUMENTATION

073 New feature WD WB WM PROGRAM DOCUMENTATION : NEW STYLE



Comprehensive program documentation? 1 click!

The program documentation has been redesigned in version 24! (PDF and printed version).

The pages have a more modern look, the information is more readable, and the interface for selecting the elements to edit is more user-friendly.

Benefit provided by this new feature of version 24 :
Splendid documentation, always in 1 click



074 New feature WD WB WM PROGRAM DOCUMENTATION : ADDITIONAL INFORMATION

The documentation is enriched with new information :

- Project dashboard
- Statistical information on the use of SCM
- ...

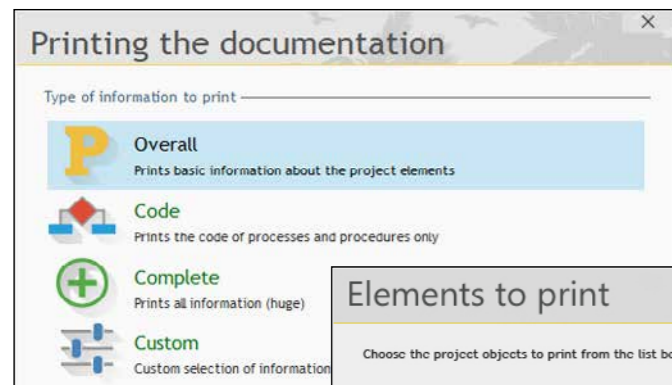
Benefit provided by this new feature of version 24 :

Increasingly comprehensive documentation

075 New feature WD WB WM PROGRAM DOCUMENTATION : COMPACT MODE

The program documentation can be edited in a new overall mode (as opposed to the complete mode, which edits all the details on all the elements of the project).

This compact mode features a user-friendly interface for selecting the elements to display.



Several modes for editing the documentation are available

Benefit provided by this new feature of version 24 :

Edit only the elements that are useful to you

076 New feature WD WB WM PROGRAM DOCUMENTATION : OPTIMIZATIONS ON LARGE VOLUMES

In previous versions, generating a folder for a very large project could require a certain waiting time in some cases. In version 24, editing the documentation is fluid and continuous, regardless of the size of the project.

Benefit provided by this new feature of version 24 :

Edit faster

CONTINUOUS INTEGRATION SOFTWARE FACTORY

077 New feature WD WB WM NEW ACTION TO UPDATE WEBSERVICES

Continuous integration is based on the execution of action plans. A new action allows requesting the update of the WSDL description file of the webservices used in the project.

Benefit provided by this new feature of version 24 :

A third-party Webservice evolves without compatibility? You will know right away!

078 New feature WD WB WM SPECIFY A ROBOT TO RUN AN ACTION PLAN

In version 24, it is possible to assign a robot to run certain action plans.

This can be useful when using a powerful machine, or a machine with expected peripherals : printer,...

Benefit provided by this new feature of version 24 :

The test on the specified machine

INSTALL

079 New feature WD WB WM COMPACT SETUP: COMMAND LINE

The compact setup now accepts command lines and their parameters.

Benefit provided by this new feature of version 24 :

Command lines!

080 New feature WD WB WM NETWORK SETUP: UPDATE WHEN CLOSING THE APPLICATION (OPTIONAL)

When end users launch the application, an automatic message may ask them to perform an update. But end users are often in a hurry and would like to use their application immediately.

In version 24 a new option is offered to end users: update the application when closing it.

Benefit provided by this new feature of version 24 :

Better user experience

AAF : YOUR APPLICATIONS OFFER FUNCTIONALITIES

081 New feature WD WB WM INPUT HISTORY: DELETE ONE OR MORE ENTRIES

Among the AAFs available in the Edit control, keeping an input history is highly valued and commonly used by end users.

This AAF allows the end user to directly select the values previously entered.

In version 24, it is possible to delete one or more values previously entered.

The user can delete confidential, unwanted or irrelevant values to shorten the list!

Benefit provided by this new feature of version 24 :

Everyone has the right to be forgotten

082 New feature WD WB WM LINKING AAFS WITH USER GROUPWARE FOR GDPR

The use of export AAFs can be restricted by a programmed password.

In version 24, it is possible to protect exports directly from the User Groupware settings, i. e. by group and user. (see new feature 083 and 178)

Benefit provided by this new feature of version 24 :

Total security, without programming. And GDPR!

PASSWORD SECURITY : USER GROUPWARE

083 New feature WD WB WM LINK WITH GDPR

User Groupware integrates functionalities dedicated to the GDPR.

Windows handling personal data are highlighted in the User Groupware rights definition interface.

Thus, the Supervisor can adjust the rights of users and groups according to the GDPR constraints linked to the data.

Benefit provided by this new feature of version 24 :

Being "GDPR Compliant" is easier!

084 New feature WD WB WM OAUTH + OPENID AUTHENTICATION

OAuth + OpenID authentication is especially useful for sites intended for the public, but not only.

This mechanism keeps the end user from creating yet another password by using their social network login data.

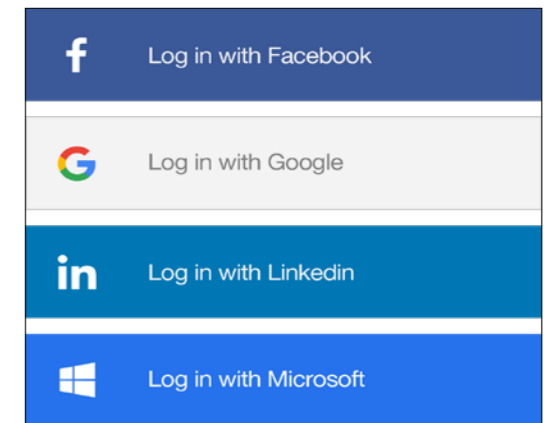
The OAuth standard allows a user to be authenticated.

The OpenID standard allows knowing this user.

Once the user is identified by OAuth, the user's profile is transmitted to your application or site by OpenID.

The following buttons are available by default :

- Facebook
- Google
- LinkedIn
- Microsoft



It is also possible to create your own buttons for other OpenID Identity providers : Instagram,...

See also new feature 124

Benefit provided by this new feature of version 24 :

Knock knock! - Who's there?

085 New feature WD WB WM MULTILINGUAL USER GROUPWARE

Before version 24, the files used by the User Groupware (GPU) for identification and connection permissions were specific to the language of the editor.

In version 24, the files are portable between the different languages of the editor.

It is also now possible to use the GPU in WEBDEV while combining the languages of the Framework and the Application Server.

Benefit provided by this new feature of version 24 :

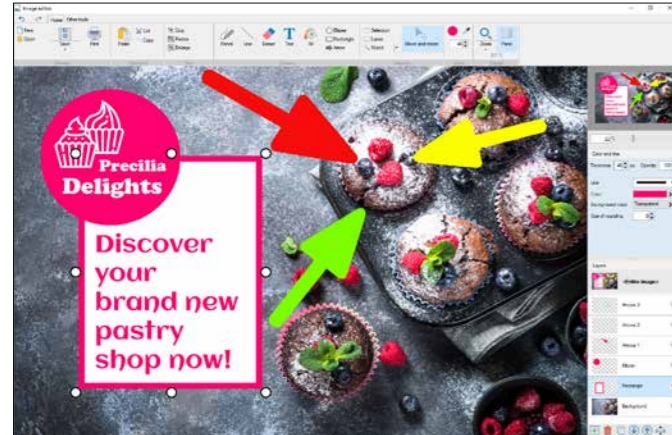
Better cross-platforming

IMAGE EDITOR

086 New feature WD WB WM NEW TOOLS

The image editor integrated into the environment offers new tools in version 24.

Note that these new tools are also available in the Image Editor control that you can include in your applications.



Benefit provided by this new feature of version 24 :
Tools that are useful to both the developer and the end user

087 New feature WD WB WM ELLIPSE, CIRCLE, OVAL

An ellipse is an oval shape. In version 24, the image editor allows you to create ellipses. It is possible to specify the line thickness, its color and background color...

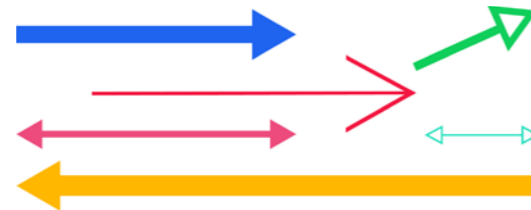


Circles, ellipses and ovals

Benefit provided by this new feature of version 24 :
Everybody loves another round

088 New feature WD WB WM ARROW

The "arrow" tool offers the expected functionalities : line thickness, color, line type, position of the arrow(s), arrow types, arrow size...

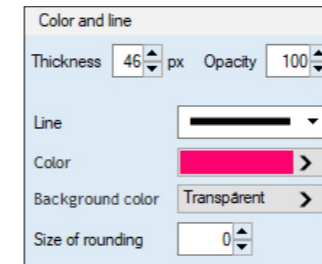


Benefit provided by this new feature of version 24 :
Unleash the archers

089 New feature WD WB WM RECTANGLE

It is possible to create rectangles directly with the image editor.

Many parameters are available: line thickness, color, background colour, angle roundness...

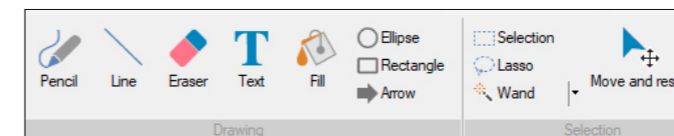


Benefit provided by this new feature of version 24 :
A well-formed feature

090 New feature WD WB WM EDIT IN PLACE NEW LOOK (MORE USER-FRIENDLY QUICK EDITING MENU)

Images can be modified in the image editor in different ways. Among these ways, it is possible to right-click on an element that you want to modify, and to display a "popup" menu on this element.

In version 24, this context menu has been made more user-friendly.



The new Edit In Place menu

Benefit provided by this new feature of version 24 :
Taste the new menu

091 New feature WD WB WM SELECTING THE RIGHT LAYER BY DEFAULT

An image can have several overlapping layers. The CTRL + CLICK key combination allows you to directly select the most appropriate layer, i.e. the one containing image data, just one click away!

Benefit provided by this new feature of version 24 :
Easy navigation

092 New feature WD WB WM IMAGE EDITOR CONTROL

As you know, you can include an "Image Editor" control in your windows.

You can define settings so that the end user won't be able to load any image other than the one you display, or not be able

to create a new one: the end user will be able to modify only the image you display. In version 24, the "NEW" and "OPEN" buttons can be removed from the ribbon in the Image Editor control in one click via the 7 tabs.

Benefit provided by this new feature of version 24 :
Freedom, yes, but within frames...

SCM

093 New feature WD WB WM SCM : "SILENT CHECK-OUT" MODE

In version 24, the check-out confirmation window may no longer appear. The "Silent Check-out" option allows you to hide this window.

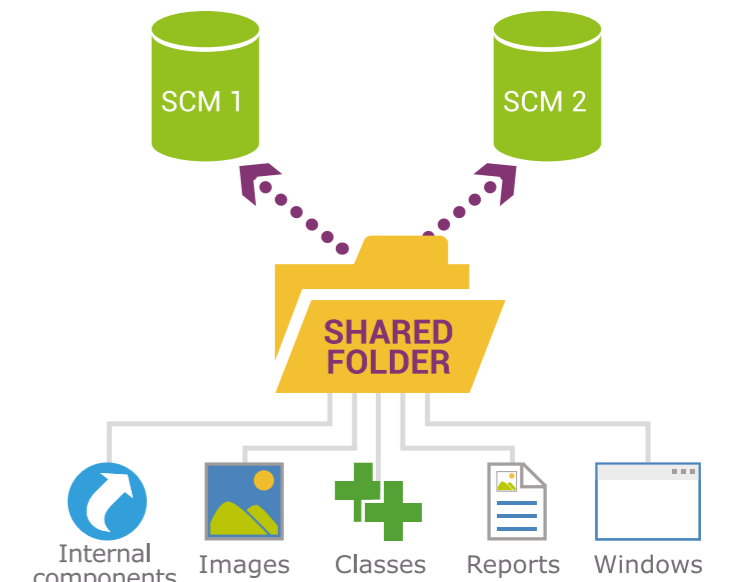
This enables users familiar with the SCM operating mode to skip an informative step that requires validation, and thus to save time.

Benefit provided by this new feature of version 24 :
Less steps!

094 New feature WD WB WM SHARED DIRECTORIES (AND CONTENT) BETWEEN DIFFERENT SCMS

In version 24, it is possible to share a directory and its content between several different SCMs: a log management class, an internal component for sending emails...

This helps to structure the sharing of elements in large organizations.



Benefit provided by this new feature of version 24 :
Easy sharing

I WANT THEM ALL!



095 New feature WD WB WM SCM : DISPLAYING COMMENTS WHEN RETRIEVING ELEMENTS

During check-in, a developer can write a comment (recommended, by the way!).

It is a "good practice".

In version 24, the comments of all retrieved elements (elements that are updated), are automatically displayed during the retrieval process.

This allows reading other developers' comments without having to perform any operations.

Benefit provided by this new feature of version 24 :
Information is shared

096 New feature WD WB WM SCM : PRE-FILLED COMMENT

Check-in comments can be based on a customizable template.

For example :

Version, Date, Name of the Developer ...

The comment box will contain the information entered during the check-in phases: no risk of forgetting, significant standardization.

The content of the template is specified in the "Comment template" option.

Benefit provided by this new feature of version 24 :
Pre-filled

097 New feature WD WB WM HISTORY OF MY COMMENTS

With a single click, developers can view all the comments they have entered.

Benefit provided by this new feature of version 24 :
Useful for cancelling or checking-in elements on the same subject

CODE EDITOR

098 New feature WD WB WM HTML LINK IN COMMENTS AND STRINGS

When a code comment contains an http or https address (for example a link to help on a subject), this address is directly clickable.

Just use the CTRL + Click combination (to avoid launching sites when you just want to edit the text...).

This allows you to consult a page, or to test it easily

```
// reference: https://www.dropbox.com/developers/reference/oauth-guide
OAuth2Params is OAuth2Parameters
OAuth2Params.ClientID = "01234567890123456789"
OAuth2Params.AuthURL = "https://www.dropbox.com/oauth2/authorize"
```

Https links in the code, directly clickable

This feature is also available in text strings used in programming.

Benefit provided by this new feature of version 24 :
Click everywhere

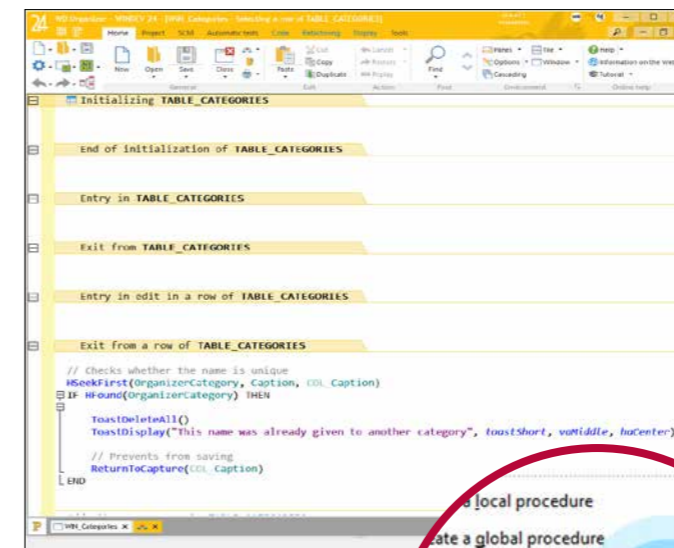
099 New feature WD WB WM PROCESSES: YOU HAVE THE POWER TO MAKE THEM INVISIBLE

As you know, the code is entered in the editor, which proposes the possible processes (events) on the control : Enter, Modification, Exit, Click...

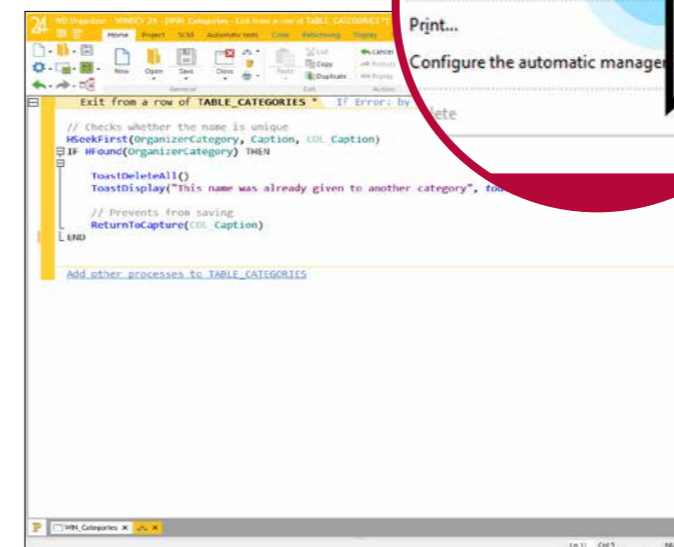
A standard series of events is always proposed for each control.

In version 24 it is possible to hide elements of this list.

This allows for a neat code editor, according to your programming habits.



Code editor in "default" mode



*Customized code editor: unused processes have been hidden
The layout is much cleaner*

(Of course, there are also optional treatments that can always be activated).

Benefit provided by this new feature of version 24 :
Cleaner code editor interface

100 New feature WD WB WM TO THE RESCUE! MULTIPLE SYNTAXES

Many WLanguage functions offer several possible syntaxes. These syntaxes can accept different parameters. In previous versions (23 and before) the tooltip only showed the parameters of the first syntax. In version 24, all the syntaxes are proposed in a tooltip, right above the line.

This has a double effect : on the one hand, you can select your preferred syntax, and on the other hand you can discover syntaxes that you didn't know about and that can be very

useful for you!

That can't be bad!



Help for each of the 4 syntaxes is displayed

Benefit provided by this new feature of version 24 :
Now you know it all

101 New feature WD WB WM REVERSE ASSIGNMENTS

In version 24, it is possible to reverse one or more assignments with one single operation

For example in POO, a procedure to load from an HFSQL file,

```
LAST_NAME = Client.lastname
FIRST_NAME = Client.first name Etc...
```

When the saving method must be written, everything has to be reversed.

In version 24, simply copy the assignments of the loading procedure, paste them, and invert all the assignments with 1 click.

Benefit provided by this new feature of version 24 :
A useful shortcut

102 New feature WD WB WM ATTRIBUTES (COMPILATION DIRECTIVE) : KNOW THEM, AND SELECT THEM

An attribute is a directive passed to the compiler.

The compiler produces different byte-code depending on the attributes passed.

WLanguage offers more and more attributes.

These attributes are powerful and practical: mapping, serialize,...

New attributes appear with each new version.

In version 24, to know these attributes, simply type the character "<" to see the list of available attributes for the current line.

Benefit provided by this new feature of version 24 :
Beautiful attributes

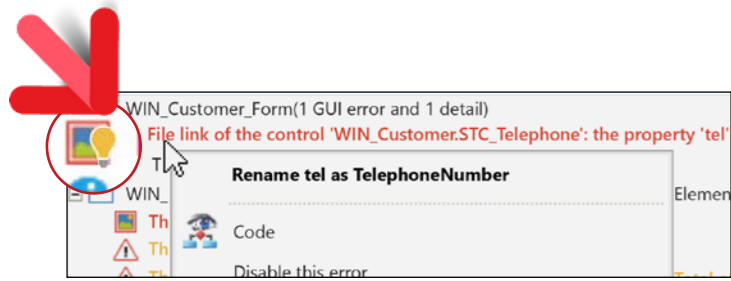
103 New feature WD WB WM SMART RENAMING OF MEMBERS

When a member of a class is renamed, a GUI compilation error appears.

A Lightbulb icon to the left of the error message indicates that the editor can help you.

Click on the lightbulb, and the member will be renamed throughout your entire project.



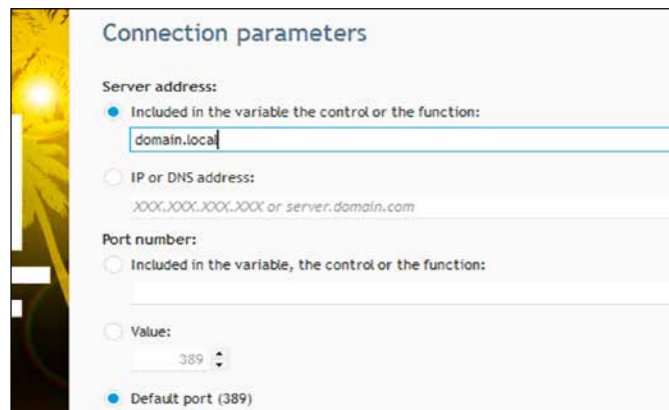


Click on the lightbulb to rename a member!

Benefit provided by this new feature of version 24 :
It looks like a good idea

104 New feature WD WB WM LDAP: CODE GENERATION WIZARD

The WLanguage functions of the LDAP family offer a wide range of parameters. In version 24, a wizard is made available for choosing the WLanguage function parameters of the LDAP family.



Simply answer the questions to generate the code

Benefit provided by this new feature of version 24 :
Automation

REPORT EDITOR

105 New feature WD WB WM REPORT EDITOR: BACKGROUND COLOR

The report editor allows you to specify the background paper color. This color will be displayed in the editor, in order to be able to choose appropriate colors for controls, texts, frames, backgrounds...

Benefit provided by this new feature of version 24 :
Colors everywhere

106 New feature WD WB WM REPORT EDITOR: ..NOTE

You certainly know the property `..Note` which allows you to

associate a note to a control in a window. In version 24 it is also possible to associate notes to a report. Reminder: the content of this note is accessible by programming; some developers even use it to store conditional code that will be executed in dynamic compilation in special cases!

Benefit provided by this new feature of version 24 :
You should take note

107 New feature WD WB WM REPORT EDITOR: SPREADSHEET

The report editor provides a wizard to print the Spreadsheet controls used in the application. Creating a report that contains a spreadsheet is very easy in version 24.

Benefit provided by this new feature of version 24 :
Easy-to-print spreadsheet

108 New feature WD WB WM REPORT EDITOR: LIST OF CONTROLS (F12)

The window for listing the controls in a report has been revised in version 24. Its interface has been improved. Finding a control is easier, and many features are available: locking, selection, search,...

Benefit provided by this new feature of version 24 :
Homogenization

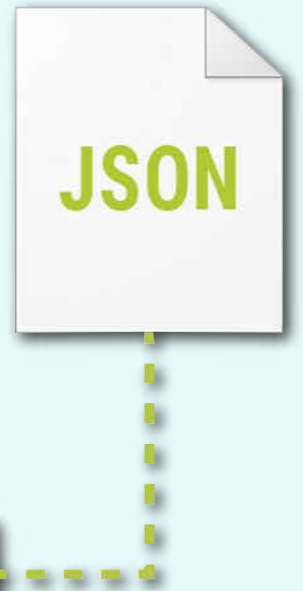
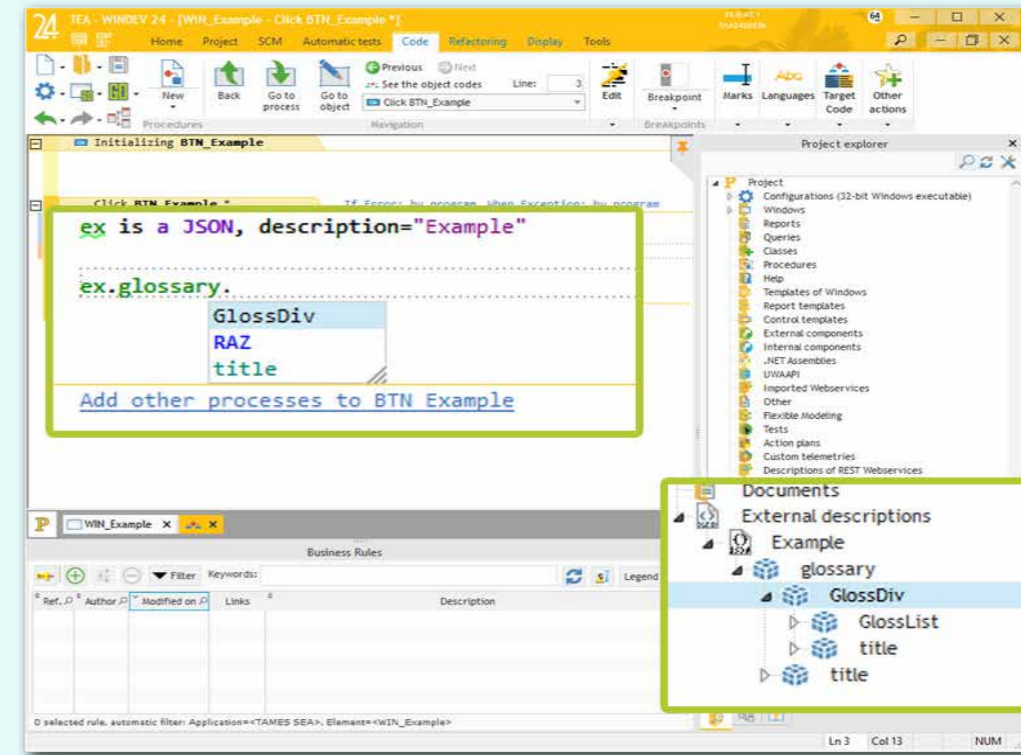
WLANGUAGE



109 New feature WD WB WM NEW PREFIXED SYNTAX ON ALL THE FUNCTIONS! ALL.FUNCTION



You discovered the prefixed input on the controls in version 23, and you loved it! The advantage of this syntax is that when you type a variable name, after entering "." a combo box appears and proposes the list of functions that apply to this variable. In version 24, this type of input becomes available for the other elements: String, Table, Queue, Stack, List, Advanced types...



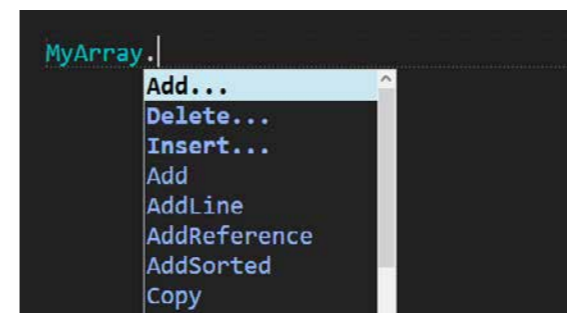
110 New feature WD WB WM NEW NATIVE JSON TYPE

The JSON format is more and more widely used.

In version 24, a native JSON type appears in WLanguage. This type allows to natively manage data in JSON format (without having to build or analyze strings). A "JSON template" can be provided to the code editor.

The code editor then assists input throughout the entire JSON structure. See also new feature 155 "JSON Item".
Benefit provided by this new feature of version 24 :
Managing JSON becomes easy

For example:
`MyString is string = "This is a test"`
`MyString.Left (4)`
`MyTable.Add (customer)`



Example of syntax on a Table element

See the complete list in new feature 303.
Benefit provided by this new feature of version 24 :
Another philosophy of code writing

111 New feature WD WB WM NEW UUID TYPE

A UUID is a randomly generated, unique identifier, for which a

duplicate is statistically impossible. Use a UUID each time you want to make sure an element is unique. In version 24, WLanguage offers the new UUID type, on 128 bits, and on 256 bits. The UUID type makes it possible for example to manipulate hash results (SHA256), identifiers, blockchain keys, the content of HFSQL UUID items (see new feature 156) etc... The UUID type is also useful for GDPR pseudonymization.
Benefit provided by this new feature of version 24 :
A type like no other

112 New feature WD WB WM NEW CHRONO TYPE

In version 24, the new Chrono WLanguage type is introduced. Managing stopwatches is so much easier! `MyChrono.Start` is clearer than manipulating subscripts, especially if there are several stopwatches.
Benefit provided by this new feature of version 24 :
Ready, set, go!

113 New feature WD WB WM NEW TYPE CRITICAL SECTION (THREAD SYNCHRONIZATION)

In version 24, the new `Critical Section` WLanguage type is introduced.

Managing critical sections is significantly easier.

Benefit provided by this new feature of version 24 :
Well synchronized threads

114 New feature WD WB WM NEW SYNTAX WITH ... DO ...

This new syntax facilitates programming the use of types that have a beginning and an end.

The use of the new types `Chrono` and `Critical Sections` is simplified.

Benefit provided by this new feature of version 24 :
Clearer programming

115 New feature WD WB WM EVOLUTION OF MIN & MAX FUNCTIONS

Going directly from an array to the function `Min` (and `Max`) allows you to reduce the code to a single line: no need to program the browsing of the array.

A small but useful new feature.

Benefit provided by this new feature of version 24 :
Efficient programming

116 New feature WD WB WM RECEIVING DATA: EVOLUTION OF THE HTTPREQUEST TYPE

The `HttpRequest` type offers an additional property: `destination`.

This property allows you to save the result of the query directly to a file on disk, without using memory.

This is very useful when receiving large volume data.

Benefit provided by this new feature of version 24 :
No memory consumption

117 New feature WD WB WM HTTPREQUEST SEND: VISUALIZE THE FLOW TO KNOW WHAT GOES TO THE SERVER

The `HttpRequest` functionality offers dozens of parameters. To analyze the frame that is sent to the destination server, the new `. .ProcedureTrace` property allows you to view the byte stream sent to the server.

Verification (and debugging) is much easier.

Benefit provided by this new feature of version 24 :
Easy debugging

118 New feature WD WB WM HTTPREQUEST TYPE : CLIENT CERTIFICATE

The `HttpRequest` function has long accepted client certificates.

The `HttpRequest` type, which is generally much more convenient, also accepts certificates in version 24.

Benefit provided by this new feature of version 24 :
Usefulness

119 New feature WD WB WM CLIENT CERTIFICATE : ON DISK, OR IN THE WDL

In version 24, you can choose where the certificate is stored:

- on disk
- in the WDL library of your application.

This allows, among other things, automation in the use of Chorus, the invoicing system of the French government.

Benefit provided by this new feature of version 24 :
Certificate confidentiality

120 New feature WD WB WM INCLUSION OF ANY FILE IN THE LIBRARY (IN THE WDL OR IN THE EXE), AND EXTRACTION

It may be useful to include a text file (for example) in the WDL library or in the EXE of the application.

This makes it possible to make this file invisible and to avoid managing its deployment.

Including this file is easy: just include it in the configuration. It is possible to include several files.

It is then easy to either extract the file or read its content.

A file is extracted by the `fExtractResource` function.

The content of a file can be read directly in the WDL using: `fLoadResource`.

Benefit provided by this new feature of version 24 :
Great flexibility

121 New feature WD WB WM ATTRIBUTES ON PROCEDURE AND INTERNAL PROCEDURE

An attribute is a directive for the compiler.

An attribute is entered in the code editor, between angular brackets (for example `<serialize=false>`).

In version 24, it is possible to define the automatisms of internal procedures and procedures thanks to attributes : timer, thread, automatic or delayed execution,...

Benefit provided by this new feature of version 24 :
Even internal procedures have attributes

122 New feature WD WB WM MURMURHASH : AN ADDITIONAL ALGORITHM

WLanguage proposes many hash types.

In version 24, the MurnurHash algorithm is also supported. Murnur is particularly used in the bloom filter of bitcoin wallets.

Benefit provided by this new feature of version 24 :
Be safer!

123 New feature WD WB WM TAPI FUNCTIONS

Today, many devices support TAPI 3 only. WLanguage supports TAPI 3.

Benefit provided by this new feature of version 24 :
Just make the call

124 New feature WD WB WM OPENID MANAGEMENT: RETRIEVE INFORMATION ON THE PERSON CONNECTED VIA OAUTH



When you offer a connection via OAuth in your application, users log in using their social network cre-

Version 24
is a solid
foundation



entials, for example Instagram or Google. The OpenID protocol allows you to retrieve information that may be necessary for your application about the person who has logged in : email, last name, first name...

2 new advanced types appear in WLanguage to retrieve the information proposed by this protocol: `OpenIDParameters` and `OpenIDIdentity`.

See also new feature 084 to know more about automatic use within User Groupware.

Benefit provided by this new feature of version 24 :
Who's there?

125 New feature WD WB WM WORD PROCESSING (OR SPREADSHEET) IN 1 LINE OF CODE: OPENDOCUMENT FUNCTION

You know the powerful Word Processing, Spreadsheet, Image Editor and PDF Reader controls (images and documents in docx, xlsx and pdf formats).

In your applications, when you wanted to propose the editing of a document in one of these controls, it often involved the creation of a dedicated blank window, containing only this control.

In version 24, everything becomes more simple : Simply use the new WLanguage function `OpenDocument`.

A simple line of code is all it takes : `OpenDocument (invoice.docx)`

Benefit provided by this new feature of version 24 :
Office controls in 1 line of code

126 New feature WD WB WM XLS FUNCTIONS

New WLanguage functions for managing XLS sheets are available in version 24 :

- `iPrintXLS` allows you to print an XLS sheet
- `iSequencingAddXLS` allows you to print several XLS documents in a row, and even to combine XLS sheet prints with reports.

Benefit provided by this new feature of version 24 :
XLS sheet programming is even more powerful.

PUBLIC KEY PRIVATE KEY

Asymmetric encryption



The management of "public/private keys" makes it possible to implement secure exchanges and authenticated communications.

Everyone can see this message.
To be certain about the author, the recipient must make sure that the message has been signed with the private key that corresponds to the public key.

127 New feature WD WB WM ASYMMETRIC ENCRYPTION: PRIVATE KEY, PUBLIC KEY 2 USES

In version 24, encryption by "public/private key" becomes possible for both uses :

- authenticate communications (already available)
- secure communications (it's new feature in version 24!).

A certificate is needed: it contains the private key. The private key included in the certificate must remain private: if it is distributed or stolen, your identity is highly compromised.

Benefit provided by this new feature of version 24 :
Security made public : to protect privacy

128 WD WB WM AUTHENTICATED COMMUNICATION

Authenticated communication makes it possible to send a message while ensuring the identity of the author. The `CertificateSign` WLanguage function allows you to sign a message (with the certificate), while `Certificate-Check` ensures that the signature and public key match (no need for the certificate here).

*Bob wants to send a message, and he wants to sign this message in a way that cannot be falsified.
Bob signs the message with his private key.*

Benefit provided by this new feature of version 24 :
I know who wrote

129 New feature WD WB WM SECURE COMMUNICATION

Secure communication consists in sending a message and ensuring that only the recipient(s) will be able to decrypt it, and therefore read it.

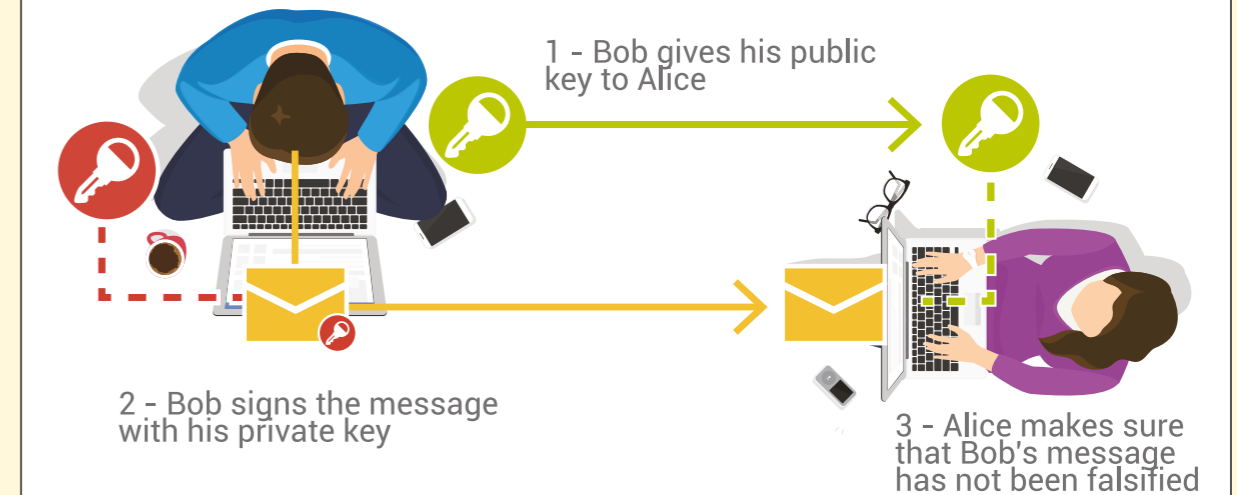
When a secure message is sent, it is the recipient who must have a private key (and therefore a certificate). The sender must simply encrypt the message with the public key.

Only the recipient who has the corresponding private key can decrypt the message. (So it's basically the "opposite" of what you might think at first, but it makes sense!).

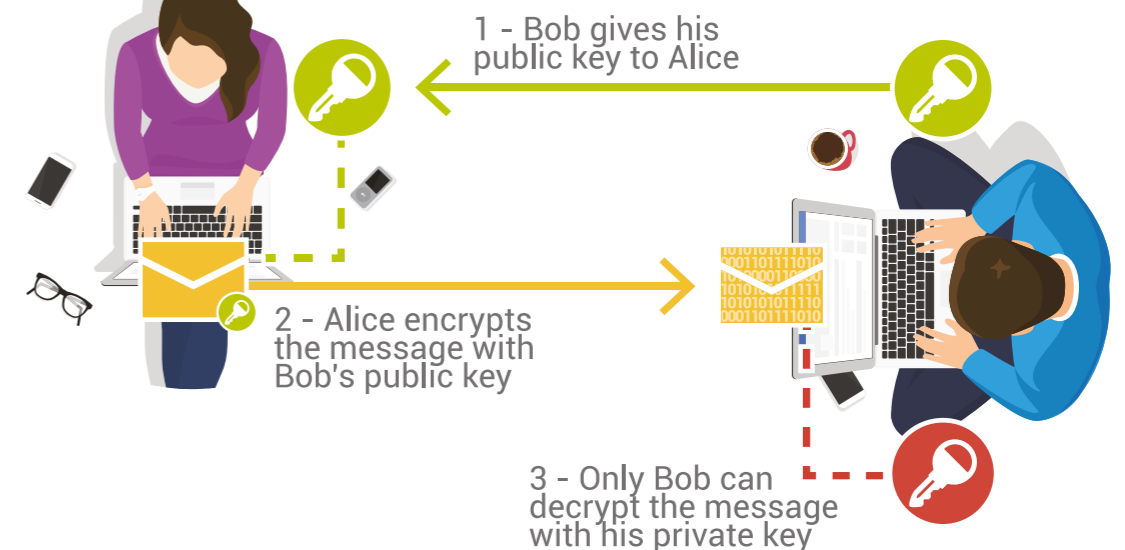
*Alice wants to send Bob a message that no one else can read.
Bob has a private key, and the corresponding public key.
The public key is not confidential.
So he gives this public key to Alice.
Alice encrypts the message she wants to send to Bob with Bob's public key.
Only Bob will be able to decrypt this message, since the only way to decrypt the message is to use the associated private key.
Of course, only Bob has this private key.*

Benefit provided by this new feature of version 24 :
I'm the only one who can read the message

Authenticated exchanges



Secure exchanges





130 New feature WD WB WM PASSWORDS ON DOCX AND XLSX FILES

In version 24, the WLanguage functions of the `XLS` and `DOC` families allow you to manage documents protected by password, and also to add passwords on existing documents. This is useful for data security. It also makes it possible to meet certain GDPR requirements.

Benefit provided by this new feature of version 24 :
Security!

131 New feature WD WB WM PDFPASSWORD

`PDFPassword`, a new WLanguage function, allows defining a password for an existing PDF file. Reminder: reading PDF files with passwords is already possible

Benefit provided by this new feature of version 24 :
Security also for PDFs!

132 New feature WD WB WM PDF/A-3 : ARCHIVING AND ATTACHMENTS

The PDF /A-3 archiving format (note, A-3 has nothing to do with paper size; A is for Archiving, and 3 is a version number) is supported in version 24.

This format allows you to include attachments to the PDF archive: XML, XLSX, DOCX...

This format is necessary for Factur-X and Chorus (see new feature 187).

Benefit provided by this new feature of version 24 :
Stronger PDFs

133 New feature WD WB WM OOP ARRAY

Rather than copying an instance of an object into an array, it is now possible to add the reference of this object in the array. The functions `ArrayInsertReference` and `ArrayAddReference` appear in version 24.

Benefit provided by this new feature of version 24 :
The array is an object

134 New feature WD WB WM TRANSFORM A BARCODE INTO AN IMAGE

In version 24, the new `BCToImage` WLanguage function allows transforming a `Barcode` variable into an `Image` variable. The image can then be saved in the format of your choice. The image can also be modified by all the usual WLanguage image management functions.

Benefit provided by this new feature of version 24 :
Total freedom in the use of barcodes

135 New feature WD WB WM INSERT AN IMAGE IN A QR CODE (FOR EXAMPLE FOR INVOICES IN SWITZERLAND)

Invoices issued in Switzerland must include a QR Code. This QR Code must contain an image of a Swiss flag in its center.

`..Image` and `..ImageProportion`, two new properties for the `Barcode` type, allow you to specify the image to be inserted in the center of the barcode, and its size.



*Example of QR Code for Swiss invoice
(the flag can be generated in black & white)*

Benefit provided by this new feature of version 24 :
Invoicing is a bliss for each and every Swiss

136 New feature WD WB WM RETRIEVE THE CONTENTS OF A SCAN IN MEMORY

In version 24, it is possible to recover the contents of a scan directly in memory (in a buffer), without going through a backup on disk.

The functions of the `TwainTo` family now support the `InMemory` constant.

Benefit provided by this new feature of version 24 :
Faster action

137 New feature WD WB WM "COUNTRIES" FUNCTIONS

New WLanguage functions allow you to retrieve the name or ISO code of countries.

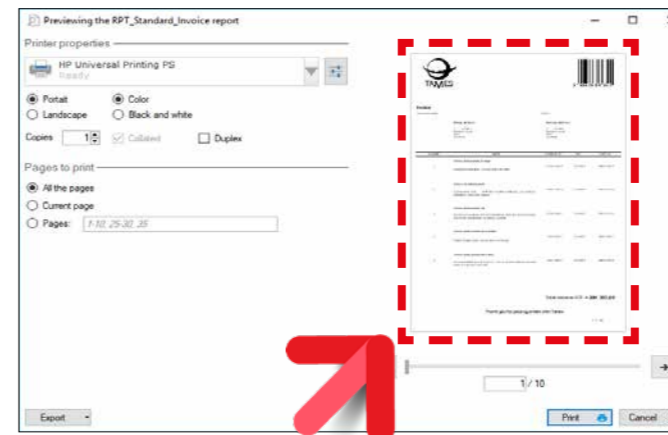
These are the functions `GetCountryName (ISOCode)` and

`GetCountryISO (CountryCaption)`

Benefit provided by this new feature of version 24 :
The planet is at your fingertips!

138 New feature WD WB WM PRINT : MINI PREVIEW

When printing a report or using the `iPrint` function, it is now possible to request the use of a mini preview instead of the traditional preview.



On the right, the new mini preview

Benefit provided by this new feature of version 24 :
Little preview, huge advantage

New feature WD WB WM

139 to 147 VARIOUS NEW FEATURES

- SSL socket : TLS 1.2 standard support.
- The new `dPolyline` function draws all lines from an array of points.
- The new `LeapYear` function is used to know if a year is a leap year.
- The new `Yesterday` and `Tomorrow` functions help you avoid declaring local variables for calculation.
- The new `TraceDeleteAll` function allows deleting all the contents of the trace.
- The `TwainToJPEG` function no longer blocks other threads
- OPC UA server : communication example provided
- Useful for multi-gigabyte files : `hashFile` can have a progress bar.
- All the `DateToXXXTimeToXXXDateTimeDateTime` variable).
- The drawing functions of the `dXXX` family can take an `Image` control or an `Image` type as a parameter. This makes it possible for example, to call the `dXXX` functions on several controls in parallel.

Benefit provided by this new feature of version 24 :
Useful new features

OOP

148 New feature WD WB WM WHAT IS "THIS"?

"`This`" is a common keyword in many languages. In WLanguage, the corresponding keyword is "`Object`" (there is certainly a good historical reason...).

In version 24, it is possible to use the keyword `This` as well.

Benefit provided by this new feature of version 24 :
... This is it

149 New feature WD WB WM INTERFACE INHERITANCE

In OOP, an interface is a set of methods accessible from outside a class, by which you can modify an object (basically it is an abstract class that has no code).

In version 24, it is possible to inherit an interface from another interface.

This advanced feature is useful for architecture designers who create structures with many levels of abstraction.

Benefit provided by this new feature of version 24 :
Tax-free inheritance.

WEBSERVICES

150 New feature WD WB WM SOAPTOHTTP : MODIFY THE XML CONTENT SENT TO A SOAP WEBSERVICE

Web services have a very wide spectrum and not all of them comply with the standard.

The ease of use of a third-party Webservice in an application or site depends on its designer.

Version 24 offers a very useful function to adapt the XML sent to the Webservice (a SOAP Webservice always receives XML). The `SOAPToHTTP` function allows retrieving the content of the Http request that goes to the third-party Webservice server. It is now possible to modify the XML content in order to adapt it to the expectations of the Webservice.

Benefit provided by this new feature of version 24 :
Unlock everything!

151 New feature WD WB WM CONSUMPTION OF SOAP WEBSERVICES WITH AUTHENTICATION

In version 24, "user / password" authentication by the "ws security" protocol is directly supported.

Benefit provided by this new feature of version 24 :
Nothing to code

152 New feature WD WB WM CALL SHAREPOINT WEBSERVICES



Some Sharepoint Webservices expect XML content in "String" parameters.

This particular mode is now managed in version 24 (for those who already use it, it is the equivalent of the `InnerXML` property).

Benefit provided by this new feature of version 24 :
Opening even to non-standard

QUERY EDITOR

153 New feature WD WB WM NEW WIZARD TO GENERATE "INSERTS"

The editor interface that allows you to enter "Inserts" becomes more ergonomic.

The selection of data files, items and parameters is now smooth and fast.

Benefit provided by this new feature of version 24 :
Generate

154 New feature WD WB WM AUTOMATIC INDENT

To easily indent the SQL code of a query, the query editor now offers the shortcut CTRL+R which automatically indents the structure of the query: selections, conditions, aggregates...

Benefit provided by this new feature of version 24 :
Readable presentation by default

HFSQL DATABASE HFSQL®

155 New feature WD WB WM NEW JSON ITEM TYPE

In version 24, HFSQL offers a new and useful type of item: JSON items.

This type of item allows you to run queries that include operations on JSON.

When writing or modifying a JSON item, HFSQL checks the syntax of its content.

If the syntax is wrong, an error is generated.

New SQL commands make it possible to query the database on the content of JSON items.

4 new commands allow testing if a value is JSON, as well as its type: `IS JSON`, `IS JSON ARRAY`, `IS JSON object`, `IS JSON Scalar`

`JSON_ARRAY`, `JSON_Object`
allow you to build a JSON object.

`JSON_ARRAYAGG`, `JSON_ObjectAGG`
allow you to build a JSON object for a set of records.

Finally, 3 new commands are introduced to query the content of the item: `JSON_exists`, `JSON_Value`, `JSON_Query`.

Benefit provided by this new feature of version 24 :
Compliance with the SQL/JSON standard

156 New feature WD WB WM NEW UUID ITEM TYPE

A UUID (Universal Unique Identifier) is a random number deemed unique: this number is so big that the probability of the same identifier being generated twice is lower than the probability of a piano falling on your head twice in a lifetime...

A UUID is useful to easily and reliably identify any element.

In version 24, HFSQL offers the new UUID item type.

This type of UUID item complies with the 128-bit RFC 4122 standard. Only the 128 bits is standardized.

The UUID item goes even further than the standard by offering a more powerful 256-bit mode.

The major interest of UUID is to allow anonymization and pseudonymization, useful for compliance with the GDPR standard.

The UUID also allows you to manage cryptocurrency identifiers...

Benefit provided by this new feature of version 24 :
Let it do the numbers

157 New feature WD WB WM AUTOMATIC UUID

HFSQL can manage UUIDs for you.

It is possible to automatically initialize a UUID item when writing a record; the UUID thus corresponds to a non-sequential unique identifier.

If necessary, to facilitate an existing migration, a record can include an automatic UUID and an automatic Identifier.

The same record can contain several UUIDs.

Benefit provided by this new feature of version 24 :
Some serious power

158 New feature WD WB WM ADVANCED ENCRYPTION STANDARD : A MORE POWERFUL ENCRYPTION

AES is available for data files (.fic), for indexes (.ndx; .ftx), for memos (.mmo).

Data is more secure.

The speed of data encryption and decryption is optimized: performance is better than with other encryption methods!

This encryption allows, among other things, case-sensitive passwords.

Benefit provided by this new feature of version 24 :
Top-level security!

159 New feature WD WB WM ODBC DRIVER ON HFSQL

In version 24, the ODBC driver provided to access HFSQL from third-party software allows access to "array" items.

Benefit provided by this new feature of version 24 :
Better interoperability

160 New feature WD WB WM ADMINISTRATOR PASSWORD WHEN INSTALLING

When installing an HFSQL server, for security reasons, it is necessary to enter a custom password for the administrator account.

Benefit provided by this new feature of version 24 :
Better security

161 New feature WD WB WM HFSQL CONTROL CENTER: UNLIMITED QUERIES

The HFSQL Control Center allows you to enter and run queries.

In version 24, queries are run in a thread, in the background. This means that you are not blocked while the query is run, and that you can launch several queries simultaneously.

Benefit provided by this new feature of version 24 :
Significant time savings.

162 New feature WD WB WM IMPROVED BROWSING SPEED OF THE HREAD FAMILY IN CLIENT/ SERVER

In version 24, HFSQL Client/Server offers improved data file browsing speed when using the `HRead` history functions.

The speed has increased by 10%.

Benefit provided by this new feature of version 24 :
Better performance

163 New feature WD WB WM MISCELLANEOUS

- The new `hExportXLS` and `hExportCSV` functions make it possible to export an HFSQL data file (or the result of an HFSQL query) to Excel or to CSV format with one single line of code.

- The `HTrack` function allows an application to be automatically notified when a change is made to an HFSQL data file; this function, `HTrack`, is now available in Windows services.

- `HOnError` now works on stored procedures.

Benefit provided by this new feature of version 24 :
I'll take it!

SQL FUNCTIONS

164 New feature WD WB WM NULLIF

The `Nullif` SQL function takes 2 parameters.

`Nullif` returns Null if the 2 parameters are equal, and returns the first parameter if the parameters are different.

Benefit provided by this new feature of version 24 :
Useful for compatibility

165 New feature WD WB WM DROP INDEX

The `Drop Index` SQL function allows you to delete indexes.

Benefit provided by this new feature of version 24 :
It's the Create Index's mirror image

166 New feature WD WB WM BETTER SELECTION OF COMPOSITE KEYS WITH THE "OR" SQL OPERATOR

In some cases (use of `Or`), the performance of the query is improved if there are composite keys in a data file.

Benefit provided by this new feature of version 24 :
Try not to go too fast!

167 New feature WD WB WM SYNTAX TO WRITE BINARY VALUES IN SQL QUERIES

HFSQL supports an additional standard for writing binary values (literals) in SQL queries:

X'binary value in Hex'

Example :

```
Insert Into PAINTER (Rubbin) Values (X'0254B8615A')
```

Benefit provided by this new feature of version 24 :

It's the standard

168 New feature WD WB WM SQL STATEMENTS FOR JSON ITEMS

New SQL commands are available for the "Native JSON item in HFSQL" new feature: see new feature </C1>155</C1>.</C1>

Benefit provided by this new feature of version 24 :

JSON and SQL

DATABASE NATIVE CONNECTORS

As you know, there are many native connectors: HFSQL, Oracle, SQL Server, AS/400, DB2, MySQL, PostgreSQL, SQLite, xBase, MariaDB, Informix, Progress, Sybase...

169 New feature WD WB WM MANAGING THREAD ERRORS

When a call to a native connector (Native Access) is made from a thread, it becomes possible to handle errors in a normal way.

Benefit provided by this new feature of version 24 :

Normal behavior when dealing with threads

170 New feature WD WB WM UUID MANAGEMENT

In version 24, native connectors (Native Access) manage UUIDs.

Benefit provided by this new feature of version 24 :

UUID in third-party databases

171 New feature WD WB WM SQL SERVER NATIVE CONNECTOR: MSOLEDBSQL

The Msoledbsql driver for SQL Server is supported by the native connector in version 24.

Benefit provided by this new feature of version 24 :

All driver versions are supported

HFSQLDRIVE YOUR DATA FILES IN THE CLOUD IN 3 CLICKS



172 New feature WD WB WM HFSQLDRIVE : SIMPLIFY DATA EXPLOITATION AND SHARING

HFSQLDrive allows you to host HFSQL data files in the cloud in a few clicks.

All HFSQL data exploitation features are available.

HFSQLDrive is intended for WINDEV Mobile, but also for WINDEV and WEBDEV.

(See new feature 670)

Benefit provided by this new feature of version 24 :

Easy data sharing

WDMMSG AUTOMATIC TRANSLATION



173 New feature WD WB WM WDTRAD : DEEPL



DeepL is a service based on an artificial intelligence algorithm that provides text translation.

This service can be useful when translating a text for the first time.

WDTRAD can send a request to DeepL directly when its dictionary is not yet rich enough to find a translation.

Remember that once translated, the texts are automatically inserted into the WDTRAD dictionary of WDMMSG, and will be automatically re-used.

Please note that DeepL is an independent service. Different fees apply.

Benefit provided by this new feature of version 24 :

DeepL support

174 New feature WD WB WM STANDARD MESSAGE WINDOWS: TRANSLATION WITH SKIN TEMPLATE INHERITANCE

When translating software, you should also consider translating standard runtime message windows, such as the windows displayed by the User Groupware, automatic HFSQL assistance, AAF windows (export to Word or Excel, etc.).

Before version 24, the translation necessarily involved the customization of these standard windows.

In version 24, it is possible to translate these windows without having to customize them.

These windows therefore benefit from the evolutions of the framework during framework updates.



Translation of the AAF export menu

Benefit provided by this new feature of version 24 :

No need to re-translate standard message windows!

175 New feature WD WB WM WDTRAD : THE INTELLIGENT DICTIONARY THAT GROWS RICHER ON ITS OWN

As you certainly know, WDTRAD allows you to manage the self-building dynamic dictionary used to translate your software.

The dictionary is enriched according to your translations. In version 24, WDTRAD evolves for easier, more powerful and faster use.

New operations are available :

- Work files can be selected by direct input, copy/paste or drag & drop.
- The list of resources can be sorted and grouped according to numerous criteria.
- Search can be carried out using the names of breaks.
- WDTRAD reports translations that seem strange to it, such as a multi-line text in one language, translated into just a few words in another language.

Benefit provided by this new feature of version 24 :

Simplified operations

176 New feature WD WB WM WDTRAD : "YOU", IS THAT "TÚ" OR "USTED"? ADDITIONAL LANGUAGE DISPLAYED

WDTRAD now allows displaying a second reference language. This is useful to ensure that certain sentences are correctly worded: choosing "tú" or "usted" from an english reference text ("you") is not necessarily easy!

By displaying the reference text in a 2nd language such as Spanish, there is no more ambiguity.

It also solves the problem of lexical categories with certain words.

Benefit provided by this new feature of version 24 :

Easier translations

BLOCKCHAIN



177 New feature WD WB WM UUID 256

A 256-bit UUID item can store identifiers, transactions... blockchain (Bitcoin, Ethereum, etc.).

If you manage a blockchain yourself, the UUID item and the new WLanguage UUID type allow you to generate and manage unique identifiers.

(see new feature 156)

Benefit provided by this new feature of version 24 :

A Blockchain-specific item

GDPR

178 New feature WD WB WM GDPR : PASSWORD IN EXPORT AAFS AUTOMATICALLY MAN- AGED BY THE USER GROUPWARE

As you know, AAFs (Automatic Application Features) allow you to export the content of the Table controls of your applications to Excel, Word, PDF, XML... These tables may contain sensitive data. In version 24, these export features can automatically be secured via a password, which is automatically managed by the User Groupware. Thus, you don't have to program anything in order to grant specific users access to these features.

Benefit provided by this new feature of version 24 :
Automatic security of AAFs

179 New feature WD WB WM GDPR : A WINDOW WITH GDPR DATA IS MARKED IN THE GROUPWARE

When editing rights in the User Groupware, the windows that contain personal data are marked. This allows administrators to verify that they have given access to personal data to the right users only.

Benefit provided by this new feature of version 24 :
A useful reminder

180 New feature WD WB WM GDPR AND HFSQL: NEW EN- CRYPTION MODES

To ensure even better data security, HFSQL version 24 adds AES to the list of supported encryption modes

Benefit provided by this new feature of version 24 :
Higher encryption level

181 New feature WD WB WM GDPR AND HFSQL: UUID ITEM FOR PSEUDONYMIZATION

The HFSQL database now offers UUID items on 128 or 256 bits. This type of item makes data pseudonymization possible: Pseudonymization is necessary in certain fields of work. See new feature 156

Benefit provided by this new feature of version 24 :
Easier anonymization

182 New feature WD WB WM GDPR AND WLANGUAGE: UUID TYPE FOR PSEUDONYMIZATION

To allow an easy and rigorous use of UUID items, WLanguage offers the new `UUID` type, on 128 or 256 bits.

Benefit provided by this new feature of version 24 :
Easy and rigorous programming

183 New feature WD WB WM GDPR : MISCELLANEOUS

Spreadsheets and word processing documents managed by WINDEV native controls can now be encrypted. Encryption is managed in read and write mode. (See new feature 018)

Benefit provided by this new feature of version 24 :
Your applications manage encrypted office documents

TELEMETRY

184 New feature WD WB WM REPORTS SENT PERIODICALLY

Telemetry allows you to edit reports that contain statistics on the use of your applications. It is possible to request one (or more) reports to be sent at regular intervals, for example weekly, monthly, yearly... It is possible to specify the versions of the application that should be taken into account in the report: all versions, latest version only...

Benefit provided by this new feature of version 24 :
It's all good over here

185 New feature WD WB WM CUSTOM TELEMETRY: NEW WIDGET

Custom telemetry consists of defining "sensors". The application sends values to the sensor. A new Widget allows you to view the information of all customized sensors. The Widgets of the custom sensors are also printed in the reports.

Benefit provided by this new feature of version 24 :
An overview of the sensors

ELECTRONIC INVOICING

Version 24 facilitates the automatic preparation and transmission of electronic invoices. Here are some examples.

186 New feature WD WB WM FACTUR-X (HYBRID INVOICE): PDF/A-3 ARCHIVES WITH ATTACHED FILES

Factur-X, is a hybrid invoice standard: an invoice that is readable both by humans (PDF) and EDI (XML).

An invoice in the Factur-X standard contains a PDF archive (A-3 standard) of the invoice, and the standard XML file (5 standards are defined in Europe, depending on the level of detail) that includes the invoice details.

Version 24 has all the necessary XML functions to generate and sign XML files.

Version 24 makes it possible to create PDF files according to the A-3 archive standard. See new feature 132.

Benefit provided by this new feature of version 24 :
Create your invoices according to the Factur-X standard in version 24

187 New feature WD WB WM CERTIFICATE IN WDL LIBRARY : NO NEED FOR SETUP

In an electronic invoice, a certificate is used to ensure the authenticity of the invoice.

Usually, a certificate is installed on the host machine.

This requires various operations as well as Windows "Administrator" rights.

This can be complicated, even impossible (servers, etc.).

In version 24, a certificate can be directly embedded in your application's WDL library.

No additional setup is required on the end users' computers. No particular system rights are required on the execution computer.

Benefit provided by this new feature of version 24 :
No need for setup

188 New feature WD WB WM HTTPREQUEST AND RESTRE- QUEST WLANGUAGE VARI- ABLES : "CERTIFICATE" PROPERTY

In version 24, the `HttpRequest` and `RestRequest` WLanguage types (for using REST Webservices) have a `Certificate` property to use a certificate during requests.

It is no longer necessary to use `HttpCertificate!`

Benefit provided by this new feature of version 24 :
Simplified code

189 New feature WD WB WM CHORUS PRO : AN EXAMPLE OF ELECTRONIC INVOICING

The European Union has chosen to generalize electronic invoicing.

In France, electronic invoicing has become mandatory for invoicing government services.

The French government has set up the Chorus Pro system to submit and monitor invoices.

It is the tool for managing the expenditure and non-tax revenues of French government services.

Version 24 makes it easier to automate the submission of invoices on Chorus Pro.

Benefit provided by this new feature of version 24 :
Create and submit your invoices on Chorus Pro with version 24

AUTOMATIC TESTS

190 New feature WD WB WM MANAGEMENT OF OPEN WINDOWS FROM INITIALIZA- TION PROCESS

It is possible to create automatic tests while windows are open in the window initialization processes.

Benefit provided by this new feature of version 24 :
Create automatic tests!

MONITORING BOT (WATCHDOG)

191 New feature WD WB WM CLIENT/SERVER DATABASE

The database containing all defined tests and tests performed by the robot can now be used in Client/Server mode.

Benefit provided by this new feature of version 24 :
Shared data management

192 New feature WD WB WM THE ROBOT CAN BE INSTALLED ON A COMPUTER WITHOUT WINDEV

In previous versions, the configuration of the Control Centers used by the robot required a computer with WINDEV.
In version 24, having WINDEV installed is no longer necessary.

Benefit provided by this new feature of version 24 :
Easier setup

193 New feature WD WB WM ALERT EMAILS SENT BY THE ROBOT: SECURE SMTP

In case of a failure from the robot (for example: inaccessible server, response timeout, application not responding, etc.) you can have the robot send a warning email.
Sending this email can now be done using the secure SMTP protocol.

Benefit provided by this new feature of version 24 :
Increased security

194 New feature WD WB WM UAC

With older versions, the configuration and use of a monitoring robot required elevated privileges, which opened a UAC window.

In version 24, only the setup requires the elevation of privileges.

Thereafter, the configuration is done simply, without any privilege elevation. This allows users without administrator rights to configure the robot.

Benefit provided by this new feature of version 24 :
A more accessible robot

195 New feature WD WB WM IMPORTING / EXPORTING CHECKS

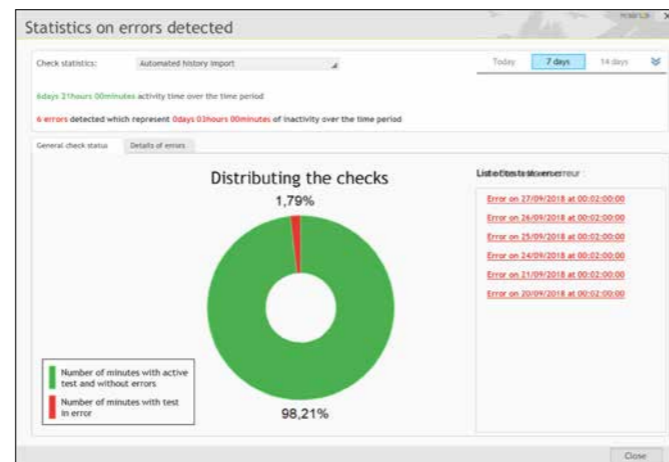
In version 24, the robot allows you to export and import checks.

The exchange follows the XML standard.

Benefit provided by this new feature of version 24 :
Better interoperability

196 New feature WD WB WM STATISTICS ON PASSED/FAILED CHECKS

In version 24, the robot display statistics on the execution of checks. Tests with errors are listed and can be clicked on.



Clicking on a test with errors opens its report

Benefit provided by this new feature of version 24 :
A global vision of the execution of audits

197 New feature WD WB WM ROBOT : MISCELLANEOUS

Application monitoring: the monitored application no longer has to write on an .INI file to indicate that it is working properly.

This simplifies configuration.

Benefit provided by this new feature of version 24 :
Simplification

BIG DATA

198 New feature WD WB WM REDIS



REDIS is a "scalable key-value" Big Data database.
In version 24, a native access to REDIS is proposed.

Benefit provided by this new feature of version 24 :
Here is another native connector for you!



199 New feature WD WB WM BENEFIT FROM THE 180 NEW FEATURES OF VERSION 24

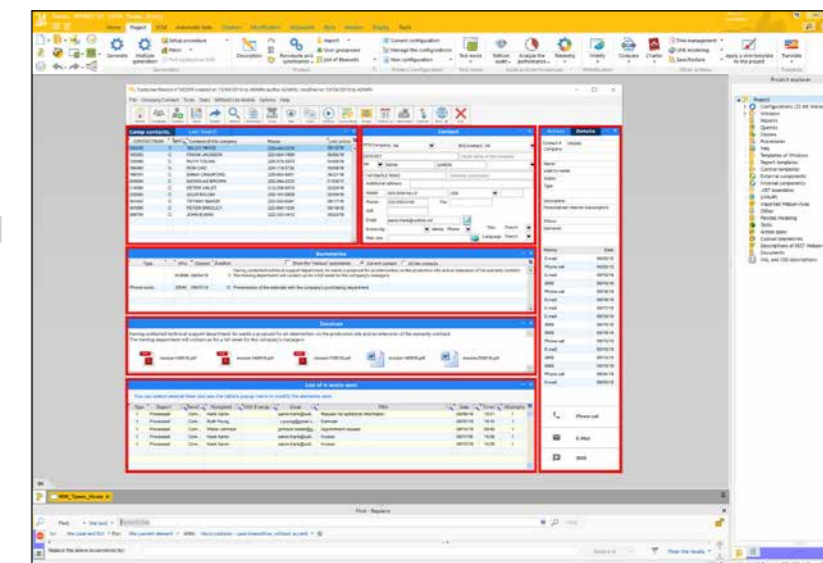
WINDEV benefits from the 180 common new features of version 24, and in particular from PDF A3, WEBDEV in WINDEV, the Business logic/GUI code splitting (MV method), changes in the environment, the new program documentation, User Groupware linked to the GDPR, SCM sharing, changes in the code editor and in the report editor, HFSQL, HFSQLDrive, support of Chorus/ Factor-X, etc...

Benefit provided by this new feature of version 24 :
Hundreds of new features for WINDEV in version 24

allowing the end user to detach and reposition parts of your windows.

And all this without any programming!
See new features 001 to 006.

Benefit provided by this new feature of version 24 :
Dock, undock



NEW CONTROLS

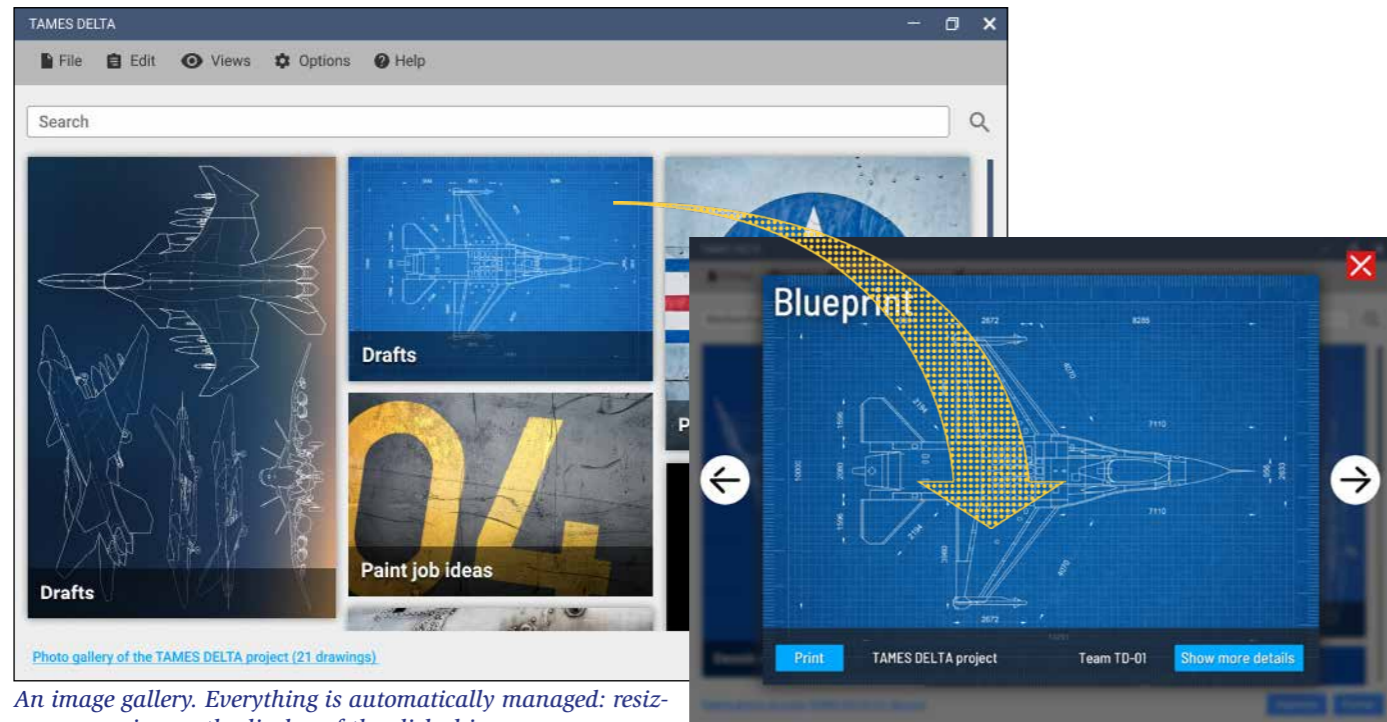
200 New feature WD WB WM DOCKABLE PANEL CONTROL

The new "Dockable Panel" control is a major new feature of version 24 for WINDEV.

This control allows you to create sophisticated interfaces,

201 New feature WD WB WM GALLERY CONTROL AVAILABLE IN WINDEV 24

The "Image Gallery" control is available in WINDEV 24. The Gallery control automatically displays and manages sets of photos or images. It is possible to browse through images; clicking on an image



An image gallery. Everything is automatically managed: resizing, path, display of the clicked image...

opens an enlarged view of the cell containing the image. No programming is needed, yet all customizations are possible in WLanguage, such as adding texts, prices, buttons...

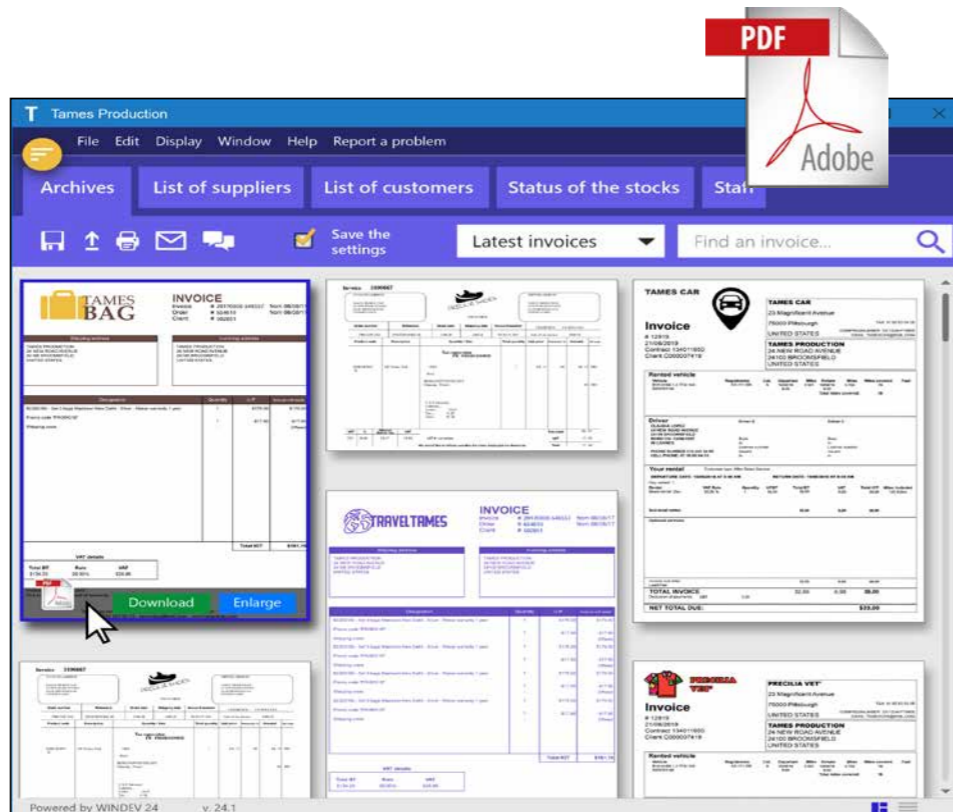
Benefit provided by this new feature of version 24 :
A powerful gallery

202 New feature WD WB WM THE GALLERY CONTROL ALSO DISPLAYS PDFS WITH WINDEV 24

In WINDEV, it is possible to display thumbnails of PDF documents in the Gallery control. This makes it possible to display a list of invoices in a gallery, for example.

Benefit provided by this new feature of version 24 :
A PDF gallery

A PDF gallery. Everything is automatically managed, there is nothing to program!



203 New feature WD WB WM EDIT CONTROL : THE HINT TEXT NOW GOES ABOVE THE CONTROL

In version 24, Edit controls offer a new layout : when entering information, the hint text can move over the control and become a caption.

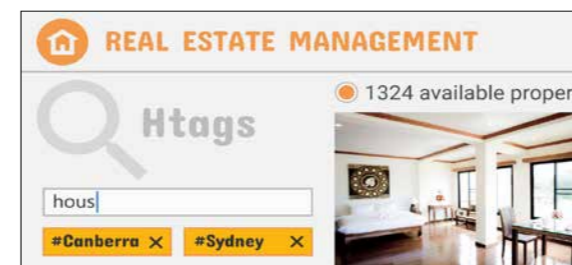
An option is available to remove the hint text once the user leaves the Edit control..



Example of an Edit control with "Hint text" that moves to the top when entering information

Benefit provided by this new feature of version 24 :
It goes up n' down

204 New feature WD WB WM TOKEN CONTROL ON WINDEV 24

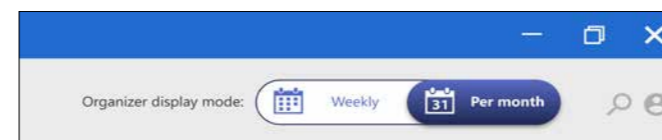


Token controls are more and more commonly used in interfaces.

It is now a standard control in WINDEV. see new features 007 to 011.

Benefit provided by this new feature of version 24 :
This control allows you to save hours of programming

205 New feature WD WB WM CLICKABLE SWITCH CONTROL



Clickable switch: the chosen option is clearly indicated

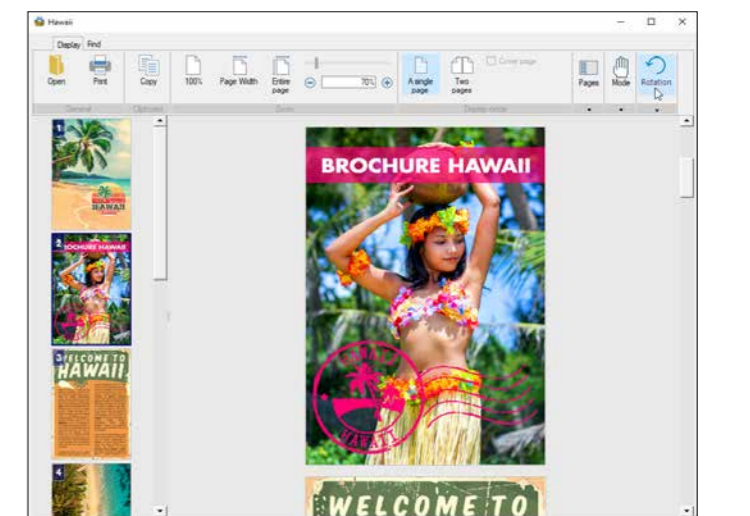
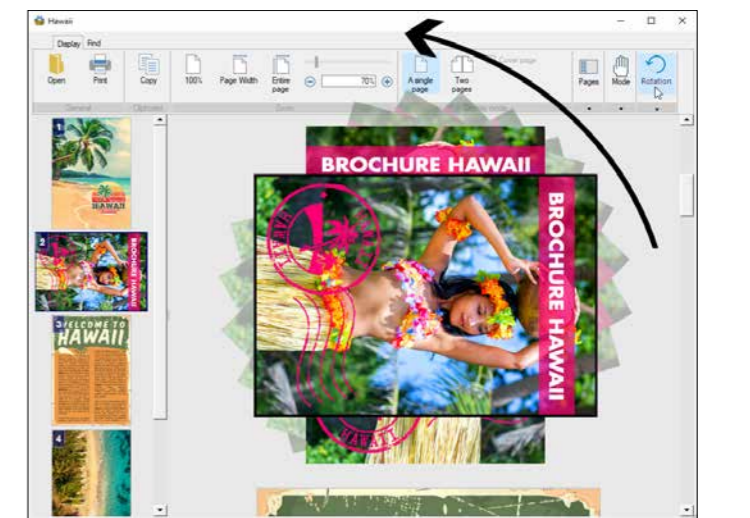
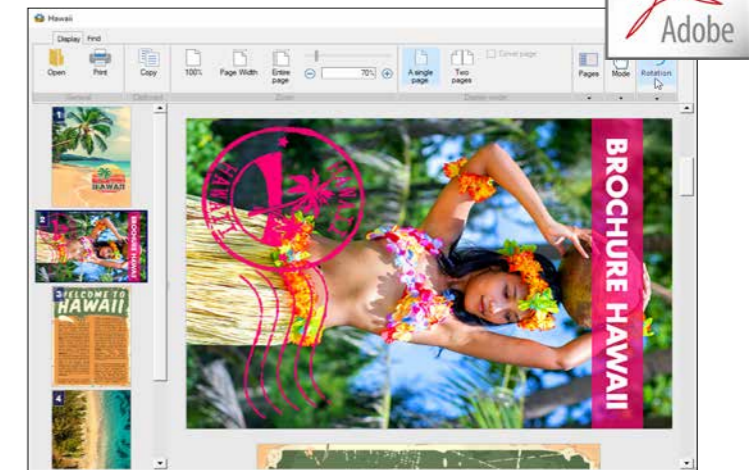
Clickable switch controls give a modern look to your interfaces.

Thanks to WINDEV 24, there is nothing special to program, just select the desired switch from the supplied library!

Benefit provided by this new feature of version 24 :
Version 24 switches things up.

206 New feature WD WB WM PDF READER CONTROL : ROTATION

The PDF Reader control now manages document rotation. An end user can change the orientation of one or more pages.



Benefit provided by this new feature of version 24 :
Useful for pages scanned upside down!

207 New feature WD WB WM STATIC CONTROLS: THERE'S ANIMATION NOW!

Static controls offer automatic animations : Scrolling and Flashing, with refresh rate and move rate settings.

Benefit provided by this new feature of version 24 :
Static, but not so static

208 New feature WD WB WM LOOPER: 3 NEW DISPLAY MODES

In version 24, the Looper controls offer 3 new display modes:

- Variable width and number of columns.
- Variable number of columns, centered.
- Fixed width and number of columns, centered.

The "Variable width and number of columns" mode makes it possible to use the entire available space at all times. When the end user enlarges the window, the displayed column(s) are enlarged (bottom and/or right) to occupy the space.

When the window is sufficiently enlarged, an additional column is automatically displayed.

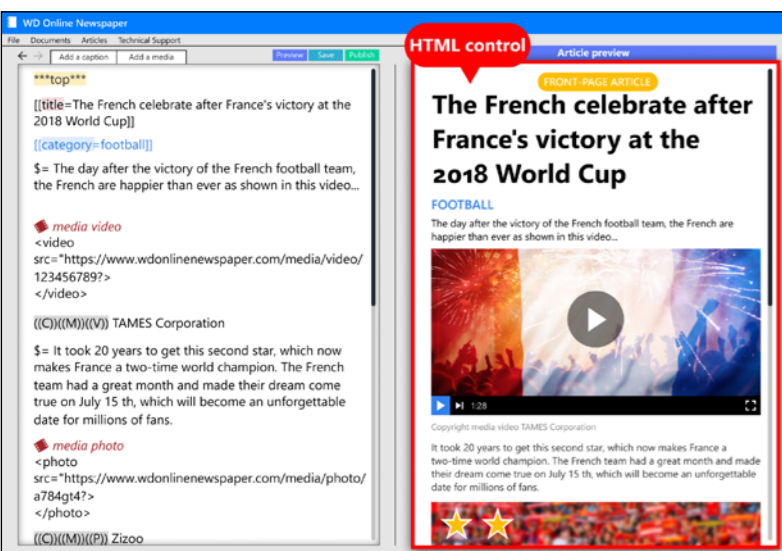
Benefit provided by this new feature of version 24 :
The Looper control is responsive!

209 New feature WD WB WM THE HTML CONTROL GETS A FRESH FACE!

The HTML control in WINDEV offers 2 modes in version 24 :

- the "classic" mode, which existed in the previous versions
- a "modern" mode that displays HTML content in a more sophisticated way, in the same way as a browser.

Benefit provided by this new feature of version 24 :
The HTML control is even more powerful



210 New feature WD WB WM SPELLING CHECKER IN EDIT CONTROLS

In version 24, spelling is automatically checked in Edit controls (in English) : there is no additional tool to install.

For other languages, simply download the corresponding dictionary, then use the `WLanguageDictionaryLoad` function to load the dictionary.



Spelling checker directly in the Edit control

Benefit provided by this new feature of version 24 :
It checks everywhere without installing anything else!

211 New feature WD WB WM OFFICE CONTROL RIBBON : ACCESS BY PROGRAMMING

The office control ribbon (Word Processing, Spreadsheet, PDF Reader, Image Editor, etc.) is easily customizable by programming.

It is easy to add your own tabs.

Benefit provided by this new feature of version 24 :
Customize the ribbon

212 New feature WD WB WM ORGANIZER CONTROL

The number of days displayed by the Organizer control can be specified down to a unit.

Benefit provided by this new feature of version 24 :
Precision is never a bad thing!

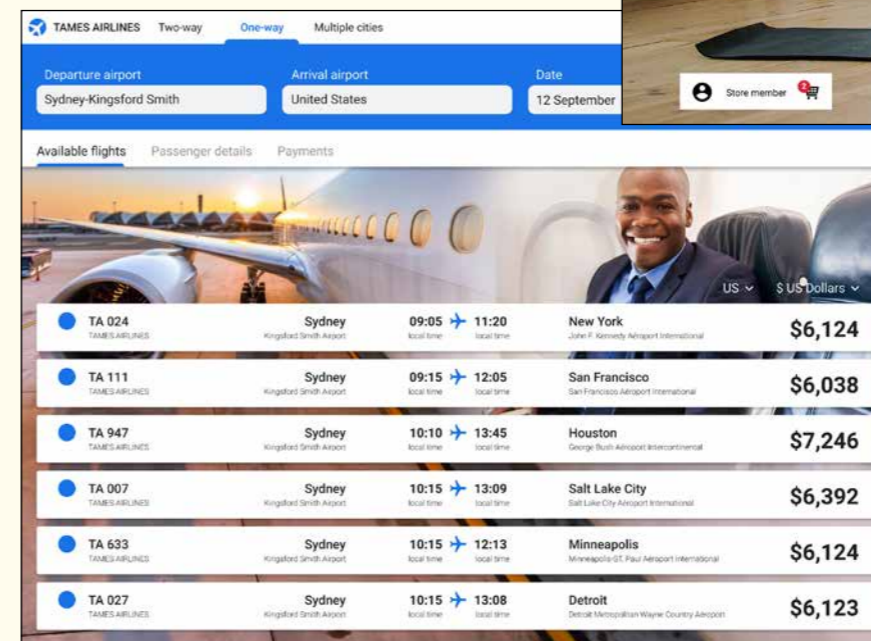
On the left, the HTML code; on the right, its execution

213 New feature WD WB WM 2 NEW SKIN TEMPLATES FOR WINDEV

The Material Design Blue 2 and Ninja skin templates are now available in version 24.

This offers you new possibilities for customization.

Benefit provided by this new feature of version 24 :
Express relooking!



Use these skin templates for your applications and programs as you like.

All the skin templates provided with WINDEV.

And remember : you can also create your own skin templates

WINDEV provides you with the necessary help to create superb UX.

214 New feature WD WB WM CONTROL TEMPLATE : BINDING ON CONTROLS ADDED BY OVERRIDE

A window can use a control template.

This model can be overridden: it is possible to add controls to the template in this window.

In version 24, it is possible to "bind" (perform a memory link) these added controls to the global variables of the control template.

Benefit provided by this new feature of version 24 :
Significant automation

215 New feature WD WB WM TABLE WITH BINDING: ALSO IN WRITING

Changes (and added/deleted rows) made in a table with memory binding are now applied in the linked array (Two-way binding).

Benefit provided by this new feature of version 24 :
Even more significant automation

216 New feature WD WB WM BINDING ON THE PDF CONTROL

In version 24, it is possible to define a file link between a PDF control and a Memo item (Binary Memo) containing a PDF file. It is also possible to assign the control directly by programming :

`MyPDFControl = MyFile.PDFSalesProposal`

It is no longer necessary to temporarily save the PDF file to disk, and therefore to "expose" it.

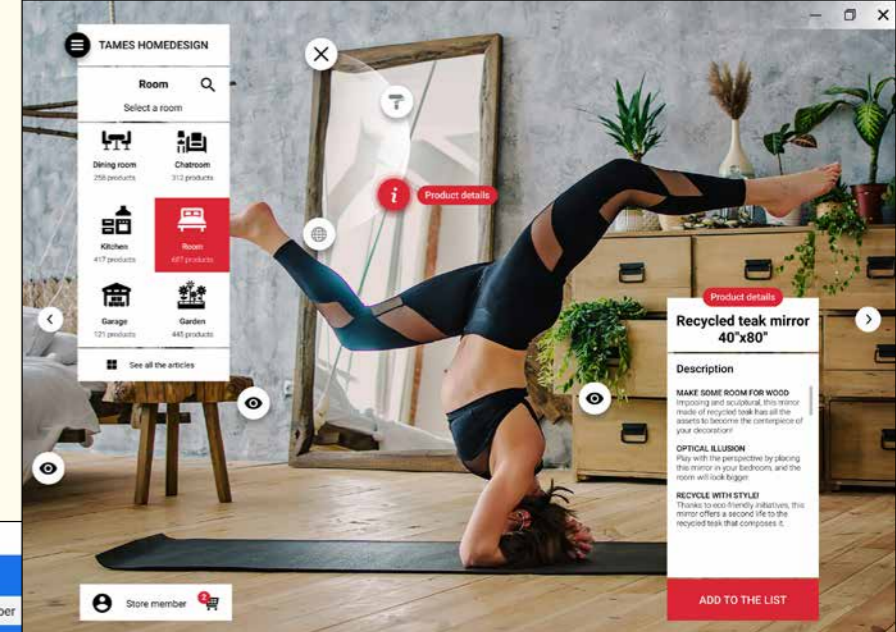
This is also an advantage for GDPR compliance, as it improves data confidentiality.

Benefit provided by this new feature of version 24 :
Less code and more security, again

217 New feature WD WB WM OTHER COMMON NEW CONTROL FEATURES

WINDEV 24 also benefits from the new features of the Word Processing control, the Spreadsheet control, UUID masks,...

See new features 015 to 035.
Benefit provided by this new feature of version 24 :
More increasingly powerful controls



HELP IN YOUR APPLICATIONS

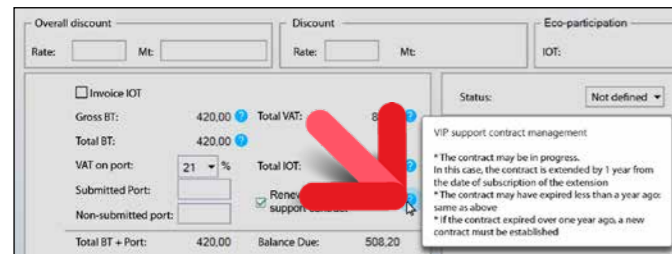
WINDEV offers several levels of help for the applications you distribute :

- launching the application's general help (HTML or PDF); called by F1.
- automatic display of a tooltip when hovering over an element.
- text displayed in the status bar (for compatibility); this is more of an information message than a help message.

In version 24, a new concept appears : a pictogram (several models available) appears next to the controls that offer contextual help.

This help can be generated automatically (via Business Rules), or entered manually.

218 New feature WD WB WM A NEW TYPE OF HELP IN YOUR APPLICATIONS: THE "IBR PICTO"



Example of IBR Picto and its tooltip, in its simplest version!

The behavior of tooltips in your applications is improved in version 24.

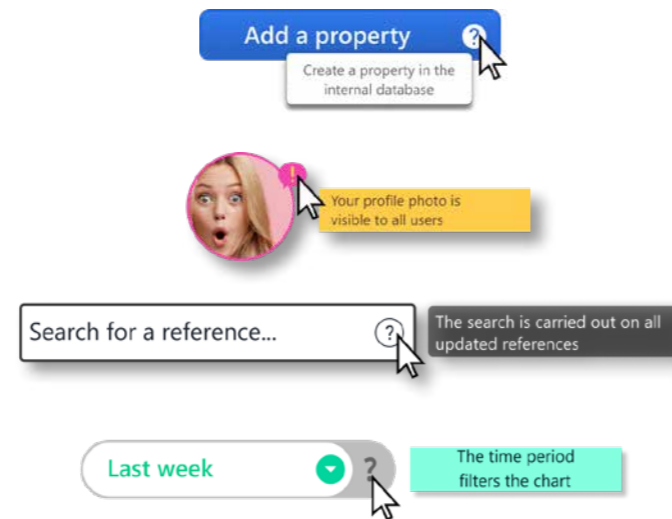
Usually, a tooltip is displayed when hovering over a control. In version 24, it is possible to make a picto automatically appear next to each control that offers a tooltip.

It is also possible to request that tooltips are automatically filled by the distributable Business Rules (non-confidential rules) associated with the control.

When the end user clicks on the picto, the tooltip appears.

The picto is customizable.

If the content of the help is too large, only the beginning appears. The user must then click on the "... " at the end of the text.



4 examples of IBR pictos, and their tooltips

Benefit provided by this new feature of version 24 :
More user-friendly help

219 New feature WD WB WM AUTOMATIC FEEDING OF ON-LINE HELP BY BUSINESS RULES

WINDEV allows entering Business Rules from the editor (see new feature 053).

A Business Rule can be simple (for example: Total = Sub Total + Taxes) or can be complex, such as the details of a customs duty calculation on several pages.

When a business rule is associated with a control and the business rule is distributable (it is not confidential), the IBR picto is automatically displayed next to the control, and the user has access to the Business Rule.

It is possible to disable this mechanism.

The set of Business Rules is also generated as a PDF that can be viewed from the "?" menu of your applications.

Benefit provided by this new feature of version 24 :
A useful aid for the end user

ENVIRONMENT

220 New feature WD WB WM CREATING A PROJECT FROM AN EXAMPLE

It is possible to create a new project with a single click from one of the many examples delivered.

This means not having to create a project "from scratch".

Benefit provided by this new feature of version 24 :
Starting from a base

221 New feature WD WB WM CREATING EXES WITHOUT DOING ANY GOS : UH-OH, THAT'S NOT GOOD!

A team member creates an EXE without even doing a GO? Hmmm...

A window asks them if it's really good to do such a thing... They should (at least) immediately do a GO to make up for it!



Whoever sees this icon knows he hasn't done a single GO since the compilation...

It is even strongly recommended to create a set of automatic tests and to launch them before any deployment...

Benefit provided by this new feature of version 24 :
Avoid distributing a module that has never been launched

WINDOW EDITOR

222 New feature WD WB WM CONTROL STYLE SELECTION: ALL THE SKIN TEMPLATES OF THE PROJECT

Before version 24, when selecting a style for a control, only the styles of the skin template associated with the window were proposed.

In version 24, when the project uses several skin templates, all of their styles are proposed.

This is particularly useful when a window has no associated skin templates.

Benefit provided by this new feature of version 24 :
More complete range of styles

223 New feature WD WB WM POPUP MENU: THEY CAN BE COPIED / PASTED

Another useful new feature is that it is now possible to copy/paste popup menus.

Benefit provided by this new feature of version 24 :
More time saved



WINDEV 24 WEBDEV 24 WINDEV Mobile 24 new features



WINDEV 24 WEBDEV 24 WINDEV Mobile 24 new features

CODE EDITOR

224 New feature WD WB WM COMMON NEW FEATURES

The WINDEV code editor obviously benefits from the common innovations of the code editor : HTML link in comments, invisible processes, help on multiple syntaxes, ... See new features 098 to 104.

Benefit provided by this new feature of version 24 :
New features that prove themselves useful day by day

225 New feature WD WB WM F2 ON NAME OF PLANE

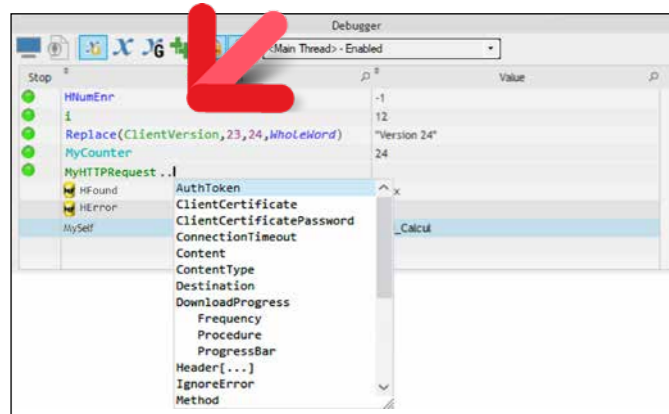
Another useful new feature in the code editor of WINDEV 24: pressing the F2 key on the name of a plane takes you to that plane (by opening the window if necessary).

Benefit provided by this new feature of version 24 :
It doesn't fly but it's the right plane

DEBUGGER

226 New feature WD WB WM EXPRESSIONS: SYNTAX HIGHLIGHTING AND SUPPORT

In version 24, the variable display area of the debugger benefits from syntax highlighting, and full support of the code editor.



Syntax highlighting can be applied to the lines of code in the debugger!

Benefit provided by this new feature of version 24 :
Syntax highlighting makes code easier to read

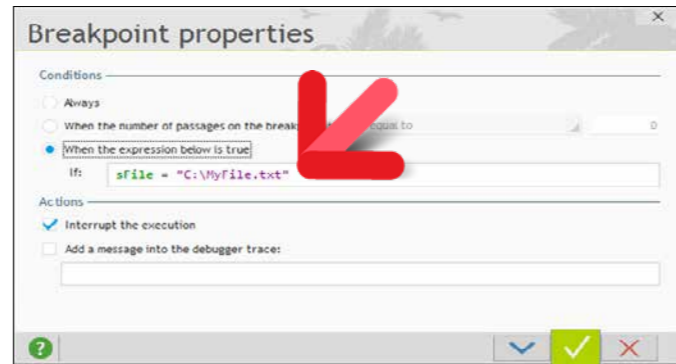
227 New feature WD WB WM CONDITIONAL BREAKPOINT

In version 24, the debugger allows setting conditional breakpoints.

A conditional breakpoint is triggered when an expression is true.

For example :

```
MyArray.Count > 0
```



Benefit provided by this new feature of version 24 :
Conditional breakpoints without modifying the code

AAF END USER: COMPUTER CHANGE ASSISTANCE

228 New feature WD WB WM END USERS EXPORT AND IMPORT THEIR CUSTOMIZATIONS : REPORTS, QUERIES, AUTOMATIONS, NOTES, ...



As you know, an end user of your software can create automations (automatic button validation for example), pre-fill controls, and add Custom-Notes in the windows and reports of your applications.

When updating your software, these elements are automatically kept.

In version 24, a new option appears in the "?" menu : export / import customizations. Before changing to another computer, end users export and save the file (or send it to themselves by email).

After installing their new computer, end users retrieve their file, import it and thus find all their automations, notes, queries, custom reports...

Benefit provided by this new feature of version 24 :
End users keep the automations they created

229 New feature WD WB WM INSTALLING CUSTOMIZATIONS ON COMPUTERS

The mechanism of customization via AAFs makes applications significantly more user-friendly, and improves user efficiency, eliminating hundreds or thousands of entries and clicks per day :

- an accountant will not have to re-enter the current date or a batch of transactions,
- statistical ranges will be filled in automatically,
- specific references to a service to be re-entered in each file will be proposed in the input history,
- experienced users will have created queries that are useful to the company,
- these same users will have created reports to be given to their service providers when the goods are taken away (for example),
- insert company-specific notes to assist in the use of complex or rarely used windows,
- etc, etc...

And all this without using development resources, without requesting a waiting period, taking no time from the IT department planning, without generating any costs from the IT service provider...

Thanks to the previous feature, it is possible to easily distribute a set of predefined automations on different computers :

- Automatic button validations
- Pre-entered values,
- Custom-notes,
- Custom queries,
- Custom reports,
- ...

Benefit provided by this new feature of version 24 :
Allows end users of a service or company to perform better

JAVA



230 New feature WD WB WM JAVA 9

WINDEV 24 supports Java 9.

Benefit provided by this new feature of version 24 :
Stay up to date!

231 New feature WD WB WM CLASS MEMBERS: "MAPPING" ATTRIBUTE SUPPORTED

The Mapping attribute allows defining the item to which a class member is linked. When executing `FileToMemory` and `MemoryToFile` all class members that have this attribute will be automatically filled with the contents of the items.

Benefit provided by this new feature of version 24 :
A relation attribute

232 New feature WD WB WM ..PROCESS PROPERTY

`..Process`, a powerful property, allows you to modify the behavior of controls by programming.

Benefit provided by this new feature of version 24 :
It's ok if you need some time to process it

A reminder of the standards supported by WINDEV

IoT
Blockchain
GDPR
ActiveX
API
XML
LDAP
FTP/FTPS
OPC
OAuth
iOS
Android
Windows
Mac
J2EE
PDF
RFID
MQTT
OPC
CSS
Bluetooth
RS 232
USB
SSL UDP
socket
DLL
https
SMTP
POP
Imap
SaaS
REST & SOAP Webservices
Ajax
All the bar codes
QR Code
All Office documents
All image formats
All video formats
Encryption: AES256, DES, 3DES, ...
Zip, RAR, CAB, Z2, GZIP, TAR, TAR.GZ, ...
iCalendar
Twain
XIO, CM 11, CMI5, DLNA
SNMP
TAPI
...

Databases supported by WINDEV

HFSQL, Oracle, SQL Server, AS/400, DB2, MySQL, PostgreSQL, SQLite, xBase, MariaDB, MongoDB, Informix, HBase, Memcached, Progress, Sybase, Azure, ...

233 New feature WD WB WM NEW WLANGUAGE TYPES

Several new WLanguage types appear in Java, in particular

- Control
- Point
- Rectangle.

Benefit provided by this new feature of version 24 :
Totally our type

234 New feature WD WB WM 12 NEW WLANGUAGE FUNCTIONS

WLanguage offers 12 new functions and 7 new constants (to discover on the online help) for Java.

AddReference	LeapYear	DateTimeToEpoch	Tomorrow
GetCountryISO	GetCountryName	EpochToDateTime	Yesterday
InsertReference	ArrayAddReference	ArrayInsertReference	TraceDeleteAll

LINUX



235 New feature WD WB WM BIG DATA : REDIS

Redis is a Big Data "key/value" database.

Redis is accessible from Linux applications compiled with WINDEV 24.

The **Redis** functions in WLanguage provide native access to the features of this database.

Benefit provided by this new feature of version 24 :
Big Data!

236 New feature WD WB WM KEY FUNCTIONS

The **Key** functions are now available in WINDEV Linux.

Benefit provided by this new feature of version 24 :
Improves cross-platforming

New feature WD WB WM

237 to 294 58 NEW FUNCTIONS 67 NEW LINUX CONSTANTS FOR WINDEV

WLanguage offers 58 new functions and 67 new constants (to discover on the online help) for Linux.

AddReference	ProfilerStart	ProfilerEnd	LeapYear
KeyCalcActivationKey	KeyCompareKey	KeyGenerateInitialKey	KeyGetIdentifier
Tomorrow	DocChangeZOrder	GetCountryISO	GetCountryName
GetUUID	GetUUIDz56	dPolyline	fLoadResource
gFontStrikeout	gpwNone	gpwDefault	gpwFindUser
gpwSupervisor	gpwRegisteredUsers	gpwVisitor	HExportCSV
HExportXLS	Yesterday	InsertReference	MongoAdd
MongoFind	MongoConnection.Constructor	MongoCreate	MongoCreateCollection
MongoExecuteCommand	MongoGridFS.Constructor	MongoGridFSSendFile	MongoGridFSListFile
MongoGridFSGetFile	MongoGridFSGetFileById	MongoGridFSGetFileInfo	MongoGridFSDeleteFile
MongoGridFSDeleteFileById	MongoInfo	MongoModifyAll	MongoModifyOne
MongoDeleteDatabase	MongoDeleteCollection	MongoDeleteAll	MongoDeleteOne
RedisSubscribe	RedisConnect	RedisUnsubscribe	RedisExecuteCommand
RedisPipelineAdd	RedisPipelineReset	RedisPipelineGet	RedisPublish
SOAPToHTTP	ArrayAddReference	ArrayInsertReference	TraceDeleteAll

DOTNET

295 New feature WD WB WM ASSEMBLY SELECTION INTERFACE

In the environment, selecting DotNet assemblies is much faster in version 24.

Benefit provided by this new feature of version 24 :
Faster operations

296 New feature WD WB WM PROFILING OF DOTNET CALLS

The profiler allows you to analyze the performance of sections of code.

In WINDEV version 24, the profiler counts and lists the duration of DotNet calls in the report.

Benefit provided by this new feature of version 24 :
Analyze the speed of your DotNet calls

WLANGUAGE

297 New feature WD WB WM COMMON NEW FEATURES

The language is the cornerstone of the development.

WLanguage is enriched in WINDEV version 24.

It benefits from common new features and numerous improvements: extension of prefixed syntax, new syntaxes, visualization of http request flow, certificate in the WDL library, OAuth and OpenID library, etc...

See new features 109 to 149.

Benefit provided by this new feature of version 24 :
Ever-increasing power in WLanguage

298 New feature WD WB WM LOOPER : WHICH BREAK DID THE USER CLICK ON?

In version 24, it is possible to know the break on which the end user has clicked!

This allows you to program the appropriate process. For example, if the end user clicks on a country break, you can display additional information about the country: turnover, number of customers, ...

Benefit provided by this new feature of version 24 :
Finer programming

299 New feature WD WB WM CONSOLE EXE

A new type of configuration allows you to create Console EXEs.



Unfortunately, using WINDEV 24, even for extended periods of time, does not have any effect on our muscles. Going to the gym on a regular basis is still necessary...

308 NEW SYNTAXES IN PREFIXED INPUT

EDIT CONTROL TokenAdd AssistedInputAdd AssistedInputClose AssistedInputOpen AssistedInputConfigure AssistedInputDeleteAll TokenInsert TokenOccurrence TokenDelete TokenDeleteAll	EncrustColor InvertColor ModifyLightness ModifyOpacity ModifySaturation ModifyHue ModifyHSL Shadow Resize Rotation SaveBMP SaveGIF SaveJPEG SavePNG HorizontalSymmetry VerticalSymmetry	EMAILOUTLOOKSESSION VARIABLE AddFolder ChangeFolder CurrentFolder CloseSession FolderList Update NbMessage OpenSession GetAll DeleteFolder	MONGO DATABASE VARIABLE CreateCollection RunCommand	ExecuteXPath Save	NoSpace Truncate
WORD PROCESSING CONTROL ChangeZOrder	SavePNG	EMAILPOP3SESSION VARIABLE CloseSession NbMessage OpenSession GetAll	MQTTSESSION VARIABLE Subscriber Connect Disconnect Unsubscribe UnsubscribeAll Publish	XMLNODE VARIABLE FindNamespaceByName FindNamespaceByURI ValidNode	UNICODE STRING VARIABLE StartsWith Split EndsWith Formats Increment Insert Reverse Count Delete ToArray ToUTF8 Complete
BTLE CHARACTERISTIC VARIABLE ChangeOfValue WriteValue ReadValue GetAllCharacteristics GetADescriptor	DocFRAGMENT VARIABLE Add Insert InsertTable Search	EMAILSMTPSESSION VARIABLE CloseSession OpenSession	SFCONNECTION VARIABLE Add ForwardQuery Connect ConvertLead Disconnect ExecuteQuery ExecuteProcess Merge Read Modify Search SeekModified SeekDeleted Restore Delete ClearRecycleBin	ZIPARCHIVE VARIABLE AddFile AddDirectory CreateExe Multi ExtractPath ExtractFile ExtractFileList ExtractAll Close CurrentFile FileInfo FileList NbNecessaryPart Open OpenCAB OpenRAR Merge DeleteFile DeleteFileList DeleteAll FileSize	Contains Right ExtractString ExtractLine Left LineToPosition Upper Middle Lower WordOccurrence WordToArray Position PositionOccurrence PositionToLine Replace NoAccent NoCharacter NoRightCharacter NoLeftCharacter NoSpace Truncate ToAnsi
BTLEDEVICE VARIABLE Connect Disconnect ConnectionStatus GetAllServices GetAService	DOCUMENT VARIABLE Add StartModification Close EndModification Print Insert InsertTable Search Redo RedoOccurrence Replace Save Undo UndoOccurrence UndoRedoDeleteAll ToHTML ToImage ToPDF ToText	EMAILATTACH VARIABLE LoadAttachment SaveAttachment	FBSESSION VARIABLE Close Open GetUserInformation Request	ZIPARCHIVEDFILE VARIABLE AddFile	DATE VARIABLE ToString ToInteger ToDay ToDayInAlpha ToMonthInAlpha ToWeekNumber
BTLEDESCRIPTOR VARIABLE WriteValue ReadValue	Insert Search Redo	EMAILSMTPSESSION VARIABLE Request	AUTOMATIC EVENT AND MANUAL EVENT VARIABLE Wait Close Open	BUFFER VARIABLE ToInteger ToHexa ToReal	DATE TIME VARIABLE ToEpoch ToReal ToString ToInteger ToDay ToDayInAlpha ToMonthInAlpha ToWeekNumber ToString
BTLESERVICE VARIABLE GetACharacteristic	RedoOccurrence Replace Save Undo UndoOccurrence UndoRedoDeleteAll ToHTML ToImage ToPDF ToText	GGLCONNECTION VARIABLE Connect Disconnect Write UploadDocument ListOrganizer ListAlbum ListComment ListContact ListContactByRequest DocumentList ListContactGroup ListPhotos TagList GetCalendar GetAlbum GetDocument FillOrganizer FillCalendarByRequest FillAlbum FillPhoto Request Delete	WSREQUEST VARIABLE AddSAMLAssertion AddAttribute AddXMLSignature	ANSISTRING VARIABLE ToUnicode StartsWith Split EndsWith Format Increment Insert Reverse Count Delete ToArray ToUTF8 Complete Contains Right ExtractString ExtractLine Left LineToPosition Upper Middle Lower WordOccurrence WordToArray Position PositionOccurrence PositionToLine Replace NoAccent NoCharacter NoRightCharacter NoLeftCharacter	DURATION VARIABLE ToString Array variable AddReference InsertReference Variant variable RAZ
CERTIFICATE VARIABLE OpenProperties	RedoOccurrence Replace Save Undo UndoOccurrence UndoRedoDeleteAll ToHTML ToImage ToPDF ToText	HTTPREQUEST VARIABLE CookieWrite CookieManage CookieRead CookieReset CookieGet CookieReplace Send	SSHSESSION VARIABLE ConnectShell DisconnectShell Write Read	UPNPDEVICE VARIABLE MediaStop MediaPlay MediaOpen MediaPause ModifyContrast ModifyLightness ModifyMute ModifySharpness ModifyVolume GetContrast GetBrightness GetMute GetSharpness GetVolume	
IMAGE VARIABLE Copy DominantImageColor StartDrawing Split EndDrawing Merge Halo	RedoOccurrence Replace Save Undo UndoOccurrence UndoRedoDeleteAll ToHTML ToImage ToPDF ToText	UPNPREQUEST VARIABLE RunAction	XLSDOCUMENT VARIABLE AddWorksheet Close Save DeleteWorksheet	XMLDOCUMENT VARIABLE BuildString ValidDocument	
	EMAILIMAPSESSION VARIABLE AddFolder ChangeFolder Expunge CurrentFolder CloseSession FolderList NbMessage OpenSession GetAll DeleteFolder	UPNPSERVICE VARIABLE RunAction			
	EMAILNOTESSESSION VARIABLE NbMessage OpenSession GetAll				

A Console EXE has no interface (no window). This type of EXE mainly allows you to create batch procedures, taking advantage of all the power of WLanguage. The new WLanguage `Console` function family allows you to read, write, send errors in standard flows (STDIN, STDOUT, STDERR).

Benefit provided by this new feature of version 24 :
Console yourself by creating powerful batches in WLanguage

300 73 NEW CONSTANTS

73 new WLanguage constants are available in version 24 :

orgCustomNbDay	apiUnsignedInt_4	apiUnsignedInt_8	docZOrderBackground
docZOrderForward	docZOrderFront	docZOrderBackward	docMulticolumnNone
docMulticolumnIdentical	docMulticolumnVariable	docColumnBreak	docLineBreak
docPageBreak	docParagraphBreak	aafOgiEditAptContent	gpwConnection
gpwFacebook	gpwGoogle	gpwMicrosoft	gpwSalesforce
gpwYahoo	grPyramid	guidRough256	HA_MURMUR_1
HA_MURMUR_2	HA_MURMUR_2_64A	HA_MURMUR_2_64B	HA_MURMUR_2_A
HA_MURMUR_2_ALIGNED	HA_MURMUR_2_BIG_ENDIAN	HA_MURMUR_3_128_X64	HA_MURMUR_3_128_X86
HA_MURMUR_3_32	hCryptAES128	hExpNoItemName	hItemJSON
hItemUUID128	hItemUUID128Auto	hItemUUID256	hItemUUID256Auto
httpTraceDataSent	httpTraceHeaderSent	maskUUID128	maskUUID128WithBrace
maskUUID128Raw	maskUUID256	Nil_UUID	Nil_UUID_256
odEchec	odOptionNone	odOptionMaxWindow	odOptionReadOnly
odOpenModified	odOpenNotModified	redisSubscribe	redisDisconnection
redisUnsubscribe	redisMessage	redisTypeBuffer	redisTypeInt
redisTypeError	redisTypeNil	redisTypeStatus	redisTypeArray
psheetLoadKeepPassword	trtAddToken	trtModificationColumnFilter	trtDeleteToken
typRangeSlider	versionLanguage	wlUUID	wlUUID_128
wlUUID_256	liBreakName		

Benefit provided by this new feature of version 24 :
More and more power for WLanguage

301 13 NEW TYPES

13 new types of variables are available in WLanguage :

Chrono	TokenCollection	docFormatColumn	docFormatMulticolumn
Token	JSON	NotificationCategory	OpenIDIdentity
OpenIDParameters	redisConnection	redisResponse	CriticalSection
UUID			

Benefit provided by this new feature of version 24 :
More and more power for WLanguage

302 5 NEW PROPERTIES

5 new WLanguage properties are available for WINDEV.

DisplayBookmarks	Displays or not the bookmarks in a Word Processing control.
Token	Allows managing the token array of an Edit control.
TokenEnabled	Indicates whether or not the Edit control allows tokens.
TokenAllowDuplicate	Indicates whether it is possible to enter the same token twice.
TokenListSeparator	Indicates the separators that trigger the creation of a new token during input.

Benefit provided by this new feature of version 24 :
More and more power for WLanguage

New feature WD WB WM

303 to 610 308 NEW SYNTAXES IN PREFIXED INPUT

Prefixed syntax, which appeared and became very popular in version 23, is now supported by a very large number of additional functions.

For example : `mystring.ExtractString()`
`myarchive.ExtractFile()`

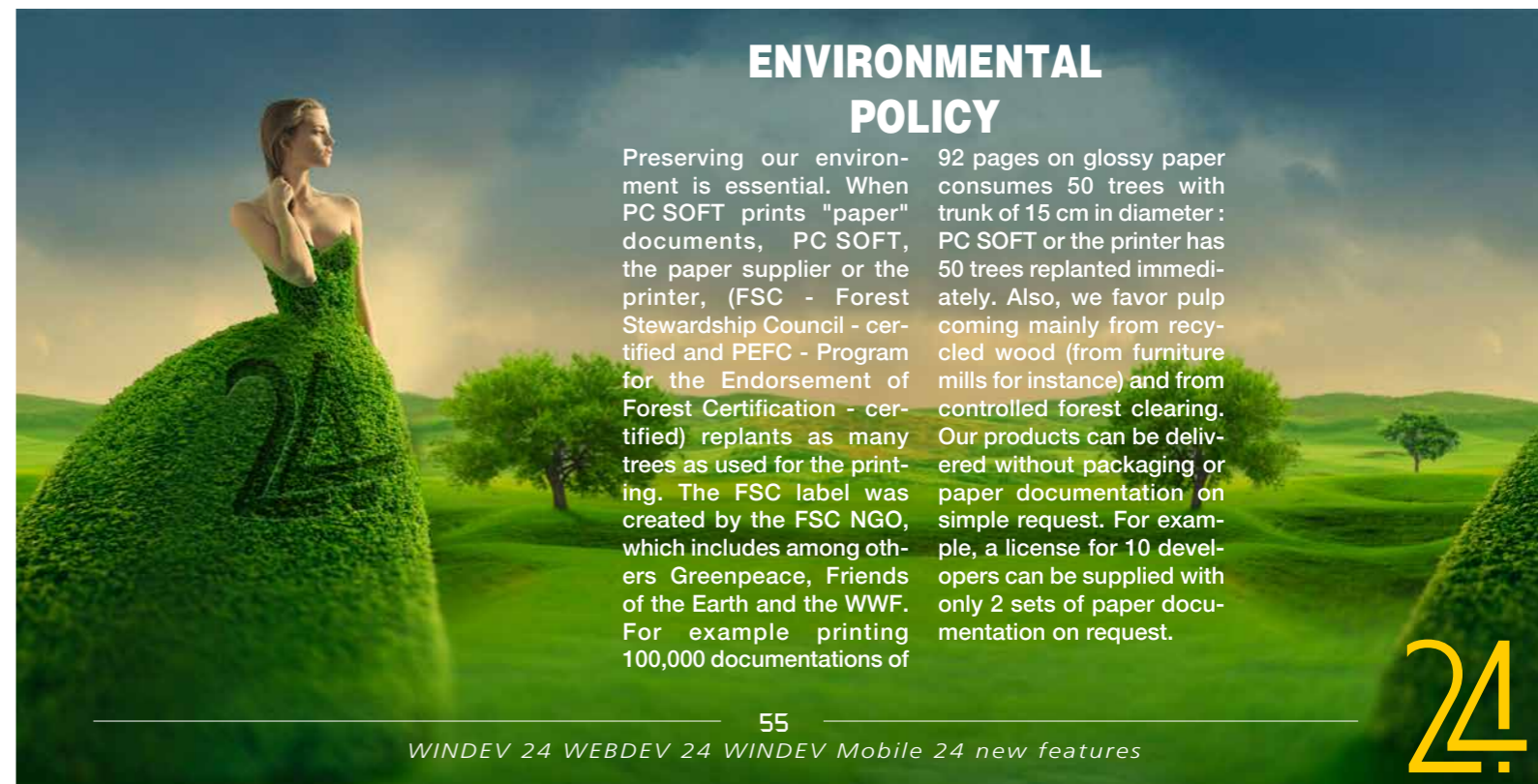
Reading and developing code is made even easier. See the list of supported new syntaxes on the opposite page.

Benefit provided by this new feature of version 24 :
Take stock of your (function) calls

ENVIRONMENTAL POLICY

Preserving our environment is essential. When PC SOFT prints "paper" documents, PC SOFT, the paper supplier or the printer, (FSC - Forest Stewardship Council - certified and PEFC - Program for the Endorsement of Forest Certification - certified) replants as many trees as used for the printing. The FSC label was created by the FSC NGO, which includes among others Greenpeace, Friends of the Earth and the WWF. For example printing 100,000 documentations of

92 pages on glossy paper consumes 50 trees with trunk of 15 cm in diameter : PC SOFT or the printer has 50 trees replanted immediately. Also, we favor pulp coming mainly from recycled wood (from furniture mills for instance) and from controlled forest clearing. Our products can be delivered without packaging or paper documentation on simple request. For example, a license for 10 developers can be supplied with only 2 sets of paper documentation on request.



611 to 658 48 NEW WLANGUAGE FUNCTIONS ON WINDEV

48 new WLanguage functions are available for WINDEV

AddReference	Adds the reference of an object in an array.
LeapYear	Indicates whether the specified year is a leap year or not.
Tomorrow	Returns the date of the day following the current day or a given date.
DocChangeZOrder	Modifies the z-order of an Image or Text Area element in a DocX document.
GetCountryISO	Returns the ISO code of a country that corresponds to its name according to the ISO 3166-1 standard.
GetCountryName	Returns the name of a country that corresponds to its ISO code according to the ISO 3166-1 standard.
GetUUID	Returns a UUID.
GetUUID256	Returns a 256-bit UUID.
dPolyline	Draws a line composed of several segments.
fLoadResource	Load the content of a resource from a library.
GesturePointerType	Returns the type of pointer used on the device : finger, mouse or stylus.
gFontStrikeout	Builds a sequence of characters used to specify whether the text that follows the call to this function is struck out or not.
gpwAddAuthLogin	Adds a login button (Facebook, Google, Microsoft, etc.) in the login window or page.
gpwNone	Returns "NONE" when the framework is in English and "AUCUN" when the framework is in French.
gpwAuthLogin	Allows logging in with Facebook, Google, Microsoft, ... according to what has been added with gpwAddAuthLogin.
gpwDefault	Returns "DEFAULT" when the framework is in English and "DEFAULT" when the framework is in French.
gpwFindUser	Retrieves the characteristics of a user of the user groupware.
gpwSupervisor	Returns "Supervisor" when the framework is in English and "Superviseur" when the framework is in French.
gpwRegisteredUsers	Returns "Registered users" when the framework is in English and "Utilisateurs enregistrés" when the framework is in French.
gpwVisitor	Returns "Visitor (not connected)" when the framework is in English and "Visiteur (non connecté)" when the framework is in French.
grAddTimeData	Adds data at a precise moment in a time chart.
grRealTimeInterval	Sets the interval used to display a real-time chart.
HExportCSV	Exports the records found in a data file (HFSQL or OLE DB), a view or a query to a CSV file.
HExportXLS	Exports records from a data file (HFSQL or OLE DB), view

Yesterday	Returns the date of the day preceding the current day or a given date.
iSequencingAddXLS	Adds a print of XLS or XLSX document into a sequence of report prints.
iPrintXLS	Prints the current worksheet of a document in «xlsx» or «xls» format.
InsertReference	Adds the reference of an object at given position in a one-dimensional array.
ReaderPDFRotationPage	Rotates a page in the PDF Reader control
OpenIDReadIdentity	Extract the identity of a user contained in an AuthToken
OpenDocument	Opens a document in a new window by using the WINDEV editor adapted to the document (Word Processing, Spreadsheet, PDF Reader or Image Editor).
RedisSubscribe	Allows subscribing to a Redis channel.
RedisConnect	Forces opening the connection to a Redis server (or a Redis cluster).
RedisUnsubscribe	Allows deleting a subscription to a Redis channel.
RedisExecuteCommand	Executes a Redis command and retrieves its result.
RedisPipelineAdd	Adds a Redis command in a pipeline.
RedisPipelineReset	Allows ignoring the results of the execution of a Redis command that has been added by RedisPipelineAdd.
RedisPipelineGet	Retrieves the result of an executed Redis command that has been added by RedisPipelineAdd.
RedisPublish	Publishes/sends a message on a Redis channel.
EditAddToken	Adds a token into a token edit control.
EditInsertToken	Inserts a token into a token edit control.
EditTokenCount	Returns the number of tokens in a token edit control.
EditDeleteToken	Deletes a token from a token edit control.
EditDeleteAllToken	Deletes all the tokens from a token edit control.
SOAPToHTTP	Constructs an HTTP request from a Webservice method.
ArrayAddReference	Adds the reference of an object in an array.
ArrayInsertReference	Adds the reference of an object at given position in a one-dimensional array.
TraceDeleteAll	Clears the content of trace window opened in parallel with the current window.

WINDEV MOBILE



659 New feature WD WB WM BENEFIT FROM THE 180 NEW FEATURES OF VERSION 24



Version 24 offers 180 common new features. Of course, WINDEV Mobile 24 benefits from most of these 180 common new features, especially : sharing projects with WEBDEV, splitting business logic/GUI code (MV method), centralized management of project images, changes in the window editor, new interface of the analysis editor, online examples, SCM sharing, changes in the code editor, new prefixed WLanguage syntaxes, private and public key management, Webservice frame analysis,...

And version 24 of WINDEV Mobile also benefits from many new features specific to the mobile world.

NEW IOS/ANDROID COMMON FEATURES

660 New feature WD WB WM GALLERY CONTROL ON WINDEV MOBILE 24

The Image Gallery control is now available on WINDEV Mobile 24. This controls allows you to display an image gallery and to manage in a sophisticated way the routes and displays without programming. Clicks on images are automatically managed, and cells are enlarged. This Image Gallery control is also available on WINDEV and WEBDEV, and its behavior is identical in all 3 products. The portability of applications is thus improved. The display of the control adapts to the screen, the control is "Responsive". Images can be aligned in rows or columns, depending on

Each update to version 24 entitles you to 15 free technical support requests. In version 24, your teams benefit from the free technical support*!

NO WORRIES...

A UNIQUE SERVICE

FREE SUPPORT

(*during the release period of the version).

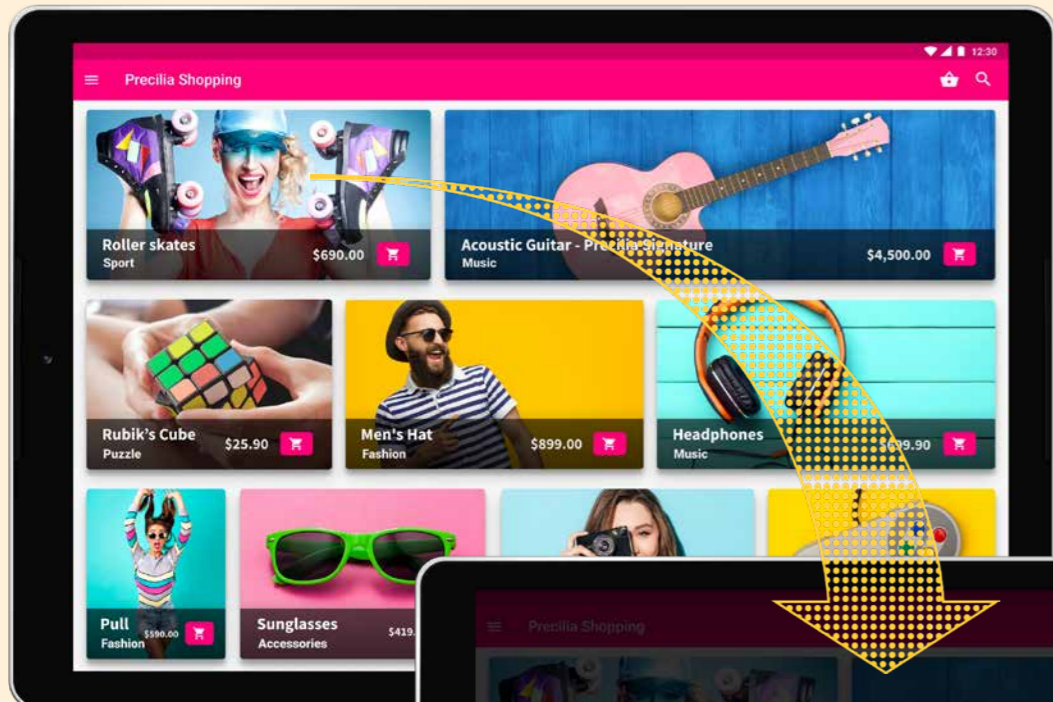
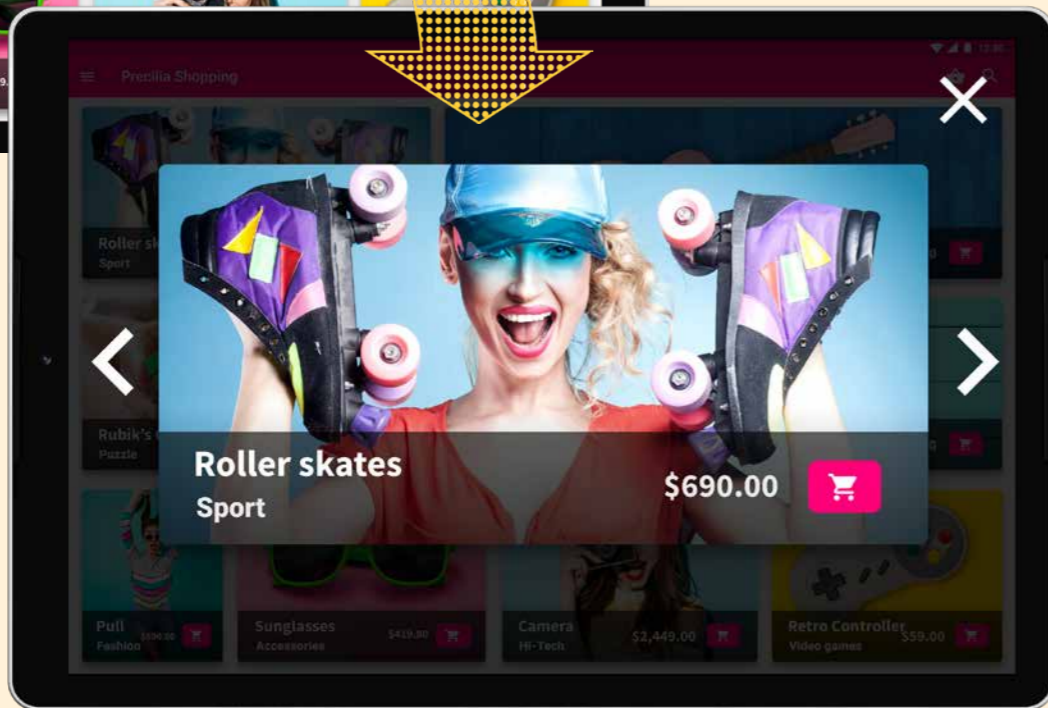


IMAGE GALLERY CONTROL ON MOBILE



FEATURE SUMMARY

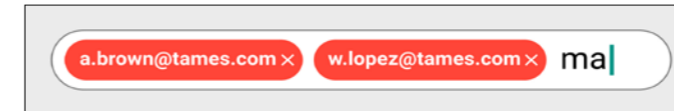
- Images can be arranged in rows or columns
- Automatic re-organization of images when resizing the window
- Pressing and holding on an image zooms in a new window.
- The Next and Back buttons are automatically managed
- Gestures are supported
- Animation at image change
- Everything is automatic, but it is possible to add controls and processes. For example, it is easy to display the price of an item and add a "Buy" button on it...
- The pull-to-refresh functionality is automatic
- The "Infinite Looper" option can be checked.
- ...

image format or screen orientation.

Benefit provided by this new feature of version 24 :
A powerful gallery

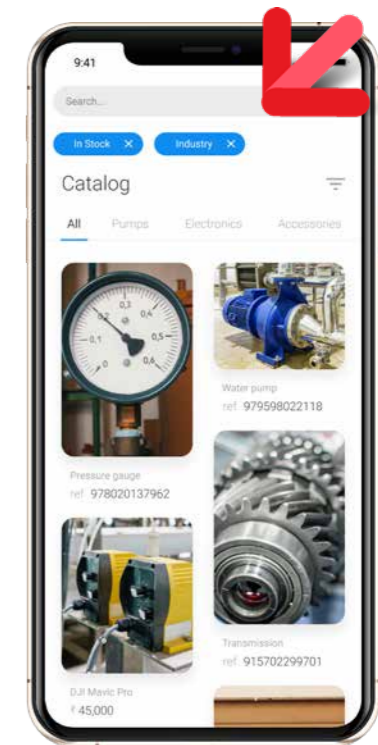
661 New feature WD WB WM TOKEN CONTROL ON WINDEV MOBILE 24

The new Token control is available in WINDEV Mobile 24. This type of control is used, for example, to view the choices made by the end user, or to manage an item entry list. See new feature <C1>007<C1>.</C1>



Entering a list of emails in a Token control

Benefit provided by this new feature of version 24 :
Accept this feature as a token of our gratitude

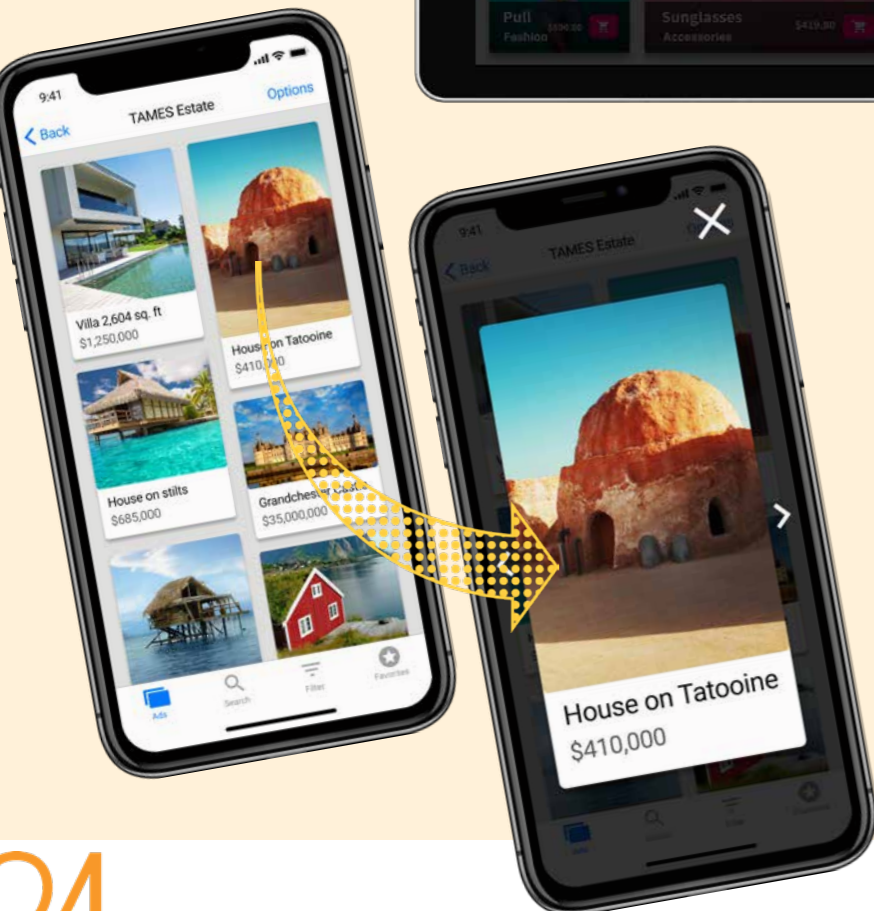
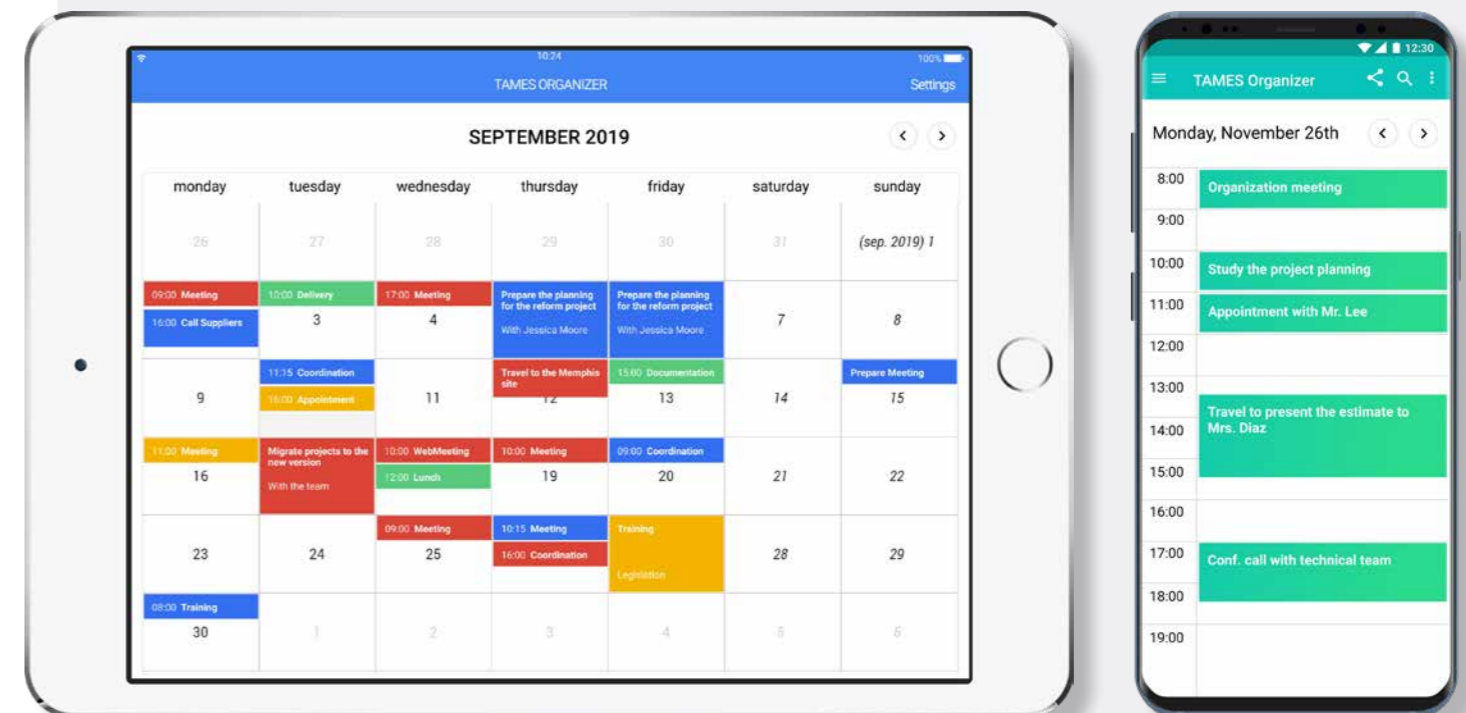


Example of a token list on a smartphone

662 New feature WD WB WM ORGANIZER CONTROL ON WINDEV MOBILE 24

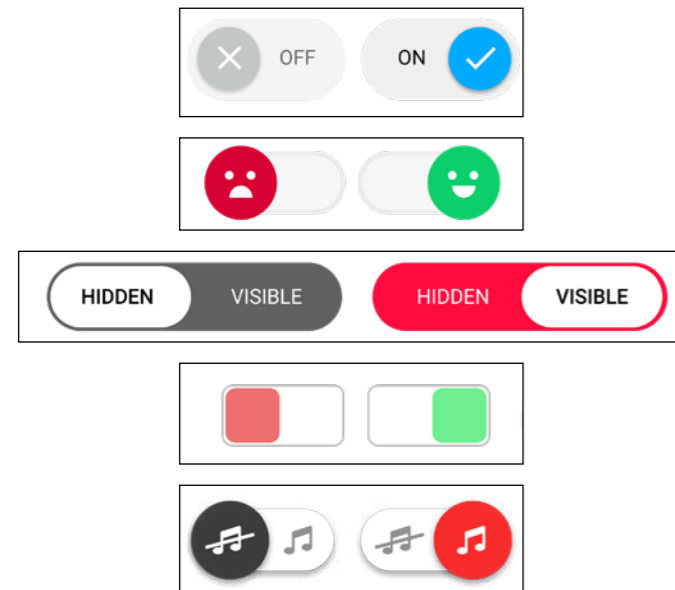
The Organizer Control is available on WINDEV Mobile 24. This control complements the Scheduler control (which is already available) in a smart way. An organizer allows you to manage the time schedule of a single person (a single resource). Displaying an organizer is therefore easier and more readable than displaying a scheduler, especially on a small screen. WINDEV Mobile manages all the uses of the control by the end user. Touch use by the end user is managed automatically, without programming: moving appointments, ... Of course, all features and behaviors are also accessible by programming.

Benefit provided by this new feature of version 24 :
You had the scheduler, now you have the organizer!

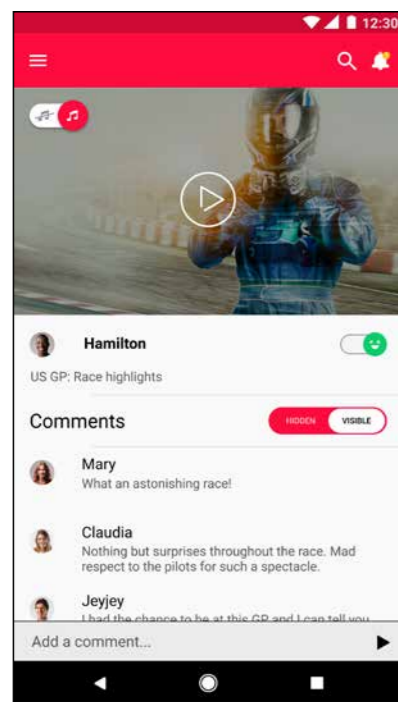


663 New feature WD WB WM SWITCH CONTROL

The Switch control, which is widely used in mobile interfaces, offers new features adapted to mobile devices. The end user uses it either by dragging the cursor or by tapping directly on the desired side.



5 examples of switch controls

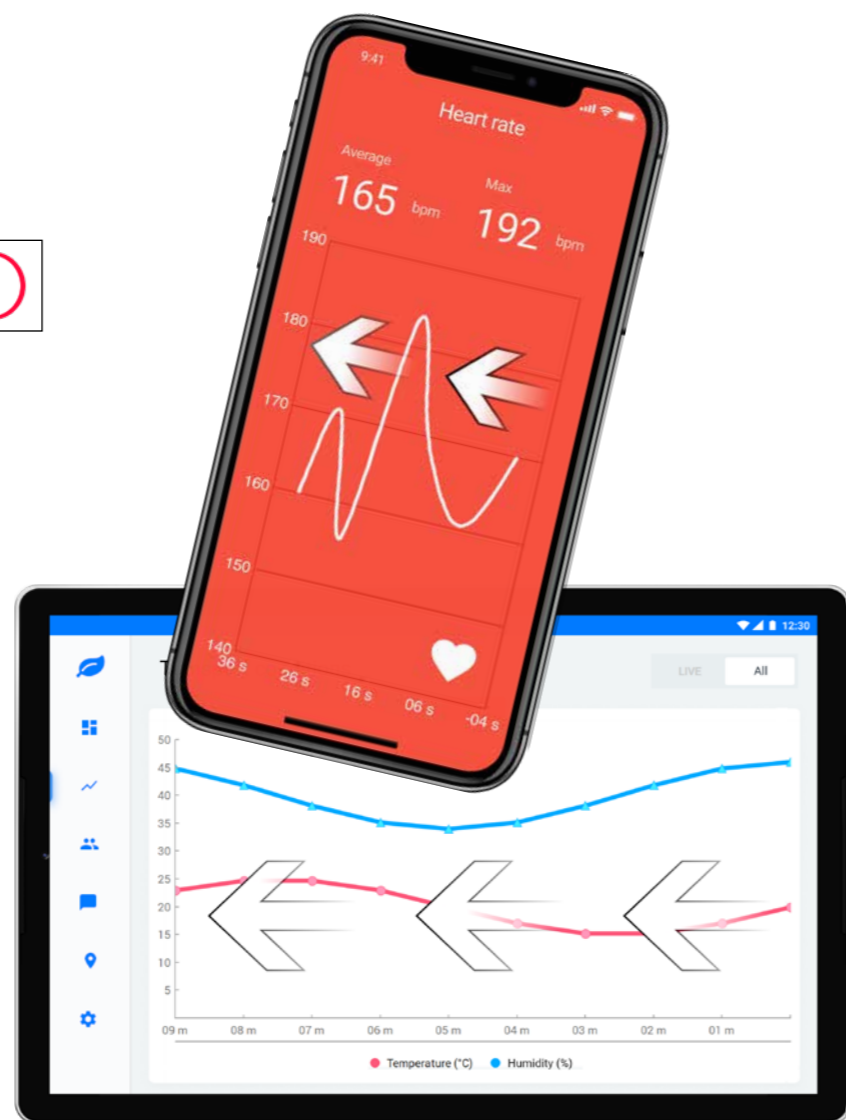


Switch control in a window

Benefit provided by this new feature of version 24 :
A popular control on mobile devices

664 New feature WD WB WM REAL-TIME CHART CONTROL

The Real-Time Chart control appears in WINDEV Mobile 24. This control automatically displays the chart of incoming data... continuously. The chart "slides" on the screen. See new feature 035.



Benefit provided by this new feature of version 24 :
The control moves automatically in real time

665 New feature WD WB WM ASSISTED INPUT IN YOUR APPS

In version 24, assisted input is available in your applications. The `AssistedInput` function family allows managing words or sentences proposed in the assistance.

Benefit provided by this new feature of version 24 :
Easier input

666 New feature WD WB WM CREATION OF SOAP & REST WEBSERVICES

In version 24, the creation of SOAP and REST Webservices is available in WINDEV Mobile. Don't switch from one environment to another to create your Webservices!

Benefit provided by this new feature of version 24 :
Easy block end

667 New feature WD WB WM DEFAULT SPLASH SCREEN) : A CONTEMPORARY LOOK

As you know, when you create a mobile application, a splash screen is added by default (it can be customized or deleted). In version 24, this splash screen offers a more modern look.



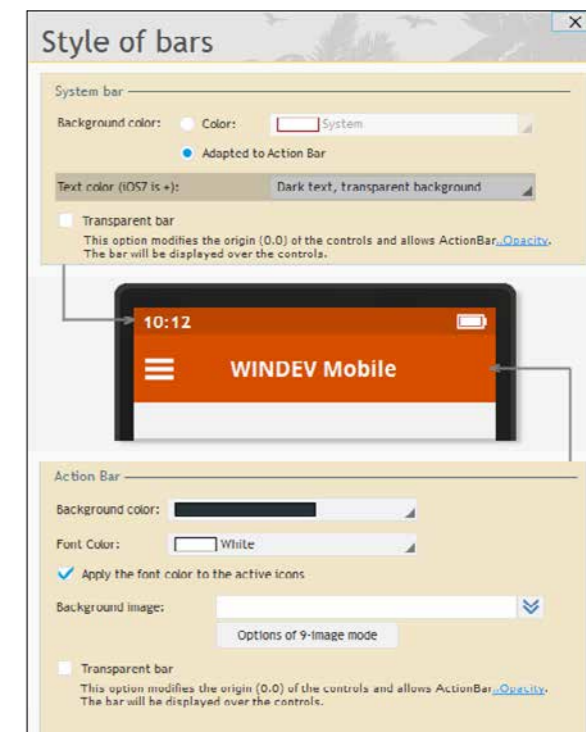
Modern splash screens for your apps

Benefit provided by this new feature of version 24 :
A fresh splash

668 New feature WD WB WM "7 TABS" OF THE ACTION BAR : A NEW LOOK!

When you develop applications, the "7 tabs" interface for creating the action bar is simplified and grouped together. When developing a cross-platform application, system-specific options are indicated.

For example, the "text color" option, which is available only on iOS, can be filled in, and the parameter will be ignored when running on Android.



The new 7 tab interface

Benefit provided by this new feature of version 24 :
Take action

669 New feature WD WB WM CROSS-PLATFORM: WIZARD TO CONVERT WINDEV APPLICATIONS INTO MOBILE APPLICATIONS



As you know, switching from WINDEV applications to Mobile is very easy. WINDEV Mobile reuses all the elements of WINDEV projects : Windows, Queries, Code... all of it without ever leaving the WINDEV editor (of course, it is necessary to have a WINDEV Mobile license). Sure, the windows must be resized so that they fit phone and tablet screens.

And there are also code adaptations to be made for features not supported on mobile phones, such as the absence of a mouse on a tablet! In version 24, an assistant analyses the code of your project and indicates precisely the lines of code to be modified.

Benefit provided by this new feature of version 24 :
A welcome help

HFSQLDRIVE YOUR DATA FILES ON THE CLOUD IN 3 CLICKS

670 New feature WD WB WM
**HSQLDRIVE :
YOUR DATA FILES
ACCESSIBLE ON THE CLOUD IN
3 CLICKS (MOBILE BACKEND)**



A recurring issue for professional mobile applications is "where can I store my data files so that they can be accessed from anywhere and by all users?". With WINDEV Mobile 24, the answer is simple : in the cloud with HFSQLDrive!
In version 24, it is possible to host your data files without hav-

ing to create a hosting platform. With HFSQLDrive, you create your account, get immediate login credentials, and install (or create) your data files in your secure cloud, all in 3 clicks. And within a minute, your applications can access this data in read and write mode.

HFSQLDrive offers a fixed, very attractive fee.

Note : a private cloud is also available, with PCSCloud.net. PCSCloud.net allows you, among other things, to define dedicated platforms, and to store and share your data files.

Benefit provided by this new feature of version 24 :
You were all waiting for it

671 New feature WD WB WM
**HFSQLDRIVE, MOBILE DATA FILES
IN THE CLOUD IN A FEW CLICKS**

No complicated settings. Just answer a few questions, and your data files will immediately be accessible in the cloud and usable by all authorized users of your applications.

Benefit provided by this new feature of version 24 :
Easy data hosting

672 New feature WD WB WM
HFSQLDRIVE: PRICING

HFSQLDrive pricing is based on simple criteria. Different fees apply according to various parameters :

- Volume of data stored
- Number of simultaneous users
- Reading/writing limit (in millions per day)

Backup options are also available.

An HFSQLDrive dashboard allows you to edit these options. If 100 or more users are accessing the data simultaneously,

note that it is preferable to subscribe to a dedicated platform on PCSCloud.net.

Benefit provided by this new feature of version 24 :
Simple and attractive fees

673 New feature WD WB WM
**HFSQLDRIVE:
FEATURES**

All HFSQL features are available:

- programming commands, of course
- queries
- control center
- user account creation
- rights management
- automatic modifications
- ...

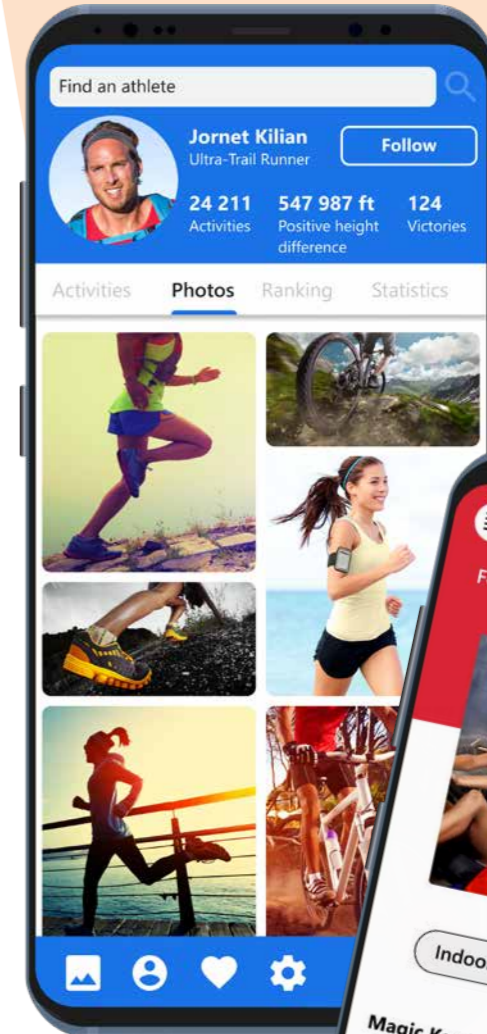
Automatic backup options are available.

Benefit provided by this new feature of version 24 :
You can enjoy the functional richness of HFSQL

674 New feature WD WB WM
**HFSQLDRIVE: WINDEV
MOBILE, BUT ALSO
WINDEV AND WEBDEV**

HFSQLDrive also works on WINDEV and WEBDEV. This makes it easy to set up interconnected applications, front-ends / back-ends in WINDEV or WEBDEV,...

Benefit provided by this new feature of version 24 :
WINDEV and WEBDEV won't become green with envy



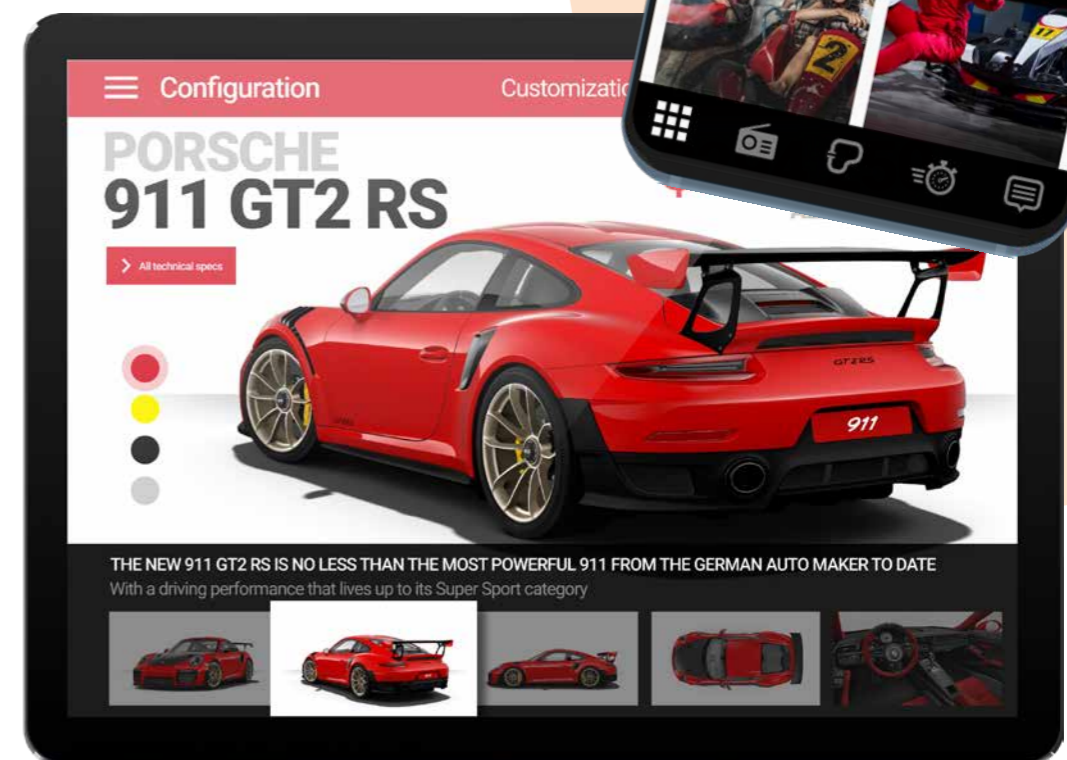
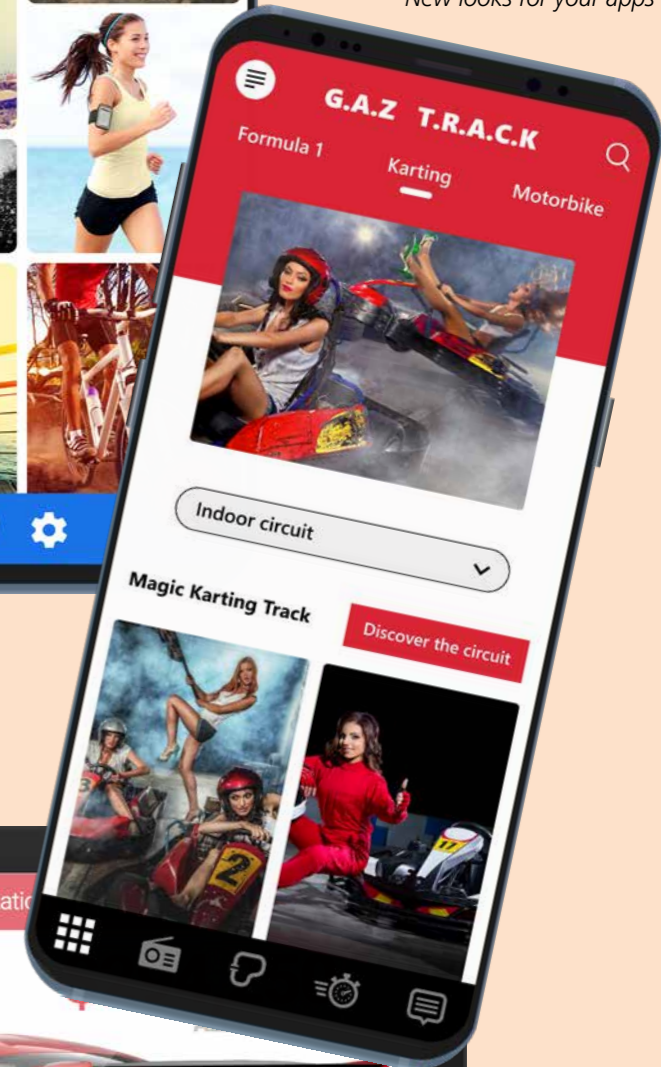
675 New feature WD WB WM

**2 NEW SKIN
TEMPLATES FOR MOBILE**

The Material Design Blue 2 and Ninja skin templates for mobile are delivered with version 24: use them as you like to customize your apps!

Benefit provided by this new feature of version 24 :

New looks for your apps



IOS

676 New feature WD WB WM COMMON NEW FEATURES FOR MOBILE



Developing for iOS has never been as powerful as with WINDEV Mobile 24. You benefit from powerful new features that come in addition to all the existing ones. iOS evolves, and so does WINDEV Mobile 24. WINDEV Mobile 24 for iOS benefits from the general common features of version 24, plus features common to mobile devices: Gallery control, Token control, Organizer control, Switch control, Real-Time Chart control, creation of SOAP and REST Web-services, HFSQLDrive, ... And in addition to the general common new features, in addition to the common new features specific to mobile devices, version 24 offers the following new features for iOS.

677 New feature WD WB WM IOS 12

WINDEV Mobile 24 supports iOS 12. Note that Apple has announced that as of March 2019, all new applications and updates of existing applications on the Apple Store must have been compiled for iOS 12 and take into account the iPhone Xs Max.

Benefit provided by this new feature of version 24 :
Enjoy all the features of iOS 12

678 New feature WD WB WM IPHONE XR, XS, XS MAX



The iPhone Xs has a screen resolution of 2,436 x 1,125 pixels at 458 ppi.
The iPhone Xs Max has a screen resolution of 2,688 x 1,242 pixels at 458 ppi.
The iPhone XR has a resolution of 1,792 x 828 pixels at 326 ppi.
WINDEV Mobile 24 supports all of these screen resolutions. Facial recognition is available with `CheckUserIdentity`. All iPhone features are available with WINDEV Mobile 24.

Benefit provided by this new feature of version 24 :
Support for all iPhones

679 New feature WD WB WM APPLE WATCH 4



WINDEV Mobile supports the Apple Watch 4. Note that Apple has announced that as of March 2019, all new applications and updates of existing Apple Watch applications on the Apple Store must have been compiled for iOS 12 and take into account the Apple Watch series 4.

Benefit provided by this new feature of version 24 :
WINDEV Mobile 24 is right on time!

680 New feature WD WB WM ARTIFICIAL INTELLIGENCE (AI) : MACHINE LEARNING ON IPHONE AND IPAD

The latest iPhone models are equipped with a processor that has features dedicated to neural networks, capable of performing 5 billion operations per second! Apple provides an SDK (CoreML) that makes it possible to take advantage of these features. WINDEV Mobile 24 allows you to interface with this SDK, and thus implement AI features in your applications.

Benefit provided by this new feature of version 24 :
Harness the power of the new iPhones



681 New feature WD WB WM GO OF APPLICATION UNDER DEVELOPMENT DIRECTLY ON THE IPHONE, WITHOUT A MAC, WITHOUT AN EMULATOR!

When developing an application for iOS (iPhone or iPad), WINDEV Mobile 24 allows you to test the application being developed (launch a GO) without having to recompile it on Mac, but directly on the iPhone or iPad.

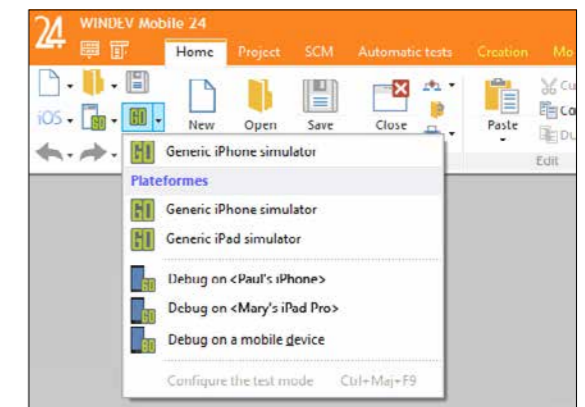
All you have to do is download once and for all the WMDEV app available for free on the Apple store. The iPhone must be on the same network as the computer (on the same Wi-fi for example). You have to do it only once : during the very first GO from WINDEV Mobile, a QR Code is displayed in the environment. Simply launch the WMDEV application and scan this QR Code. This automatically establishes communication between the WINDEV Mobile editor and the computer on which WMDEV is installed. Then, during the next GOs, WMDEV automatically downloads the elements necessary to launch the test.

Note that this feature is subject to Apple's discretion and Apple may decide to remove the application to download from its store. Please accept our apologies in advance if Apple withdraws the application.

Benefit provided by this new feature of version 24 :
No need to recompile on Mac to test

682 New feature WD WB WM DEBUGGING IOS APPLICATIONS, WITHOUT MAC, DIRECTLY ON IPHONE OR IPAD!

WINDEV Mobile 24 also allows you to debug your iOS application directly on the device thanks to the new "GO on phone" option. The application on the phone is controlled by the debugger. You can then access the debugger: breakpoints, step by step, content of variables, stacks...



Launch the debugger on the device

Benefit provided by this new feature of version 24 :
Debugging directly on iPhone or iPad

683 New feature WD WB WM NFC ON IPHONE

In version 24, NFC functions are available on iPhone. For example, a WINDEV Mobile application allows you to open a hotel room door (hotels that offer this service).

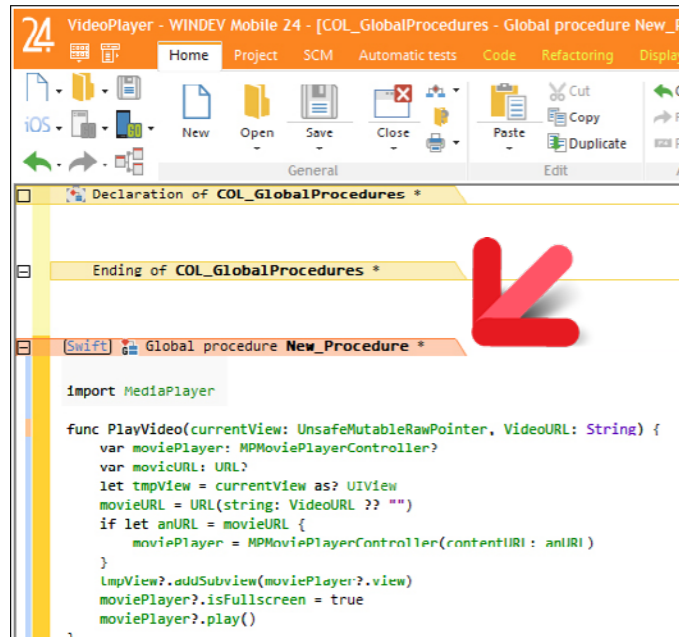


Open your hotel room door with your iPhone (or your Android smartphone!)

Benefit provided by this new feature of version 24 :
iPhones finally benefit from NFC

684 New feature WD WB WM SWIFT CODE : DIRECT INPUT IN THE CODE EDITOR

WINDEV Mobile 24 allows you to enter Swift code directly. Syntax highlighting is very helpful. It is possible to call WLanguage code from Swift code, and also to call Swift code from WLanguage code.



The code editor in WINDEV Mobile 24 is open to other technologies: in the example, Swift code input

Benefit provided by this new feature of version 24 :
Direct input in the code editor

685 New feature WD WB WM 7 NEW TYPES

7 new types of variables are available for iOS:

Chrono	Token	JSON	OpenIDIdentity
OpenIDParameters	CriticalSection	UUID	

Benefit provided by this new feature of version 24 :
More and more power for WLanguage

686 New feature WD WB WM 4 NEW PROPERTIES

New properties for iOS are available in WLanguage

Token	TokenEnabled	TokenAllowDuplicate	TokenListSeparator
-------	--------------	---------------------	--------------------

Benefit provided by this new feature of version 24 :
More and more power for WLanguage

687 New feature WD WB WM 65 NEW WLANGUAGE FUNCTIONS FOR IOS

65 new functions for iOS are available in WLanguage

OrganizerDisplayPreviousPeriod	OrganizerDisplayNextPeriod	OrganizerAddAppointment	OrganizerChangeMode
OrganizerBackgroundColor	OrganizerDateVisible	OrganizerTimeDisplayed	OrganizerWorkingHour
OrganizerInfoXY	OrganizerListAppointment	OrganizerMode	OrganizerSelectedRange
OrganizerPosition	OrganizerSelectMinus	OrganizerSelectPlus	OrganizerDeleteAppointment
OrganizerDeleteAll	OrganizerToiCalendar	AddReference	ProfilerStart
ProfilerEnd	LeapYear	ControlToSource	dbgStartMemoryDiff
dbgEndMemoryDiff	dbgSaveDebugDump	dbgSaveMemoryDump	Tomorrow
GetCountryISO	GetCountryName	GetUUID	GetUUID256
dPolyline	WithSpace	fLoadResource	WinSize
GesturePointerType	gBackgroundGradient	gFontStrikeout	grAddTimeData
grRealTimeInterval	HAddLink	HAddTask	HDeclare
HExportCSV	HExportXLS	HCloseAnalysis	Yesterday
HFree	HMode	HCheckIndex	InsertReference
OpenIDReadIdentity	EditAddToken	EditInsertToken	EditTokenCount
EditDeleteToken	EditDeleteAllToken	SOAPToHTTP	SQLConnect
SQLListSource	SQLTransaction	ArrayAddReference	ArrayInsertReference
TableSavePositionAndSelection			



688 New feature WD WB WM COMMON NEW FEATURES FOR MOBILE



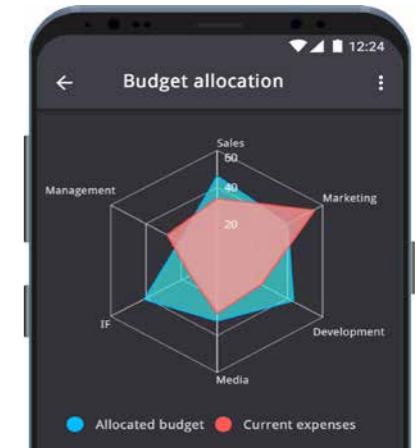
Android development has never been as powerful as with WINDEV Mobile 24. You benefit from powerful new features that come in addition to existing ones.

Android evolves, and so does WINDEV Mobile 24. WINDEV 24 for Android benefits from the general common features of version 24, plus features common to mobile devices: Gallery control, Token control, Organizer control, Switch control, Real-Time Chart control, creation of SOAP and REST Webservices, HFSQLDrive, ...

And in addition to the general common new features, in addition to the common new features specific to mobile devices, version 24 offers the following new features especially for Android.

689 New feature WD WB WM RADAR CHART

In version 24, the Radar chart is also available for Android.



Radar chart on Android smartphone

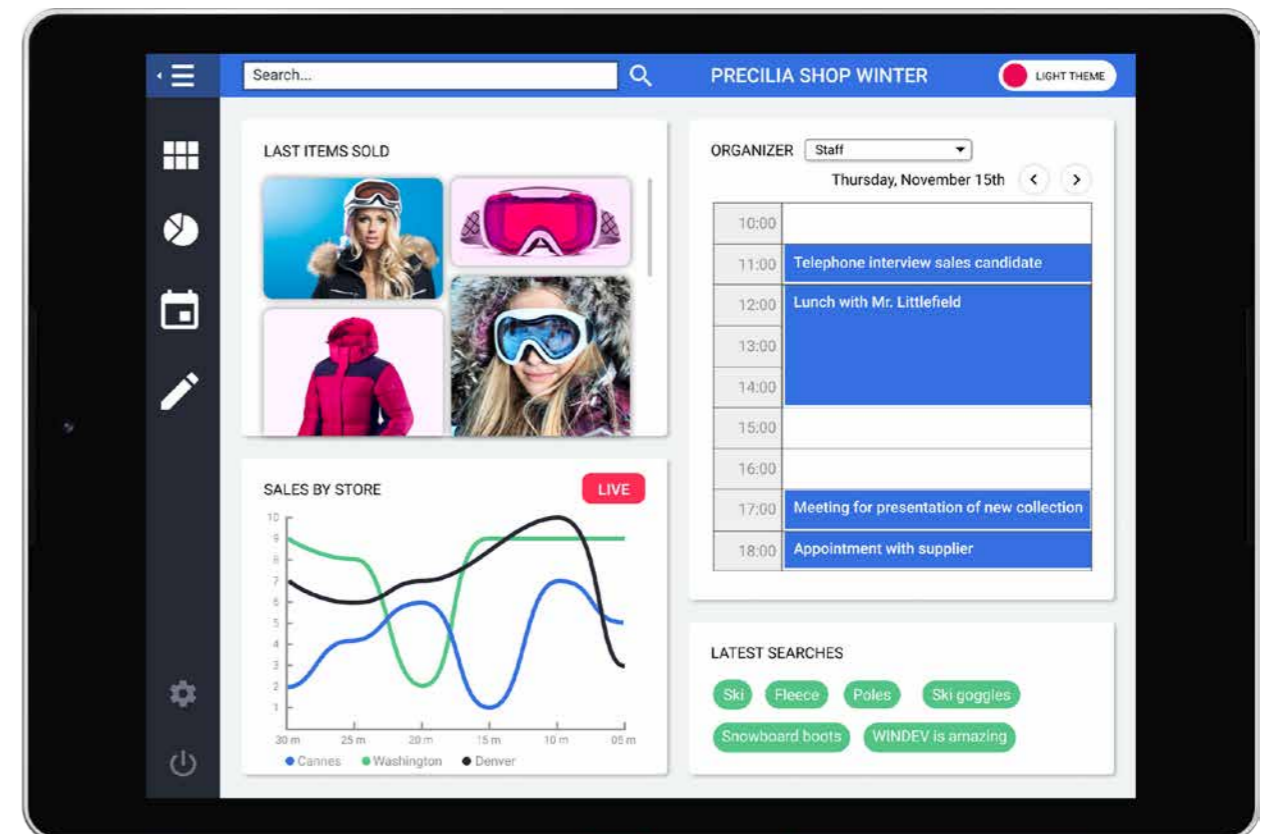
Benefit provided by this new feature of version 24 :
This chart will definitely be on your radar

690 New feature WD WB WM IOT : MQTT

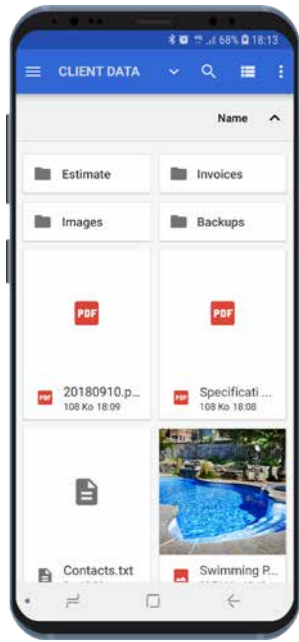
The IoT functions of the MQTT family are also available on Android.

These functions make it possible to communicate with brokers that use this standard to manage subscriber devices: temperature sensor, delivery tracker, ...

Benefit provided by this new feature of version 24 :
Interoperability



691 New feature WD WB WM ANDROID FILE SELECTOR



In version 24, `URISelect`, a new `WLanguage` function for Android appears. `URI` is the acronym for Uniform Resource Identifier. `URI` is an identifier that indicates where the file is located: on the phone, on Google Drive, on an FTP... This function is the equivalent of the `fSelect` Windows function, but returns a `URI` type. It allows you to propose navigation through all files, directories and resources on the phone. The hamburger menu is automatically enabled to select the source.

Here, the `URISelect` function displays 4 folders, 2 PDF documents, 1 text document and 1 image.

Benefit provided by this new feature of version 24 :
How to live without it?

692 New feature WD WB WM WLANGUAGE "CONTROL" TYPE

The `Control` type is also available on Android. The `..Process` property is very powerful and allows overriding the behavior of the control! The default process of controls can be modified using this property.

Benefit provided by this new feature of version 24 :
A long-awaited type

693 New feature WD WB WM RECTANGLE AND POINT TYPES

The `Rectangle` and `Point` types are available on Android.

Benefit provided by this new feature of version 24 :
An effective type

694 New feature WD WB WM ARRAY ITEMS

In version 24, the `Array` items are (finally) available on Android! This feature is available for Embedded HFSQL and Client/Server HFSQL.

Benefit provided by this new feature of version 24 :
A useful type

695 New feature WD WB WM BAR CODE PRINTING

In version 24, the `iPrintBarcode` function is available on Android.

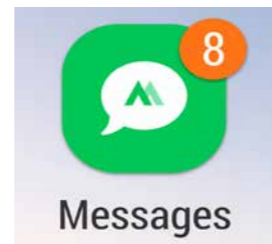
Benefit provided by this new feature of version 24 :
Easy barcode printing for Android

696 New feature WD WB WM ANDROID NOTIFICATIONS : BADGE ON THE APP ICON

On Android, system notifications offer Android-specific features. `WINDEV Mobile 24` makes it possible to manage these specific features.

The first specific feature is the possibility to display a badge on the app icon.

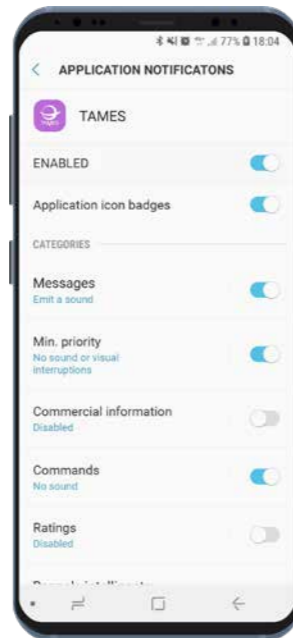
The `..Badge` property is used to modify this badge.



The badge (the orange circle with the number 8) is a piece of information that can be displayed on the app icon.

Benefit provided by this new feature of version 24 :
Show useful information to the user

697 New feature WD WB WM ANDROID NOTIFICATIONS : CHANNELS



nels

It is possible to trigger notifications by programming. In version 24, it is possible to define notification groups ("channels").

These groups appear in the application settings.

The end user can thus configure the display of each of these groups.

Note that notifications can be displayed on a locked screen.

Examples of notification categories for one of your apps: the end user can configure each of the categories that your app has defined

Benefit provided by this new feature of version 24 :

Users can channel positive energy into their lives with these... channels

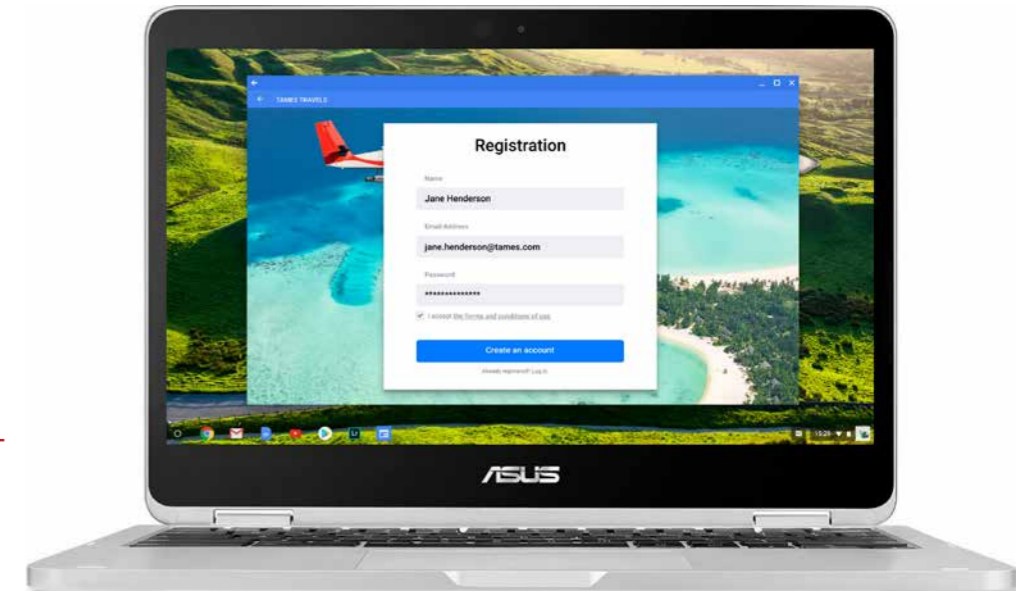
698 New feature WD WB WM CHROME OS

The Chrome Operating System allows Android applications to run on different hardware (not just phones and tablets). In version 24, new Chrome OS-specific functionalities appear :

- minimum & maximum size support for windows in window mode
- mouse support: hover, right click, cursor and tooltip events
- detection of held-down keys
- ...

Benefit provided by this new feature of version 24 :

A brilliant new feature



A Chromebook from Asus

699 New feature WD WB WM THE REPORT EDITOR GENERATES THE "IPRINT" OF THE REPORT

In version 24, the report editor makes it possible to generate the sequence of `WLanguage iPrint` commands corresponding to the static report.

The controls are positioned in the same way they appear in the report editor.

The font, color and attributes are kept.

This allows you to use the report generator as a print code

generator.

The generated code is structured, with an internal procedure for each block, for example.

Preset controls are identified, and generated with the `WLanguage` code that is needed to keep them working. Then, simply add a little code to make loops, replace variables...

It is also possible to request the generation of the code only for a control or a block.

Benefit provided by this new feature of version 24 :
Generates nothing but good things



Print easily from the phone.

Here is a car rental ticket, given to the customer who brings the car back directly to the site through the operator



ZEBRA INDUSTRIAL DEVICES



Zebra equipment is widely used, particularly in the industrial sector. Zebra devices support Android. WINDEV Mobile 24 allows you to develop native applications for Zebra devices, and allows you to control all the features: bar code reader, print functions, RFID,...

Another advantage of WINDEV Mobile: if you have an old application developed in Windows CE, WINDEV Mobile 24 offers backward and cross-platform compatibility of your code and interfaces. WINDEV code can also be retrieved.

700 New feature WD WB WM ANDROID DEVICES WITH KEYBOARD

An Android device can have a physical keyboard, or can be connected to a physical keyboard (through the Samsung DeX system for example). WINDEV Mobile 24 manages keyboard events, with the possibility of intercepting them in WLanguage code.

Benefit provided by this new feature of version 24 :
Virtual keyboard, physical keyboard

701 New feature WD WB WM JAVA 9 SUPPORT

WINDEV Mobile 24 supports Java 9.

Benefit provided by this new feature of version 24 :
Stay up to date with the latest versions!

702 New feature WD WB WM WINSIZE WLANGUAGE FUNCTION

The `WinSize` function is now managed in version 24. The positioning of non-maximized windows is also managed.

Benefit provided by this new feature of version 24 :
It's not the size that matters

703 New feature WD WB WM ..INPUTMASK PROPERTY: CUSTOMIZE

In version 24, the `..InputMask` property accepts custom masks on Android. This property makes it possible to create custom masks.

Benefit provided by this new feature of version 24 :
Use your masks every day, not just on Halloween

704 New feature WD WB WM FRAMEWORK X86 INTEL

In version 24, applications made with WINDEV Mobile also work on devices equipped with Intel x86 processors : certain Chromebooks, tablets, phones...

This increases the portability of your applications even more.

Benefit provided by this new feature of version 24 :
Extended cross-platforming

705 New feature WD WB WM MAVEN

Maven repository is supported in version 24. This allows access to a wider choice of external libraries.

Benefit provided by this new feature of version 24 :
Maven support

706 New feature WD WB WM 64-BIT HFSQL

The embedded version of HFSQL is also available in 64-bit version for Android.

Benefit provided by this new feature of version 24 :
32 and 64 bits

707 New feature WD WB WM MISCELLANEOUS

All drawing functions of the "d" family can accept a `Color` type instead of the RGB color.

Benefit provided by this new feature of version 24 :
Draw in color

708 New feature WD WB WM WLANGUAGE 7 NEW TYPES

7 new types of variables are available for Android:

Token Point	NotificationCategory Rectangle	mqttSession URI	Control
-------------	--------------------------------	-----------------	---------

Benefit provided by this new feature of version 24 :
Among other useful variables : Control, Point

709 New feature WD WB WM 10 NEW PROPERTIES

10 new WLanguage functions are available for Android :

FicCryptMethod	MmoCryptMethod	NdxCryptMethod	Token
TokenEnabled Directory	TokenAllowDuplicate Process	TokenListSeparator	NbArrayElement

Benefit provided by this new feature of version 24 :
More and more power for WLanguage

710 New feature WD WB WM 56 NEW WLANGUAGE FUNCTIONS FOR ANDROID

In version 24, WLanguage integrates 56 new functions for Android

OrganizerDisplayPreviousPeriod	OrganizerDisplayNextPeriod	OrganizerAddAppointment	OrganizerChangeMode
OrganizerTimeDisplayed	OrganizerWorkingHour	OrganizerInfoXY	OrganizerListAppointment
OrganizerMode	OrganizerSelectedRange	OrganizerPosition	OrganizerSelectMinus
OrganizerSelectPlus	OrganizerDeleteAppointment	OrganizerDeleteAll	OrganizerToCalendar
AddReference	LeapYear	DateTimeToEpoch	Tomorrow
GetCountryISO	GetCountryName	dPolyline	EpochToDateTime
WinSize	GalleryDisplayPopup	GalleryClosePopup	GesturePointerType
gFontStrikeout	grAddTimeData	grRealTimeInterval	Yesterday
iCalendarToOrganizer	iPrintBarcode	InsertReference	MQTTSubscribe
MQTTConnect	MQTTDisconnect	MQTTUnsubscribe	MQTTUnsubscribeAll
MQTTPublish	NotifListCategory	NotifDeleteCategory	EditAddToken
AssistedInputAdd	AssistedInputClose	AssistedInputOpen	AssistedInputConfigure
AssistedInputDeleteAll	EditInsertToken	EditTokenCount	EditDeleteToken
EditDeleteAllToken	ArrayAddReference	ArrayInsertReference	TraceDeleteAll

Never without my
WINDEV!



WINDOWS MOBILE & CE

Windows Mobile, Windows CE and Windows Embedded are very popular in industrial settings.
 Please note: your Windows Mobile and CE code is compatible with Android (and iOS).
 If you migrate your industrial devices from CE to Android, you don't lose your code!
 All thanks to WINDEV Mobile!
 Your teams will be happy to keep their know-how!

711 New feature WD WB WM COMMON NEW FEATURES

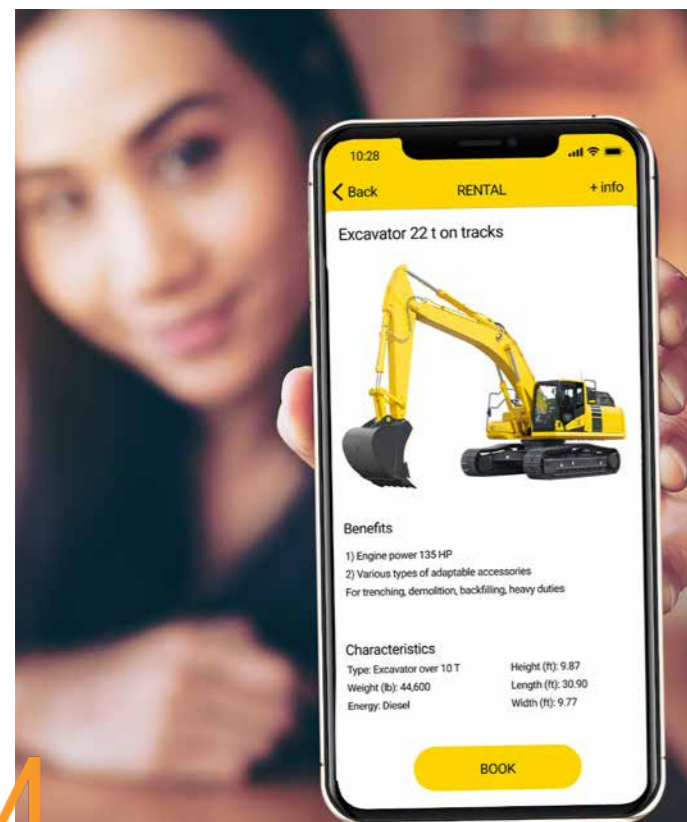
WINDEV Mobile 24 for Windows Mobile and Windows Embedded benefits from the common new features of version 24.

Benefit provided by this new feature of version 24 :
 New features even for Windows CE!

712 New feature WD WB WM 15 NEW WLANGUAGE FUNCTIONS FOR WINDOWS MOBILE AND CE

15 in version 24, new WLanguage functions are available for Windows Mobile and Windows CE.

AddReference	LeapYear	Tomorrow	GetCountryISO
GetCountryName	GetUUID	GetUUID256	dPolyline
GesturePointerType	gFontStrikeout	Yesterday	InsertReference
OpenIDReadIdentity	ArrayAddReference	ArrayInsertReference	



UWP

713 New feature WD WB WM COMMON NEW FEATURES

UWP development benefits from the common new features of version 24. See new features <C1>048 to 197<C1>.</C1>

Benefit provided by this new feature of version 24 :
 UWP evolves

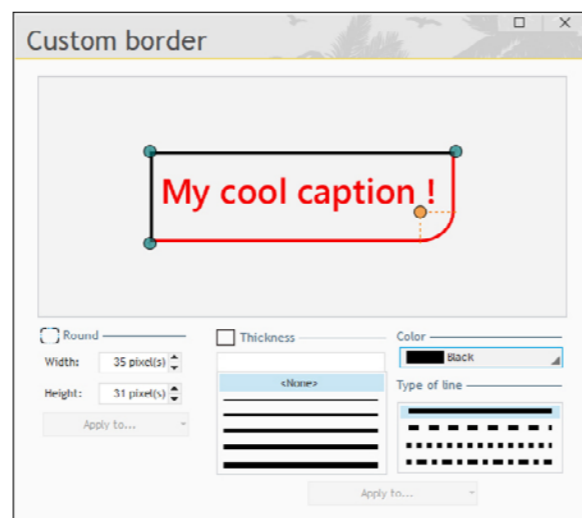
714 New feature WD WB WM NEW ENVIRONMENT

UWP development also benefits from the new development environment of version 24.

Benefit provided by this new feature of version 24 :
 Increased user friendliness

715 New feature WD WB WM FRAMES

In version 24, advanced frames are supported on UWP: border radius, line thickness, ...



Frame configuration in UWP

Benefit provided by this new feature of version 24 :
 Frames!

716 New feature WD WB WM 16 NEW WLANGUAGE FUNCTIONS FOR UWP

16 new WLanguage functions for UWP appear.

AddReference	LeapYear	Tomorrow	GetCountryISO
GetCountryName	GetUUID	GetUUID256	dPolyline
gFontStrikeout	HExportCSV	HExportXLS	Yesterday
InsertReference	ArrayAddReference	ArrayInsertReference	TraceDeleteAll



WEBDEV

717 New feature WD WB WM BENEFIT FROM THE 180 NEW FEATURES OF VERSION 24



WEBDEV 24 benefits from most of the 180 new common features of version 24.
 WEBDEV 24 benefits from the possibility of editing web pages directly in WINDEV, the new Token control, changes in WLanguage, HFSQL, Webservices, OpenID, prefixed WLanguage syntax, changes in the code editor, SCM sharing, Business Logic/GUI code splitting, etc., etc...
 And in addition to all these new features, WEBDEV 24 benefits from new features specific to the Web.

Benefit provided by this new feature of version 24 :
 An incredible amount of new features

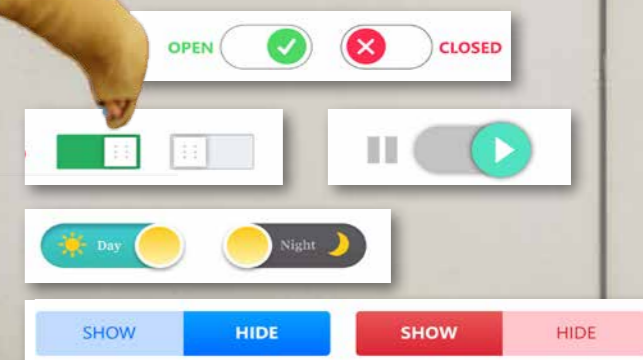
NEW CONTROLS

718 New feature WD WB WM NEW CLICKABLE SWITCH CONTROL

As a foretaste of the new controls, let's take a look at the "Clickable Switch control".
 These "clickable switch" controls are increasingly popular in web pages.
 In WEBDEV 24, it is very easy to use this type of control in your pages.

Benefit provided by this new feature of version 24 :
 An increasingly popular control

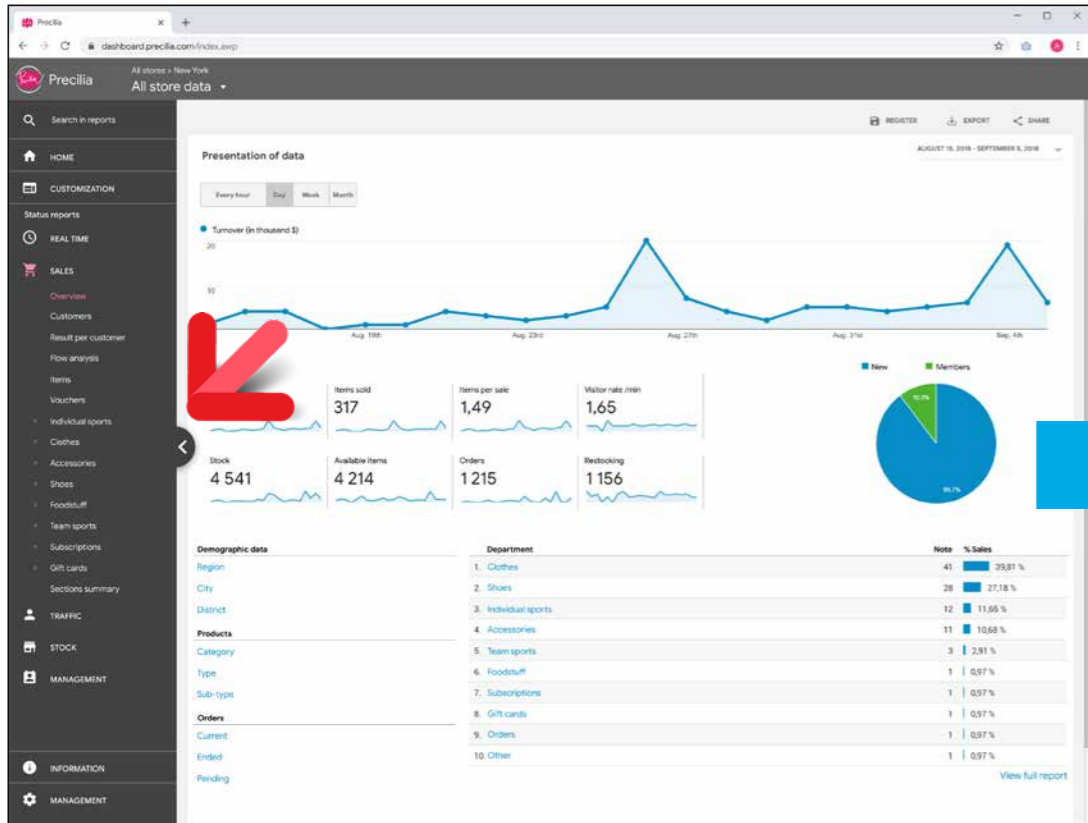
5 examples of clickable switches



719 New feature WD WB WM

NEW "AUTOMATIC PANE" CONTROL

The use of sliding panes in Web sites and applications is be-

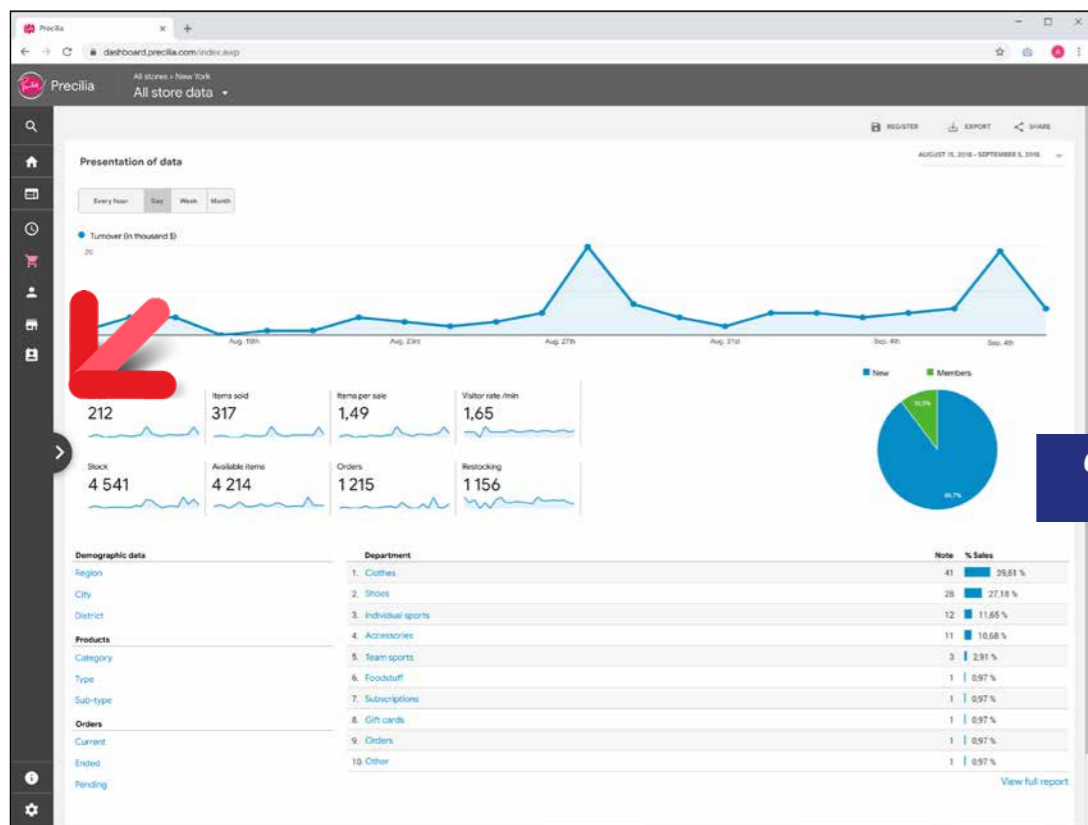


OPEN PANE

coming more and more popular. These panes can contain controls, menu options, charts, internal pages, ... WEBDEV 24 offers an automatic management of these panes. These mechanisms are made possible by significant improvements of the "Drawer control".

Note that the closed pane shakes when the mouse hovers over its area in order to be noticed!

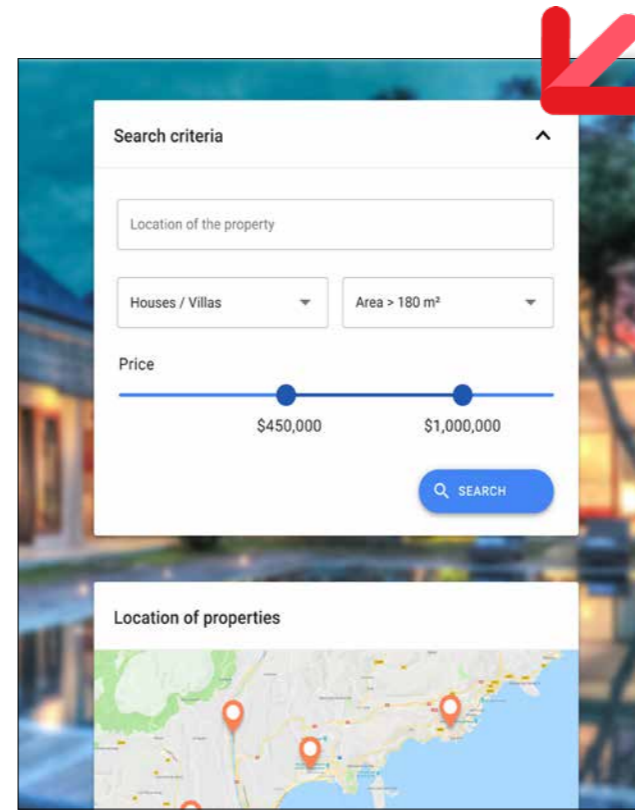
Benefit provided by this new feature of version 24 :
Smart, functional panes



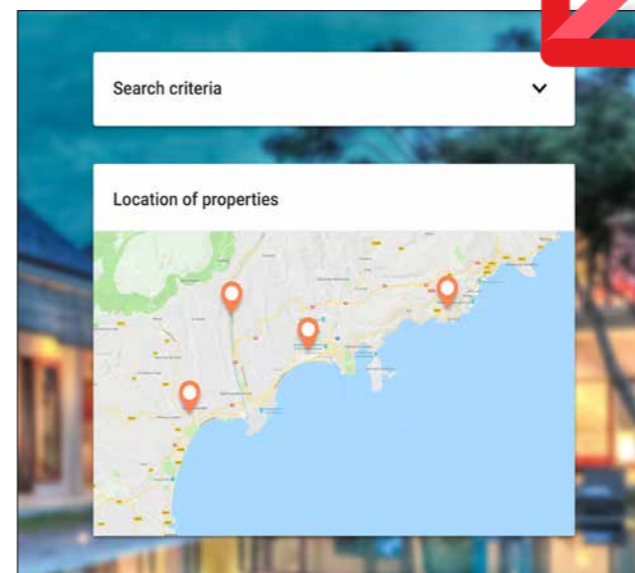
CLOSED PANE

In this page the left pane is open

In the page below the pane is closed. There is just a border of a few pixels visible, and the button in its center. When the mouse hovers over the area of the pane, the pane "vibrates" a few pixels to be noticed!



Here, the top pane is open



Top pane closed

with the mouse, the pane "shakes" a few pixels to indicate its presence!

Benefit provided by this new feature of version 24 :
Essential for a modern UX

721 New feature WD WB WM

AUTOMATIC PANE: HOW TO CREATE IT?

Creating an automatic pane in the WEBDEV 24 page editor is very easy.

An automatic pane is created like a Drawer control. It is possible to create an "automatic pane" zone and to place the desired controls in it.

Automatic panes can also be created by selecting a set of controls, then, right-click to choose a "refactoring" of these elements into an automatic pane.

The automatic pane can also contain an internal page. Then, simply position the open/close button (optional).

Benefit provided by this new feature of version 24 :
Easy to create

722 New feature WD WB WM

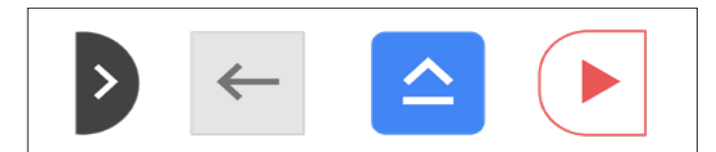
AUTOMATIC PANE: (OPTIONAL) OPEN/CLOSE BUTTON

A pane indicates its presence with a "button" that opens or closes the pane when clicked on.

There are several button templates.

This button is optional, the pane works in the same way with or without it.

This button is just a visual aid for the Web user.



Examples of pane buttons

Benefit provided by this new feature of version 24 :
Easier to open

720 New feature WD WB WM

AUTOMATIC PANE: HOW IT WORKS

Automatic panes display data that can be hidden on demand, either by the user using a button or by programming. When a pane is closed, the rest of the page adapts itself to occupy the entire space.

When a pane is opened, the content of the rest of the page is either automatically moved or overlapped.

A pane (drawer) can be placed on the left, on the right, at the top or at the bottom.

A page can contain several panes (several drawers).

Smart feature: when the user hovers over the closed pane

723 New feature WD WB WM

AUTOMATIC PANE: HOW TO PROGRAM IT

There is no programming required to use automatic panes. The settings are defined using the "7 tabs" technology. However, it is possible to modify the automatic panes by programming, to open, close, resize them,...

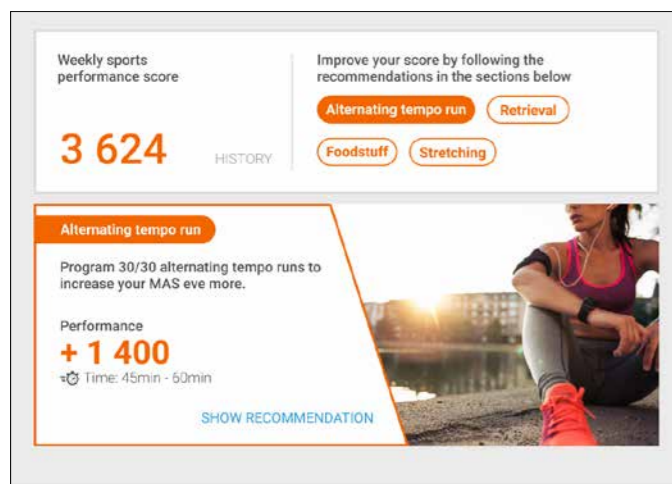
Benefit provided by this new feature of version 24 :
Everything is automatic

724 New feature WD WB WM NEW TOKEN CONTROL

Token controls are very easy to include in your pages, and they are widely used for multiple sorting criteria. It is a new type of control which is available in version 24 of WINDEV, WEBDEV and WINDEV Mobile. In WEBDEV, the Token control has an additional feature. The `..CaptionHTML` property makes it possible to modify the appearance of the token by inserting HTML code.



Examples of tokens in a Token control



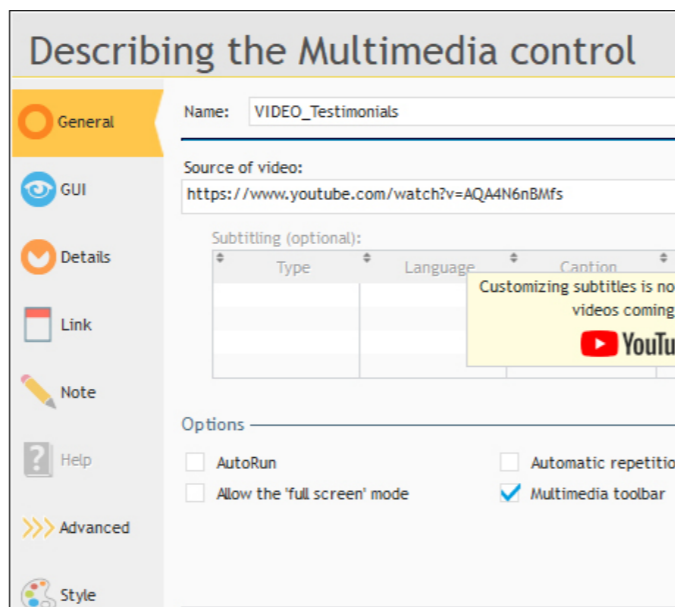
Token controls used in a page

Benefit provided by this new feature of version 24 :
On Web as well!

725 New feature WD WB WM NEW YOUTUBE CONTROL



In WEBDEV 24, it is easy to display videos on YouTube thanks to the new, well named "YouTube" control. This control is available through the "YouTube" option of the Multimedia control. Simply enter the video URL and specify some options, if necessary: play video automatically, display gridlines,...



The "7 tabs" window for defining links and settings. Also available by programming

Benefit provided by this new feature of version 24 :
Automatic YouTube

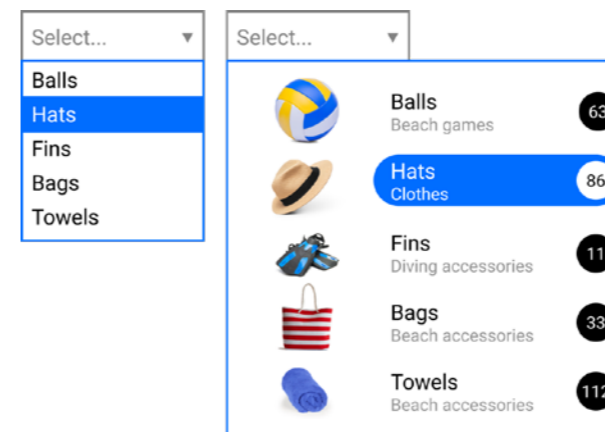
726 New feature WD WB WM MULTIMEDIA CONTROL: IT ACCEPTS URLS

In version 24, the Multimedia control accepts URLs. This allows you to play videos (or music,...) on another server, especially on CDNs. CDNs are content servers, dedicated and optimized for storing large volumes of data.

Benefit provided by this new feature of version 24 :
The right way to broadcast

727 New feature WD WB WM NEW "POPUP" COMBO CONTROL

The "basic" browser combos are quite plain when it comes to appearance : plain text... WEBDEV 24 allows you to easily create combos that display a small "PopUp" page when you expand them. The expanded area of this combo displays a PopUp that you have previously created.



A beautiful combo popup, containing a Looper

Benefit provided by this new feature of version 24 :
Gorgeous combos

SIMPLIFIED OPERATING MODES IN THE EDITOR

In version 24, WEBDEV simplifies and secures many operating modes in the editors. This does not change anything about your existing elements, but it greatly facilitates interactions.

728 New feature WD WB WM PROJECT CREATION

The creation of projects becomes more intuitive. The different modes (Classic (Session), AWP, PHP) are presented in a better way. The interface for creating pages is also reviewed and simplified.

Benefit provided by this new feature of version 24 :
Natural project creation

729 New feature WD WB WM IMAGE MANAGEMENT

In version 24, image management becomes much more intuitive. No more "static", "dynamic", "generated" images... the type of image is automatically detected. Please note that your existing elements remain the same and work just as well.

Benefit provided by this new feature of version 24 :
Everything becomes automatic

730 New feature WD WB WM INTERFACE OF THE "7 TABS"

The "7 tabs" technology allows for fast and powerful creation of sophisticated interfaces. In WEBDEV 24, the content of the "7 tabs" windows is significantly simplified while keeping its functional richness. The content of WEBDEV's "7 tabs" is harmonized with WINDEV and WINDEV Mobile. You will love this set of modifications, it is even easier to create your pages!

Benefit provided by this new feature of version 24 :
A harmonized interface

731 New feature WD WB WM ANCHORING AND ZONING

Anchoring and zoning operations are simplified in version 24. WINDEV users will find a similar behavior.

Benefit provided by this new feature of version 24 :
An even better interface

INCREASED SPEED IN THE ENVIRONMENT

The speed of the environment brings comfort and productivity to the developer. In version 24, the speed of actions in the WEBDEV environment increases significantly : tasks such as opening, saving, generating ... are much faster: up to ten times. *Note: some of these improvements were implemented during version 23.*

732 New feature WD WB WM OPTIMIZATION OF THE OPENING SPEED OF PAGES AND PROJECTS

The page opening speed is drastically improved. The gain can be as high as 1000% (10 times faster). **Benefit provided by this new feature of version 24 :**
Major time savings

733 New feature WD WB WM OPTIMIZATION OF PROJECT COMPILATION SPEED

Depending on the type of project, the compilation speed in version 24 can be improved by a factor of 2 to 5. **Benefit provided by this new feature of version 24 :**
How did we even do it before version 24?

RESPONSIVE WEB DESIGN

734 New feature **WD WB WM**
5 EXAMPLES OF RESPONSIVE PAGES TO DISCOVER THE CONSTRUCTION OF RESPONSIVE PAGES

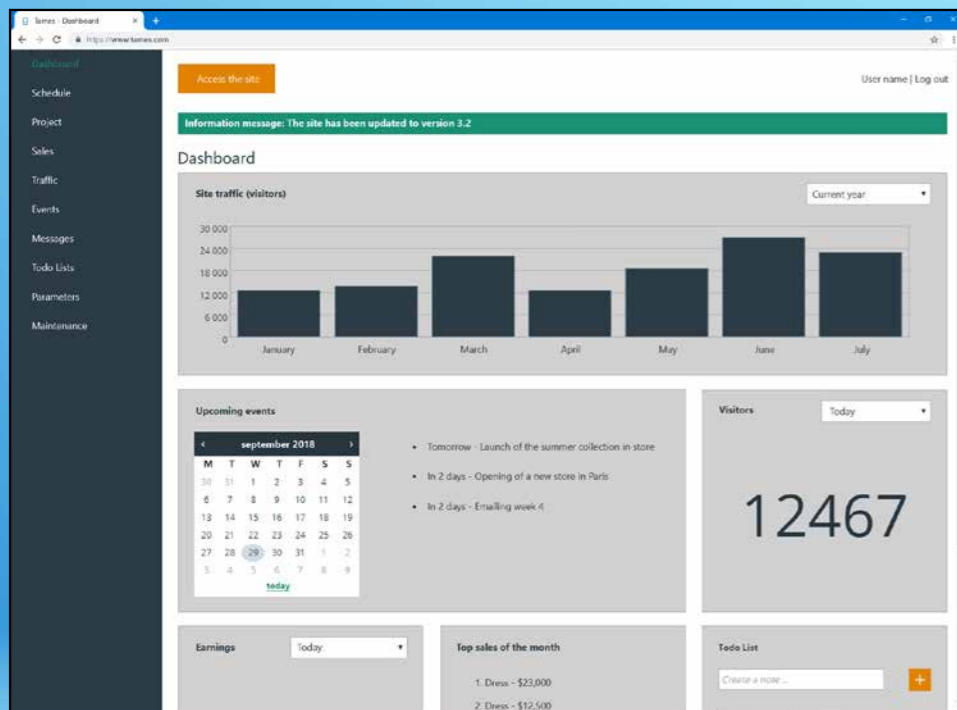
pages :
 • administration page
 • blog
 • ...
 These illustrative pages have been designed so that you can discover (by comparison) the parameters to apply to your own pages in order to make them responsive: blade, control visibility, anchoring...
 By studying these pages in the editor, you will know how to organize your responsive blades in your own pages!
Benefit provided by this new feature of version 24 :
 A valuable help to create your Responsive pages

WEBDEV 24 comes with 5 illustrative examples of Responsive

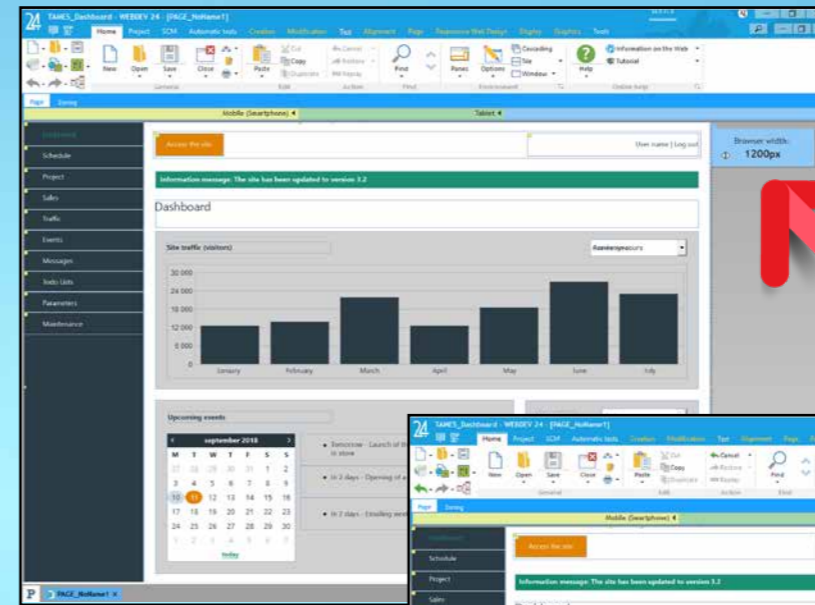
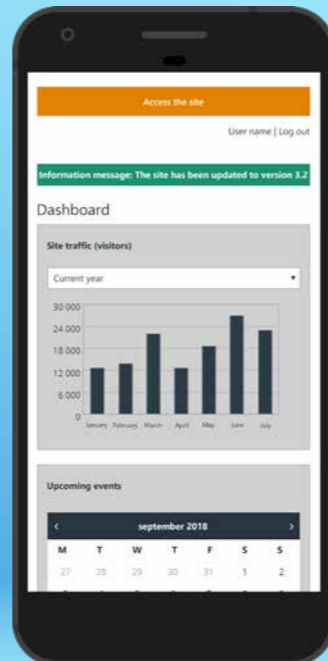
AT RUNTIME

Example 1 Dashboard

Dashboard on PC

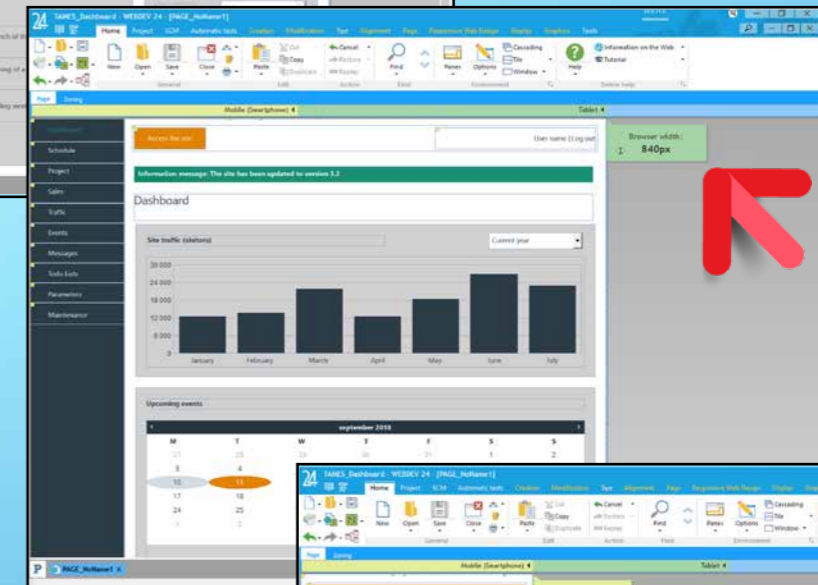


Dashboard on the phone, at runtime

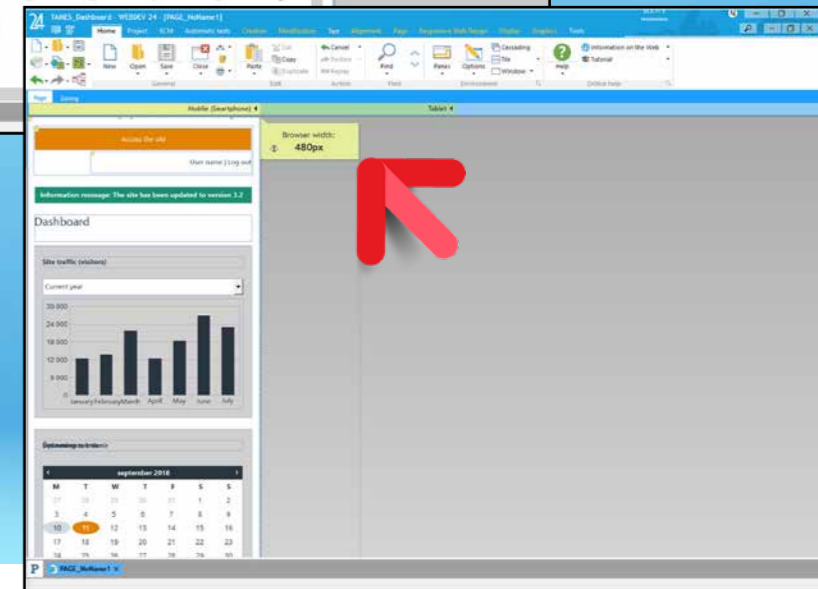


IN THE WEBDEV EDITOR

PC blade

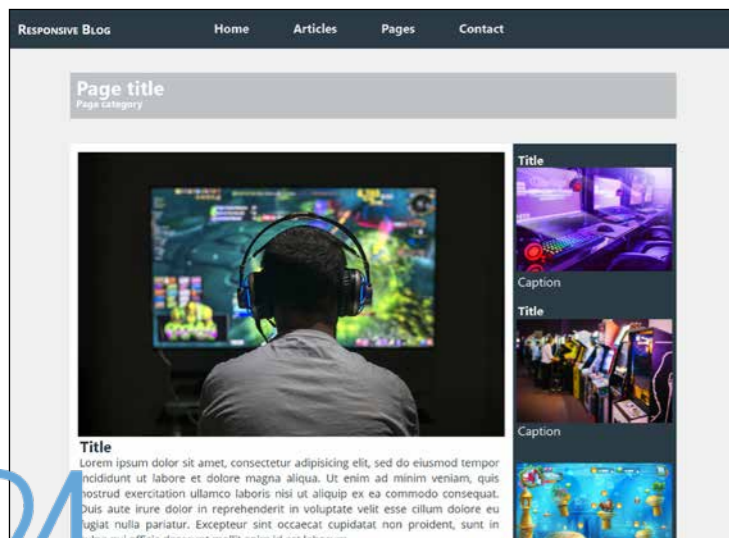


Tablet blade

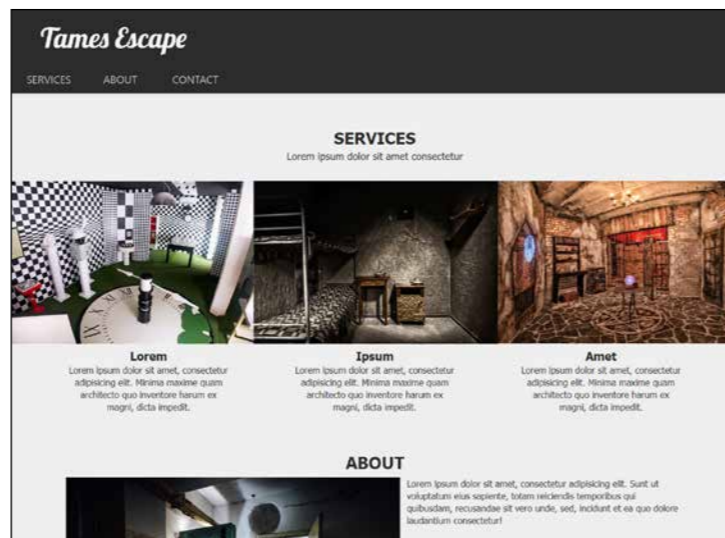


Phone blade

Example 2 Blog / News



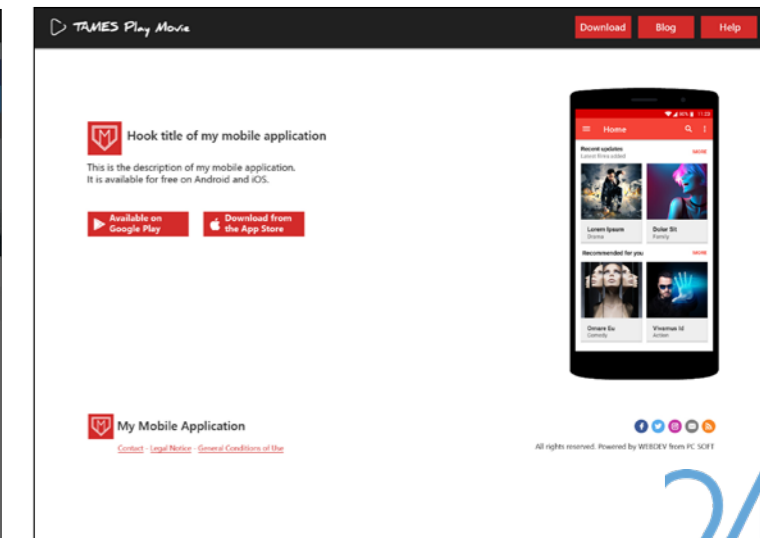
Example 3 Presentation of services



Example 4 Achievement portfolio



Example 5 Presentation of a mobile app



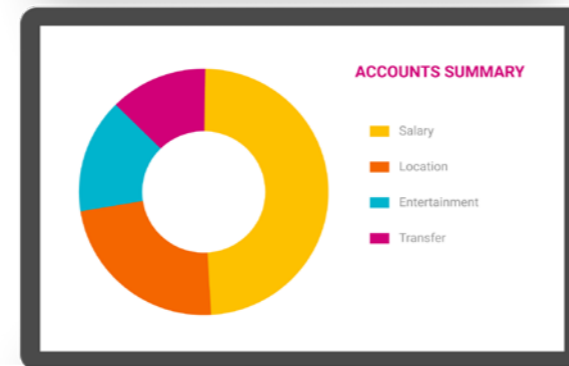
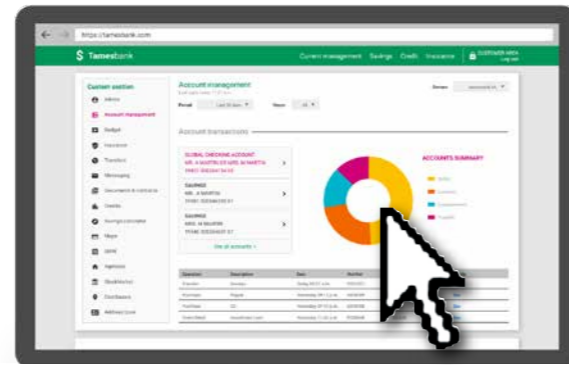
735 New feature WD WB WM PAGE TEMPLATES : INCREASED SPEED OF PAGE UPDATES

Updating pages using page templates is much faster in version 24.

The technology for spreading changes has been optimized, and the gain can be substantial.

Benefit provided by this new feature of version 24 :

You won't spend more time staring into infinity by the coffee machine



1 click and the chart is displayed in full screen

Benefit provided by this new feature of version 24 :
One click, one stunning chart!

CHART

736 New feature WD WB WM "FULL SCREEN" MODE FOR CHARTS

In version 24, WEBDEV allows the user to switch a chart of the page to "full screen" mode with a click.

The Esc key allows you to return to the previous mode, which is the standard behavior.

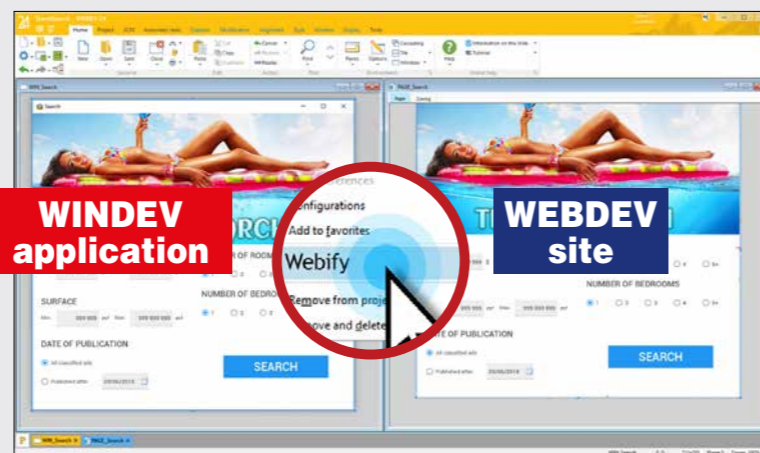
EASY WEBIFICATION OF YOUR WINDEV APPLICATIONS

The support of many new WLanguage functions (such as `Open`) allows a much faster porting of the existing elements in WINDEV.

737 New feature WD WB WM EASY WEBIFICATION OF EXISTING WINDEV APPLICATIONS

Webifying existing WINDEV applications (or parts of applications) has never been as easy as in version 24. Numerous new features make transforming a Windows application into Web significantly easier :

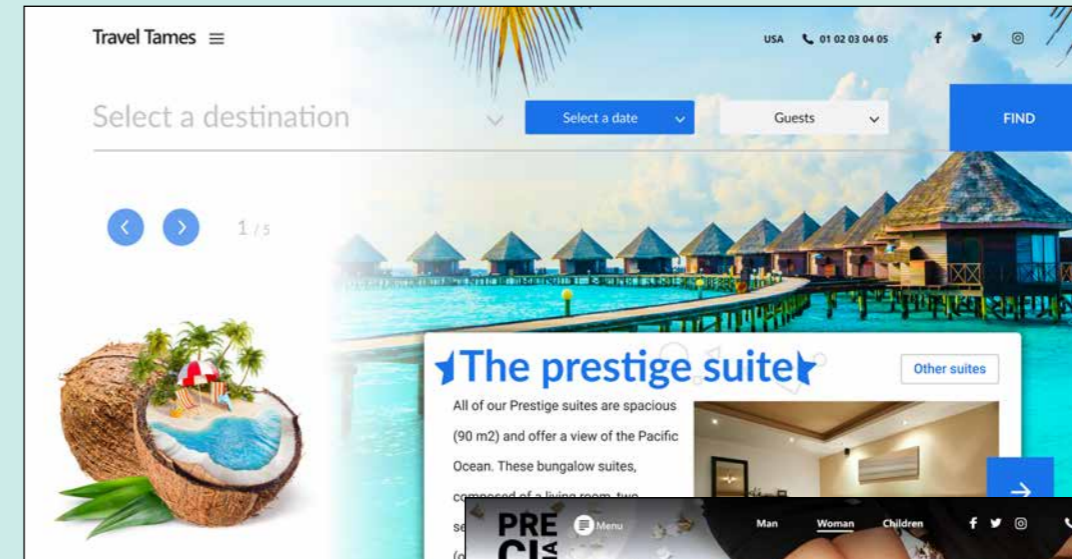
- Opening and editing WEBDEV pages directly in the WINDEV editor
- Transforming a window into a page with a right-click, or transforming an entire application
- Wizard for modifying Windows code that must be adapted to the Web (in Web, certain Windows features are not available, due to the integrated security features in the Browser, for example)
- Assistance for splitting Business logic/GUI code if necessary (MV and MVP methods)



- Even greater number of compatible WLanguage functions
- Compatibility of `Open` and `Close` functions in WINDEV, with the same behavior (locking `Open`)
- ...

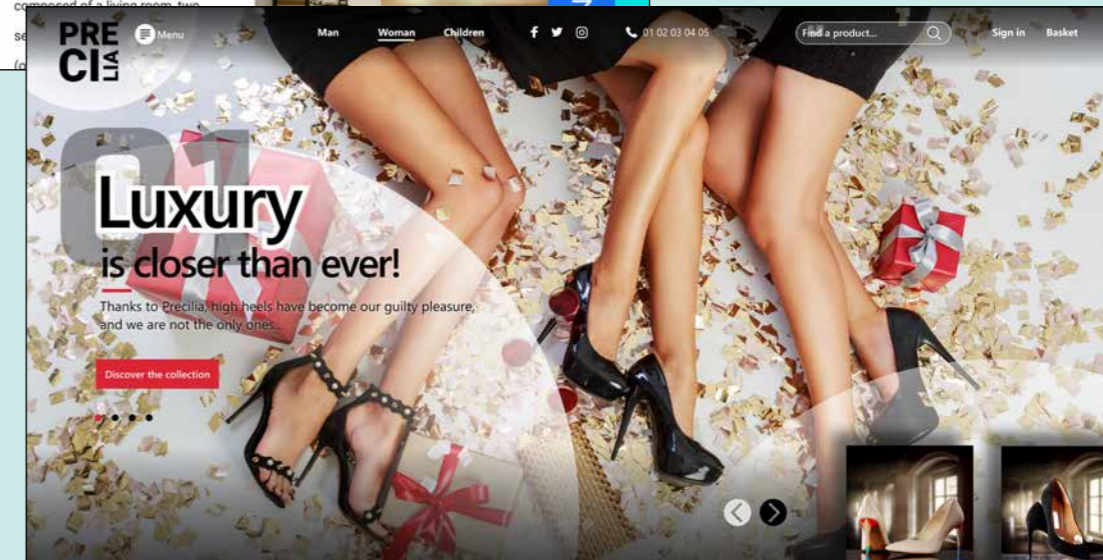
See new features 040 to 046 and 036 to 039.

Benefit provided by this new feature of version 24 :
Keep your legacy code



Use these skins for your sites as you like!

Benefit provided by this new feature of version 24 :
More and more choices



738 New feature WD WB WM 2 NEW SKINS

2 NEW SKINS

2 new skins come with version 24: Material Design Blue 2 and Ninja skins.

BROWSER WLANGUAGE

739 New feature WD WB WM OOP IN BROWSER CODE (IT WAS ON SERVER ALREADY!)

In version 24 it is possible to use OOP (object programming) in browser code.

This allows for better portability and code sharing.

And this allows especially those who want to program in OOP to do so!

Benefit provided by this new feature of version 24 :
OOP in browser

740 New feature WD WB WM CLASS: "BROWSER" OR "SERVER" OR "BROWSER + SERVER"

A class can be declared as :

- "Server" class

- "Browser" class

- Or both : "Server + browser".

An entire class can thus be shared between Server code and Browser code.

See the equivalent feature for procedural code in the new feature 831.

Benefit provided by this new feature of version 24 :
Stay classy, no matter the circumstances

741 New feature WD WB WM IMAGE ASSIGNED BY PROGRAMMING

Before version 24, when an image was assigned by programming, it was necessary to indicate in the "7 tabs" of the image control if the image was in the `_web` directory or not. "Locate the image in the `_WEB` directory in the browser code" : it was a little tedious...

In version 24, it is no longer necessary to specify if the image is in the `_web` directory or not.

It is assigned in any case.

Note that the existing settings are kept; a "compatibility" combo in the "7 tabs" makes it possible to keep, find and modify old settings if necessary.

Benefit provided by this new feature of version 24 :
Simple and effective

742 New feature WD WB WM BROWSER CODE: 9 NEW FUNCTIONS

9 new WLanguage functions appear in Browser code in version 24.

dCopy	Tomorrow	grSaveBMP	Yesterday
EditAddToken	EditInsertToken	EditTokenCount	EditDeleteToken
EditDeleteAllToken			

Benefit provided by this new feature of version 24 :
New functions

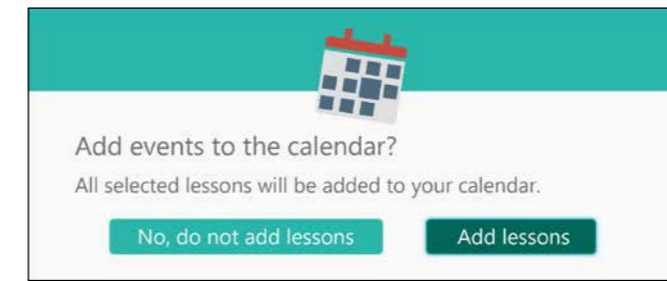
the same behavior in WEBDEV as in WINDEV; this is a "blocking" function, which waits for the other functions.

Benefit provided by this new feature of version 24 :
Easier code portability

744 New feature WD WB WM WLANGUAGE "CLOSE" FUNCTION WEBDEV

In version 24, the `close` function is supported in WEBDEV.

Benefit provided by this new feature of version 24 :
Once opened, it must be closed...



... and boom! A beautiful dialog box appears

Benefit provided by this new feature of version 24 :
Finally, the `Dialog` function in WEBDEV

gpwAuthLogin	gpwDefault	gpwSupervisor	gpwRegisteredUsers
gpwVisitor	grAxisPosition	grSunburstAddData	grSunburstSectionColor
HExportCSV	HExportXLS	Yesterday	iSequencingAddXLS
iWindowCancel	iDocumentCanceled	iPrintXLS	InitParameter
InsertReference	mLoadWorkspace	mSetVariable	mExecute
mInitialize	mListVariable	mResetWorkspace	mGetVariable
mSaveWorkspace	mDeleteVariable	mEnd	OemToAnsi
OpenIDReadIdentity	Ping	SchedulerMode	RedisSubscribe
RedisConnect	RedisUnsubscribe	RedisExecuteCommand	RedisPipelineAdd
RedisPipelineReset	RedisPipelineGet	RedisPublish	Input
RedisAddToken	EditInsertToken	EditTokenCount	EditDeleteToken
EditDeleteAllToken	SaveParameter	SOAPToHTTP	DeleteParameter
ArrayAddReference	ArrayInsertReference	ValidatePassword	

New feature WD WB WM

746 to 828 SERVER CODE: 83 NEW FUNCTIONS

83 new WLanguage functions are available in Server code :

AddReference	LeapYear	AnsiToOem	Warning
LoadParameter	CoordinateScreenToEditor	CoordinateEditorToScreen	Tomorrow
RequestUpdateUI	RequestUpdateUIParent	Dialog	DocChangeZOrder
GetCountryISO	GetCountryName	GetUUID	GetUUID256
dPolyline	ExecuteUpdateUI	ExecuteUpdateUIParent	LargeFontFactor
fAttributeReadOnly	fLoadResource	fShortPath	fLongPath
fListDisk	fReadLineRegularExpression	fShortName	fLongName
fDataDirCommon	gFontStrikeout	gpwAddAuthLogin	gpwNone

WEBDEV CODE EDITOR

WEBDEV 24 benefits from common new features in the code editor and the debugger.
And WEBDEV 24 also has its own new features.

SERVER WLANGUAGE

743 New feature WD WB WM WLANGUAGE "OPEN" FUNCTION IN WEBDEV

In version 24, the `open` function is managed in WEBDEV, as well as `OpenChild` et `OpenSister`.
It must be pointed out that these WLanguage functions have

745 New feature WD WB WM "DIALOG" AND "INPUT" WLANGUAGE FUNCTIONS IN WEBDEV

The `Dialog` and `Input` functions are managed in WEBDEV 24. On the one hand this can simplify programming, and on the other hand it improves the automatic cross-platform porting of applications.

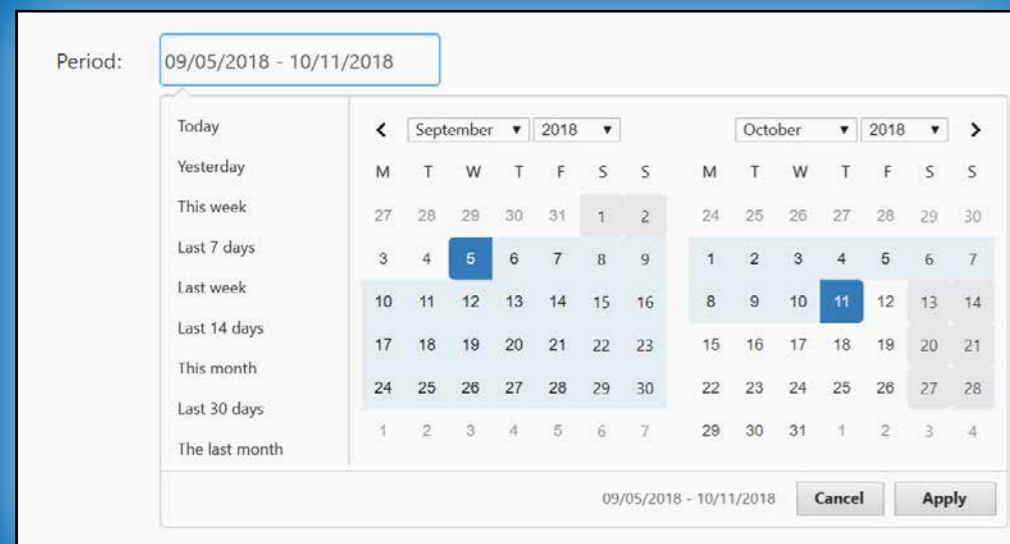
```
SMITCH Dialog( Message_Identifier [, Parameter_1] [, Parameter_2 ] )
```

1 simple line of code (`Dialog` function)...

829

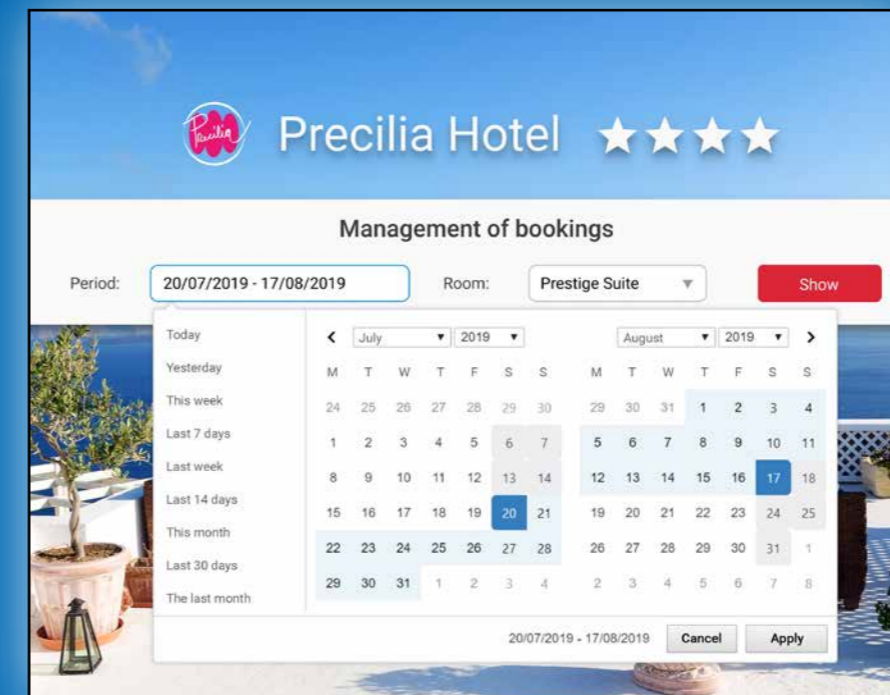
New feature WD WB WM

EXAMPLE OF A JAVASCRIPT COMPONENT BEING INTEGRATED IN WEBDEV A CALENDAR WITH DATE RANGE PICKER



An illustrative example of Javascript code integration in a WEBDEV site is provided in version 24. In this example, the calendar manages the selection of a date or a range.

Modify, customize and freely use this complete example (or other Javascript codes) in your sites and applications!

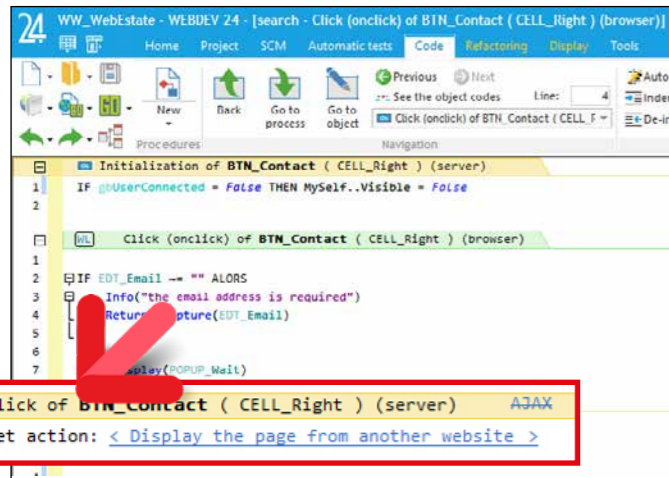


Among the features of this illustrative example are:

- date range selection in 2 clicks
- possibility to specify a start time and an end time
- link with a WEBDEV edit control
- easy-to-reuse control template.

Benefit provided by this new feature of version 24 :
WEBDEV is open to all technologies

830 New feature WD WB WM PRESET ACTIONS VISIBLE IN THE CODE



The preset action "Display a page from another site" activated in the 7 tabs, appears in the code editor

Preset actions on a control (on a button for example: click, ...) are defined in the "7 tabs". It's very practical.

When you resumed a project and studied the code, the selected preset action was not visible in the code editor. Before version 24, it was necessary to go into the "7 tabs" and verify if a preset action had been selected.

In version 24, the preset action can be seen in the code: a description is displayed in the corresponding process, directly in the code editor.

Pro tip: the "7 tabs" window opens by clicking on the description!

Benefit provided by this new feature of version 24 :
The existing elements are easier to understand

831 New feature WD WB WM LOCAL PROCEDURE: "BROWSER", "SERVER" OR "BOTH"

In version 24, a local procedure can be defined according to 3 modes :

- Browser
- Server
- Both Browser and Server.

For example, an input check is often performed both in Browser for local checks and in Server to check the received data.

There is an equivalent feature in OOP, see new feature 740.

Benefit provided by this new feature of version 24 :
Everything is possible

832 New feature WD WB WM TRANSFORM A SERVER LOCAL PROCEDURE INTO BROWSER... (AND MORE)

In version 24, it is possible to change the existing type of local procedure at any moment.

A local procedure can be transformed from one mode to another:

- Server to Browser
- Browser to Server
- Browser to Server + Browser
- etc.

It is no longer necessary to duplicate code!

Benefit provided by this new feature of version 24 :
Procedures that work everywhere

833 New feature WD WB WM BUSINESS LOGIC REQUEST-UPDATE-UI EXECUTE-UPDATE-UI

In version 24, the `RequestUpdateUI` and `ExecuteUpdateUI` functions are available in WEBDEV.

These functions allow you to call the "GUI Update" process by program (from the page).

This allows for architectures where the business logic is separated from the GUI code.

It makes possible to use the MVP architecture with WEBDEV.

Benefit provided by this new feature of version 24 :
MVP in WEBDEV

AJAX



834 New feature WD WB WM HFSQL AUTOMATIC HELP WINDOWS IN AJAX

HFSQL provides automatic help windows when an unexpected error occurs: duplicate detected, record blocked...

In version 24, automatic help also works in Ajax processes : these windows are displayed when the event that causes the error occurs in an Ajax process.

Benefit provided by this new feature of version 24 :
Finally in Ajax

835 New feature WD WB WM 83 NEW WLANGUAGE FUNCTIONS FOR AJAX

In version 24, many new WLanguage functions support Ajax. see the entire list in the online help.

Benefit provided by this new feature of version 24 :
Ajax becomes even more efficient

836 New feature WD WB WM IN CLASSIC (SESSION) MODE, IN AJAX PROCESSES : USE PAGEDISPLAY

In version 24, it is possible to use the `PageDisplay` WLanguage function in an Ajax process. This simplifies the code.

Benefit provided by this new feature of version 24 :
A significant improvement

WEBSERVICE TEST

837 New feature WD WB WM TEST OF REST WEBSERVICES

WEBDEV allows creating and testing REST Webservices.

In version 24, the test tool also includes 4K screens: the display is adapted accordingly.

Benefit provided by this new feature of version 24 :
Test the rest

JSON



838 New feature WD WB WM NATIVE WLANGUAGE TYPE

Web technologies use JSON very often.

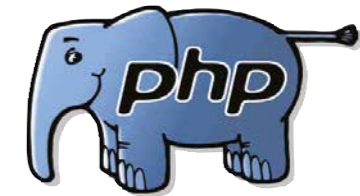
Version 24 offers both a new native WLanguage JSON type and a new JSON item (column) category.

WEBDEV 24 takes advantage of these powerful new features in exchange of data by Webservice, between Browser and Server...

See new feature 110.

Benefit provided by this new feature of version 24 :
Native json

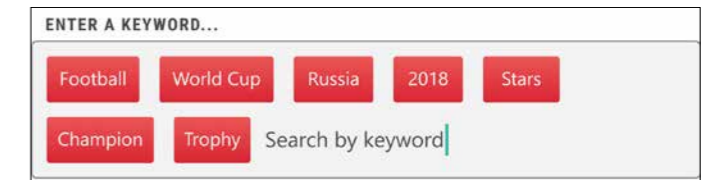
PHP



839 New feature WD WB WM NEW PHP CONTROLS

The new controls of version 24

- Token Edit
 - PopUp Combo
- are available in PHP.



The new "Token" Edit control in PHP

Benefit provided by this new feature of version 24 :
PHP evolves

840 New feature WD WB WM OOP AVAILABLE IN BROWSER PHP

In version 24, it is possible to use OOP for the Browser code in PHP.

Benefit provided by this new feature of version 24 :
A beautiful object

841 New feature WD WB WM 7 NEW WLANGUAGE FUNCTIONS FOR PHP

7 new functions are available in PHP

Tomorrow EditTokenCount	Yesterday EditDeleteToken	EditAddToken EditDeleteAllToken	EditInsertToken
----------------------------	------------------------------	------------------------------------	-----------------

Benefit provided by this new feature of version 24 :
Evolution of WLanguage

GO OF SITES

842 New feature WD WB WM NOTHING TO INSTALL FOR THE GO : WEB SERVER INTEGRATED TO THE ENVIRONMENT

To test your sites under development, there is no need to install and configure a Web server (such as IIS or Apache [although using Apache was smart]) on your development computer.

A Web server is integrated into the WEBDEV development environment.

Benefit provided by this new feature of version 24 :
Nothing to install, nothing to configure

843 New feature WD WB WM GO OF SITE: THE END OF UAC



In earlier versions of WEBDEV, a UAC (Windows Account Control) could be triggered several times during the day. In version 24, thanks to the integration of the Web server into the environment, UACs disappear and developers are no longer interrupted.

Benefit provided by this new feature of version 24 :
UACs were (sometimes) annoying...

LINUX

844 New feature WD WB WM KEY FUNCTIONS

The functions of the `Key` family are now available for WEBDEV Linux.

Benefit provided by this new feature of version 24 :
Improves cross-platforming

845 New feature WD WB WM APPLICATION SERVER DOCKER



An image of the WEBDEV Linux Application Server is available on DockerHub.

The Application Server can be installed in one command line! See new feature 958 on the next page.

Benefit provided by this new feature of version 24 :
Easy installation

New feature WD WB WM

846 to 954 109 NEW WLAN-GUAGE FUNCTIONS ON LINUX

109 new functions are available on Linux :

AddReference	ProfilerStart	ProfilerEnd	LeapYear
AnsiToOem	Warning	LoadParameter	KeyCalcActivationKey
KeyCompareKey	KeyGenerateInitialKey	KeyGetIdentifier	CoordinateScreenToEditor
CoordinateEditorToScreen	Tomorrow	RequestUpdateUI	RequestUpdateUIParent
Dialog	DocChangeZOrder	GetCountryISO	GetCountryName
GetUIID	GetUIID256	dPolyline	ExecuteUpdateUI
ExecuteUpdateUIParent	fAttributeReadOnly	fLoadResource	fShortName
fLongName	fDataDirCommon	gFontStrikeout	gpwActivateUser
gpwAddAuthLogin	gpwNone	gpwAuthLogin	gpwDefault
gpwForgottenPassword	gpwFindUser	gpwSupervisor	gpwRegisteredUsers
gpwCheckUser	gpwVisitor	grAxisPosition	HExportCSV
HExportXLS	Yesterday	iWindowCancel	iDocumentCanceled
BitmapInfo	InitParameter	InsertReference	MongoAdd
MongoFind	MongoConnection.Constructor	MongoCreate	MongoCreateCollection
MongoExecuteCommand	MongoGridFS.Constructor	MongoGridFSSendFile	MongoGridFSListFile
MongoGridFSGetFile	MongoGridFSGetFileById	MongoGridFSGetFileInfo	MongoGridFSDeleteFile
MongoGridFSDeleteFileById	MongoInfo	MongoModifyAll	MongoModifyOne
MongoDeleteDatabase	MongoDeleteCollection	MongoDeleteAll	MongoDeleteOne
OemToAnsi	OpenIDReadIdentity	SchedulerMode	RedisSubscribe
RedisConnect	RedisUnsubscribe	RedisExecuteCommand	RedisPipelineAdd
RedisPipelineReset	RedisPipelineGet	RedisPublish	Input
EditAddToken	EditInsertToken	EditTokenCount	EditDeleteToken
EditDeleteAllToken	SaveParameter	SFAdd	SFForwardQuery
SFConnect	SFConvertLead	SFDisconnect	SFExecuteQuery
SFExecuteProcess	SFMerge	SFRead	SFModify
SFSearch	SFSeekModified	SFSeekDeleted	SFUndelete
SFDelete	SFEmptyRecycleBin	SOAPToHTTP	DeleteParameter
ArrayAddReference	ArrayInsertReference	ValidatePassword	

Benefit provided by this new feature of version 24 :
Improves cross-platforming

SINGLE-PAGE APPLICATION (SPA)

955 New feature WD WB WM SPA: MANAGEMENT OF PLANES

A Single Page Application is often built on different planes. In version 24, managing planes is more visual.

It is easy to :

- View all the planes
- Insert a plane
- Move a plane.

This new feature has an effect of the planes of the page themselves, but also on the planes of the containing controls.

Benefit provided by this new feature of version 24 :
It doesn't fly but it's the right plane

SOCIAL NETWORKS

956 New feature WD WB WM INSTAGRAM



A new "Instagram" control opens the user's Instagram account page. This allows the user, for example, to easily subscribe to an Instagram account.

Benefit provided by this new feature of version 24 :
1 billion users on Instagram!

APPLICATION SERVER

957 New feature WD WB WM SECURITY AUDITS : CLASSIC (SESSION) MODE MEETING THE STANDARDS



The WEBDEV Classic (session) mode is based on an automatic management of sessions.

Session identification uses a protocol that makes it impossible to maliciously generate the identifier used (more than 1 million billion billion possibilities).

However, it was theoretically possible to copy/paste the session ID (full URL) in another browser with the same IP address and enter the session, if it hadn't already ended.

This was only possible from a computer in the same company, by performing this manipulation at the same time.

No real cases of this manipulation have ever been reported.

Nevertheless, security audits could identify this theoretical possibility.

In version 24, this operation is no longer possible.

Benefit provided by this new feature of version 24 :
Green light for audits





958 New feature WD WB WM
**SIMPLIFIED LINUX SETUP:
 DOCKER CONTAINER OF
 WEBDEV SERVER
 APPLICATION**

In version 24, a Docker container with the WEBDEV Application server is present in Docker Hub. Setting up a Linux WEBDEV Application Server becomes extremely simple : 1 line to type or script! Depending on the type of server (10 or unlimited simultaneous connections), you will be asked for the server's serial number.

```
~ # docker run -p 80:80 -v /home/webdev/:/home/webdev windev/webdev
```

(if you manage to read it:) The script line!

Benefit provided by this new feature of version 24 :
The setup of the Linux application server is very simple

959 New feature WD WB WM
**SIMPLIFIED SETUP:
 NO NEED FOR FTP**

In version 24, it is no longer necessary to use an FTP server to install the WEBDEV application server. This simplifies the setup process! Of course, it is still possible to continue using an FTP server.



Benefit provided by this new feature of version 24 :
Simplified application server setup

REST WEBSERVICES

963 New feature WD WB WM
**TRIGGER?
 PROCEDURE EXECUTED
 EACH TIME THE WEBSERVICE
 IS CALLED
 (PROLOG FUNCTION)**

In version 24, it is possible to specify that a procedure must be called (and executed automatically) each time a Webservice is called. This makes it possible, for example, to set up security or billing systems, such as a check of a token passed in the header.

Benefit provided by this new feature of version 24 :
A procedure that doesn't leave out the rest...

964 New feature WD WB WM
**AND NUMEROUS OTHER
 FEATURES**

Version 24 offers many other new features, which we will let you discover once you have ordered and received your product...

SAAS

960 New feature WD WB WM
**SAASCHECKSERVICE :
 OPTIMIZATIONS**

In SaaS, it is possible to check at any moment whether the connected user has the rights to use any functionality. This verification uses the WLanguage function *SaaSCheckService* (Here, "Service" is used in the sense of "SaaS functionality"). In version 24, *SaaSCheckService* can check a set of services in a single call. This reduces the number of lines of code, but most importantly it reduces round trips to the server!

Benefit provided by this new feature of version 24 :
Even faster

MANAGEMENT

961 New feature WD WB WM
ADMINISTRATOR IN WEB MODE

In version 24, the administrator in Web mode benefits from new features: install several sites with the same name on the same server, make the JSON description of a REST Webservice accessible,...

Benefit provided by this new feature of version 24:
Manage in Web mode



**DEPLOYMENT
 OF YOUR SITES :
 DYNAMIC
 UPDATES**

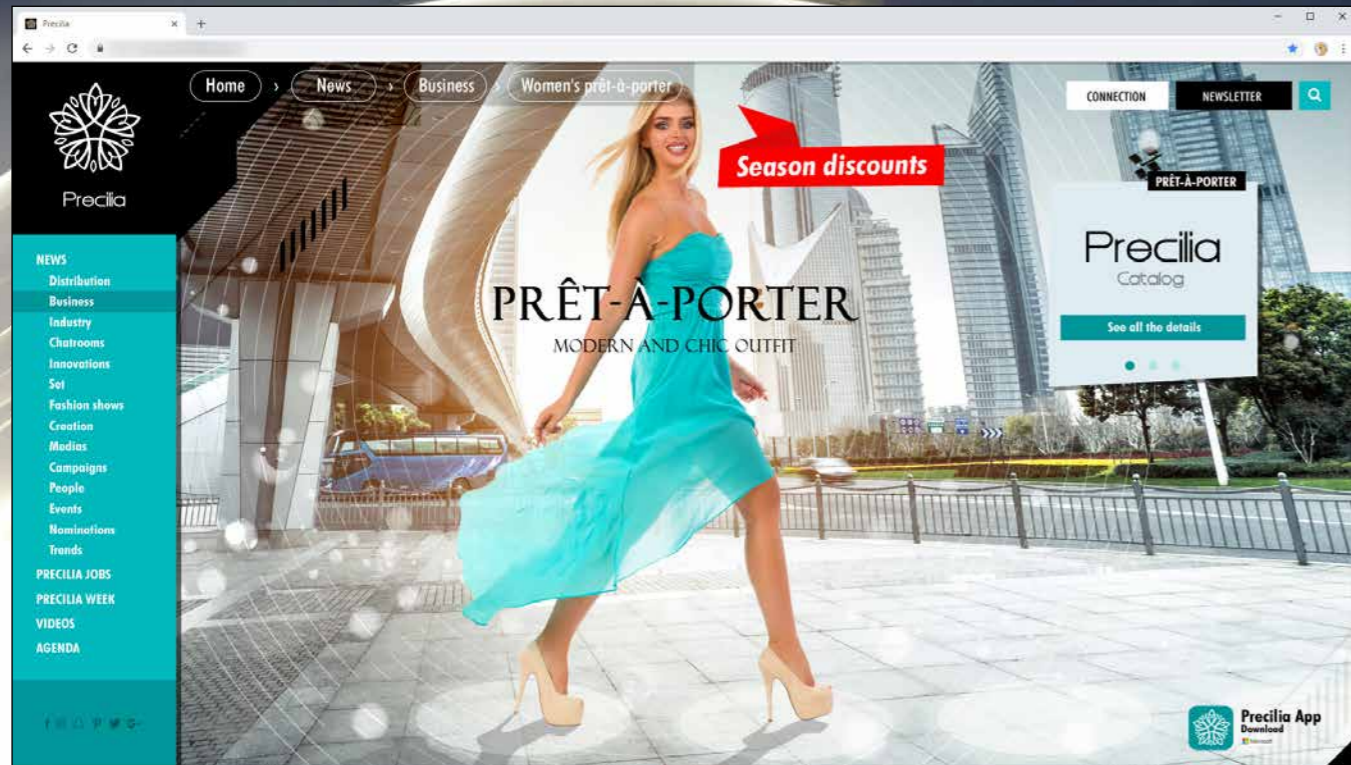
962 New feature WD WB WM
**NO NEED FOR WEB USERS
 TO BE DISCONNECTED:
 ZERO DOWNTIME UPDATE OF
 YOU DYNAMIC SITES**

This new feature will satisfy all Classic (Session) site administrators.

Updating a Dynamic Classic site (session site) no longer requires disconnecting all Internet users to perform the update! In version 24, the update of a site does not affect connected users, whether in AWP or Classic mode.

Benefit provided by this new feature of version 24 :
Great!





**YOUR
APPLICATIONS
ARE FASTER
AND MORE
BEAUTIFUL
IN VERSION**

24

**TECHNOLOGY DOES NOT WAIT :
ORDER VERSION 24
TODAY**

Order today! Versions 24 have been announced. Any purchase of WINDEV 23 or WEBDEV 23 or WINDEV Mobile 23 (excluding updates) as of 9/1/2018 entitles you to a free update (package and manuals) to the corresponding version 24, as soon as available. Any purchase of an update to version 23 after 9/1/2018 entitles you to version 24 (package and manuals) for the difference in update price (excluding shipping costs). New versions are being announced now so you can plan on them when developing, and so you don't spend time developing features that will be included in the product. Some functions may not be available right away when the version ships, but will be offered later as downloads. Also note that additional improvements and new features other than the ones described in this document may be available in the new version. WINDEV, WEBDEV and WINDEV Mobile are professional software. The amount of new features adds up to more than 924 since certain new features concern several subjects and are presented more than once. Despite the care taken in creating this document, it is not contractual. The screen shots and the lists are given for information purposes only. Don't hesitate to contact us if you need any additional information or to get confirmation of a feature. All the trademarks mentioned in this publication are registered trademarks of their respective owners.

Your code is unique:
Windows, Internet,
HTML5, CSS, Linux,
Mobile, Java, .Net,
PHP, Mac, Webs er-
vice, Android, iOS,
Windows 10 Mobile,
Cloud, SaaS...



WINDEV WEBDEV WINDEV
Mobile

924
NEW FEATURES

TECHNOLOGY DOES NOT WAIT:
ORDER VERSION 24
TODAY

Your code is unique : Windows, Internet,
HTML5, CSS, Linux, Mobile, Java, .Net, PHP,
Mac, Webservice, Android, iOS, Cloud, SaaS...



WWW.WINDEV.COM

PCSOFT