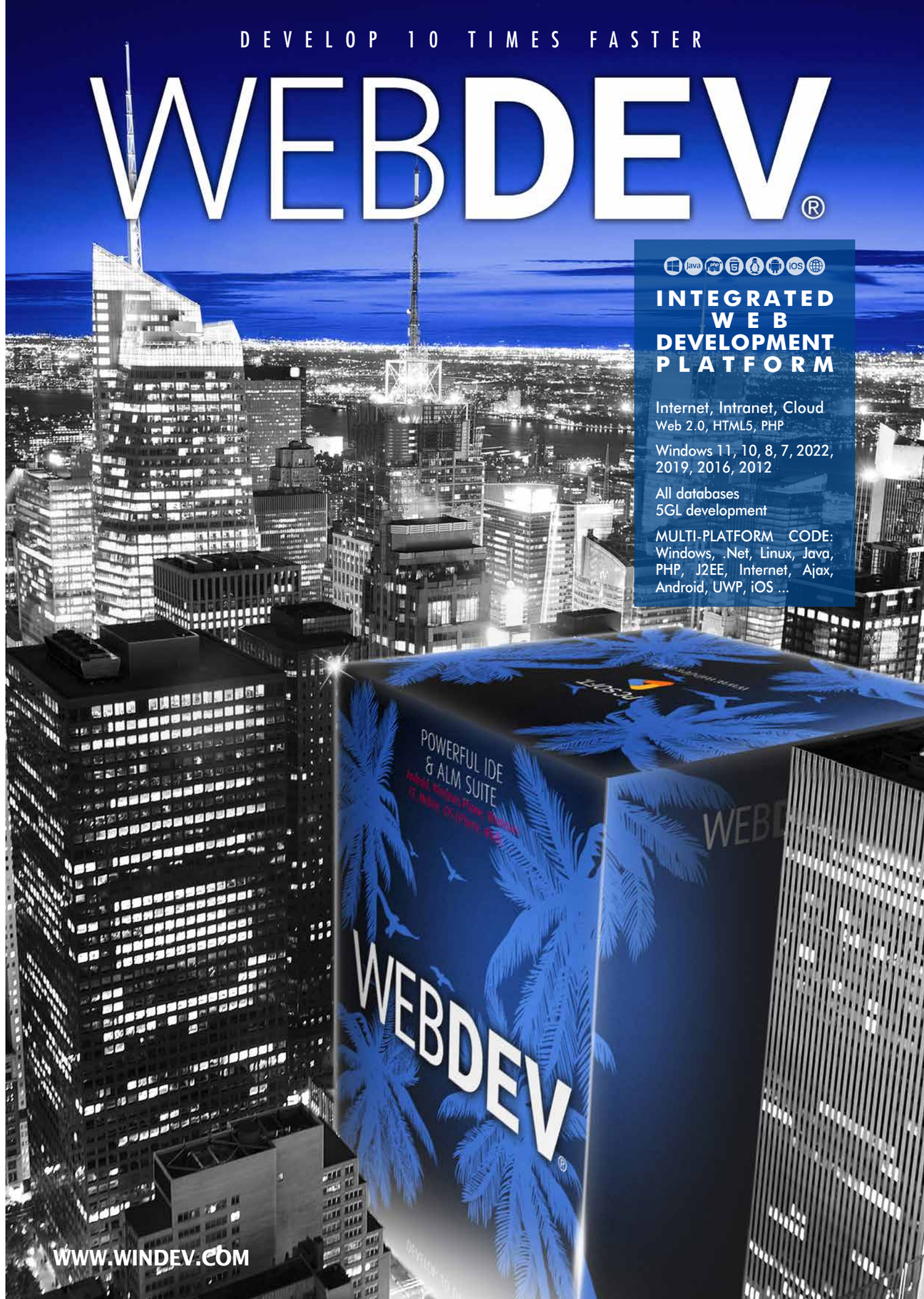
DEVELOP 10 TIMES FASTER

WEBDEV®



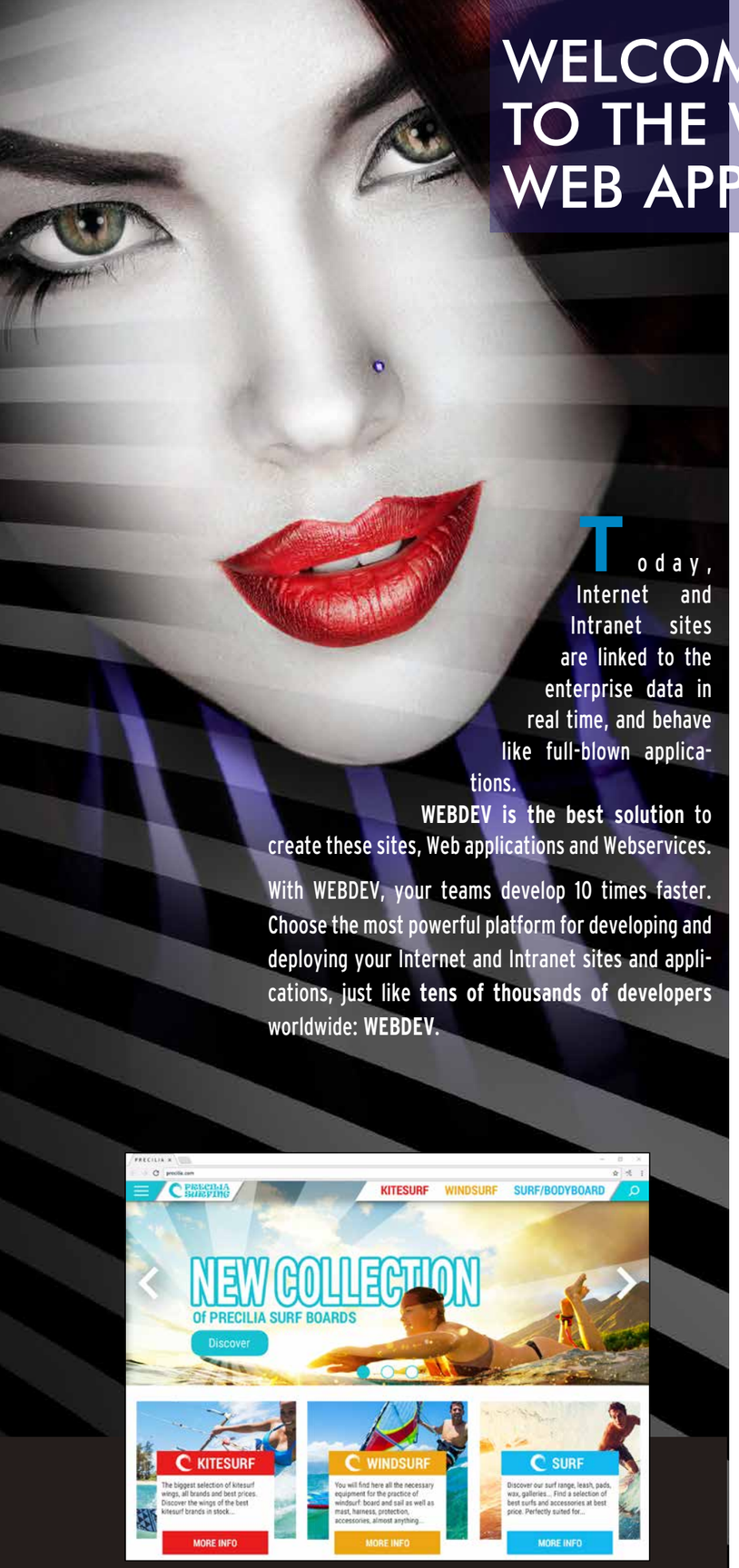
INTEGRATED WEB DEVELOPMENT PLATFORM

Internet, Intranet, Cloud
Web 2.0, HTML5, PHP

Windows 11, 10, 8, 7, 2022, 2019, 2016, 2012

All databases
5GL development

MULTI-PLATFORM CODE: Windows, .Net, Linux, Java, PHP, J2EE, Internet, Ajax, Android, UWP, iOS ...



WELCOME TO THE WORLD OF WEB APPLICATIONS

Today, Internet and Intranet sites are linked to the enterprise data in real time, and behave like full-blown applications.

WEBDEV is the best solution to create these sites, Web applications and Webservices.

With WEBDEV, your teams develop 10 times faster. Choose the most powerful platform for developing and deploying your Internet and Intranet sites and applications, just like **tens of thousands of developers** worldwide: **WEBDEV.**

Summary

3 Entire lifecycle
4 Questions/Answers
6 Examples
8 Static and dynamic sites
9 Intranet, Internet
10 A revolutionary technology
12 IDE: the WYSIWYG environment
13 The "7-tab" tech
14 Zoning
15 Responsive Web Design
16 Templates
17 HTML Editor
18 Compatibility with all browsers
20 Controls adapted to the Web
27 Export to Word, Excel
28 HTML5 & CSS3
29 64 languages, Electronic invoicing
30 The 5GL language
31 Code editor
32 Debugger, OOP
33 REST & SOAP Webservices
34 Angular, Bootstrap, JQuery...
35 Native access to Google, SAP,...
36 Https, Secure payment
37 Organic SEO, Password security
38 SPA, Websocket
39 SaaS
40 Data modeling
41 All databases
42 HFSQL: free database
44 Visual query editor
45 Report & PDF generator
46 Versioning (SCM)
47 Project management
48 HTML import & WINDEV
49 PHP
50 Hosting
52 Deployment
54 Administration, Statistics
55 Front Office, Back Office
57 Examples of sites

INTEGRATED DEVELOPMENT PLATFORM
IDE - DevOps

WITH WEBDEV:
QUICKLY CREATE INTERNET, INTRANET AND SAAS SITES USED TO MANAGE DATA

1 IDEAS, REQUIREMENTS

2 DESIGN

- **REQUIREMENT MANAGEMENT**
- **UML** 9 Diagrams
- **ANALYSIS** Data structures, CDM, LDM
- **RAD PATTERN**
- **STYLE BOOK**
- **FLEXIBLE MODELING**
- **TEMPLATES** windows, reports, controls, ...
- **CODE STYLE**

GENERATION

REVERSE ENGINEERING

3 DEVELOPMENT

DATABASE

- **ARCHITECTURE** 2-TIER AND 3-TIER, MOR, MVP
- **HFSQL/HFSQL DRIVE** SQL database
- **NATIVE CONNECTORS** OLE DB, ODBC, MySQL, PostgreSQL, MariaDB, AS/400, Oracle, SQL Server, ...
- **BIG DATA** Hadoop, HBase, Riak, Memcached, MongoDB, Redis, ...
- **NATIVE APP. ACCESS** WebService, SAP, Google, Outlook, LDAP, Lotus Notes, RSS, Facebook, SalesForce, ...
- **UNIVERSAL REPLICATION**
- **BINDING**
- **HFSQL CONTROL CENTER**
- **EXTERNAL RESOURCES** Component, Webservices API, DLL, OLE, ActiveX, XML, XLS, DOCX, RSS, JSON, HTML, HTTP, FTP, Socket, .Net, Java, J2EE, Javascript, SMTP, POP3, IMAP, TAPI, Serial Port, MQTT, Chorus, DMP, Twitter, Instagram, Youtube, Facebook, Linkedin, ...
- **EXISTING CODE** C, C++, C#, Java, Phyton, Access, Pascal, Cobol, Fortran, VB, ...
- **DEVICES AND DOMOTICS** X10, Robot, Production line, iOT, Modbus, ...

- **PAGES,** Responsive, Zoning, HTML stream, ...
- **5GL CODE** WLanguage
- **COMPONENTS**
- **RAD** (Rapid Application Development)
- **DEBUGGER**
- **REPORTS AND QUERIES**
- **CLASSES**
- **MULTIPLE LANGUAGES**
- **IMAGE EDITOR**

- **TECHNICAL DOCUMENTATION** Generation (PDF, RTF, HTML, ...)
- **MESSAGING**
- **SECURITY** User groupware , Rights management, Encryption, ...
- **EDITION AUDIT** GDPR, Dead codet, Cleaning, GUI, ...
- **MULTI-PROJECTS SEARCH**
- **CONTINUOUS INTEGRATION**
- **SCM/SCM DRIVE** Source Code Manager, Versioning, ...
- **PROJECT MONITORING CONTROL CENTER** Requirements , Business rules, Tasks, Bugs, Statistics, ...
- **AUTOMATED TESTS**
- **HOSTING CONTROL CENTER** User account, Server configuration, Cloud, ...
- **CODE COVERAGE** Detection, Measure, Statistics, ...
- **SAAS**
- **...**

4 GENERATION

- **WEBSITES** Static/Dynamic, AWP, HTML5, CSS3, Responsive, Mashup, Javascript, AJAX, ...
- **COMPONENTS**
- **PHP**
- **WEBSERVICES** Soap, Rest
- **WEBSOCKETS**

5 DEPLOYMENT
zero-dowmtime, ...

- **APPLICATION SERVER**
- **DOCKER**
- **PRIVATE CLOUD**
- **SAAS**
- **PCS CLOUD**

6 PRODUCTION

- **STATISTICS TOOLS**
- **SAAS ADMIN.**
- **DYNAMIC AUDIT**
- **WEBDEV ADMIN.**
- **MONITORING ROBOT**
- **DEBUG DUMP FILE**
- **PROFILING**
- **AAF** (Automatic Application Features)

www.windev.com

QUESTIONS ANSWERS

You will find the answers to the most common questions about WEBDEV.

1	Who is WEBDEV made for?	WEBDEV is made for all the organizations and developers that want to create Internet, Intranet, extranet, Cloud and SaaS sites and applications.
2	What types of sites and applications can be created?	All types of sites, Web applications, SPAs, webservices... WEBDEV specializes in sites that manage data.
3	What do I have to know?	You just need a little experience in programming (even if brief experience during your studies). One week is usually enough to train oneself thanks to the tutorial included.
4	Do I need any special Internet skills?	No. Your development teams will automatically build robust and efficient sites. All the code (HTML, JavaScript, CSS, Server) is generated by WEBDEV.
5	Can I create Responsive websites with WEBDEV?	Yes. Responsive design comes standard in WEBDEV..
6	What is the main advantage of WEBDEV?	There are many, such as: integration, simplicity, speed of development, access to databases. And WEBDEV is "Full Stack"
7	Does WEBDEV rely on standard technologies?	Yes: HTML5, XML, CSS3, JavaScript or PHP. But you don't need to know these technologies, WEBDEV automatically generates the necessary code.
8	So I don't need to know HTML, PHP or JavaScript?	No, it's not required. WEBDEV automatically generates the necessary code.
9	What if I want to write HTML, or use JavaScript or CSS?	WEBDEV is not restrictive. You can write or copy HTML, PHP or JavaScript code directly in the editor. You retrieve CSS styles and animations.
10	I already have a site. Can I use it with WEBDEV?	Yes. You can "absorb" existing HTML pages. You can also mix WEBDEV pages with an existing page, while keeping your existing site.
11	I have read that WEBDEV is compatible with WINDEV. Do I have to have WINDEV?	No. WEBDEV is a totally independent platform.
12	What if I already own WINDEV?	If you already own WINDEV, you can automatically transform your existing WINDEV applications into Web sites...
13	Can consume or create Webservices?	Yes, WEBDEV allows you to use Webservices (SOAP and REST). WEBDEV also lets you create Webservices.
14	What databases can be used with WEBDEV?	All databases can be used: HFSQL, MySQL, SQLite, Oracle, AS/400, SQL Server, DB2, Informix, PostgreSQL, Progress, Access, ... As well as Big Data databases
15	Are Ajax, XML, CSS, JSON, JQuery, Angular JS, Bootstrap supported?	Yes.
16	Can I develop large and complex sites with WEBDEV?	Yes, this is where its true value lies.
17	What Technical Support is available?	WEBDEV Technical Support is free (15 free custom inquiries by e-mail). Consulting services are available (on-site or by video conference).
18	Who uses WEBDEV?	All kinds of professional entities: software companies, hardware manufacturers, IS departments, lab engineers, government offices, administrations, individuals...
19	Can I generate sites in PHP with WEBDEV?	Yes, this is a standard feature.
20	So WEBDEV is the best for creating dynamic sites	Yes

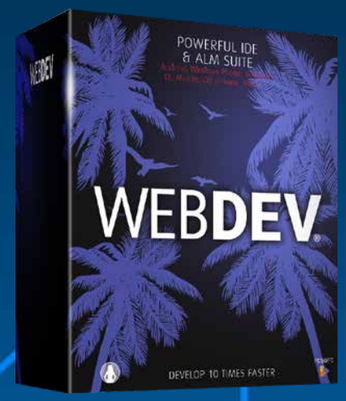
WEBDEV MANAGES ALL THE DEVELOPMENT STAGES

WEBDEV : "FULL STACK" DEVELOPMENT TOOL

WEBDEV, a complete and fully integrated product : it is easier to master, technical support is more efficient (and it is free).

EVERYTHING IS MANAGED :

- Prototyping
- Design
- GDPR
- Analysis and program documentation
- Link with existing static sites
- Databases
- Webservices
- Programming: 5LG, Ajax, .NET, J2EE, HTML5, JavaScript, CSS...
- Reusing existing elements
- Reports: PDFs, bar codes,...
- Secure payment
- Creation and use of components
- Documentation
- Working with Web designers
- Tests during development
- Link to the Back Office
- Hosting
- SaaS management
- Cloud
- Setup on the hosting provider
- Regression tests
- Performance tests
- Continuous integration
- Maintenance and evolutions
- Traffic statistics
- Development method



A LARGE NUMBER OF **READY-TO-USE** SITES AND APPLICATIONS ARE PROVIDED

REUSABLE AND CUSTOMIZABLE SAMPLE SITES ARE PROVIDED

WEBDEV comes with a large number of fully-developed websites and web applications. Both the source code and the pages are provided: you can use these sites, these applications directly, modify them, customize them, resell them...

A TRAINING ROLE

You can also study the code of these sites in order to learn from them.

AMONG THE PROVIDED SITES...

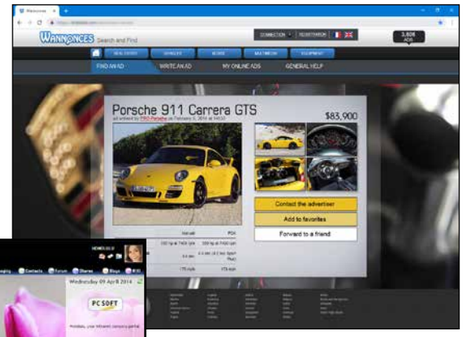
Here's a selection of some of the provided sites :

➔Retail site

Shelf, basket, payment management.

➔ Classified ads

Management of multiple selection criteria.



Honolulu : Intranet portal

A complete Intranet portal, with all its applications (mail, news, document search, etc.) is also provided. Directly usable, it can also be adapted to your needs (source code provided).

Hundreds of thousands of Honolulu copies have already been deployed

➔ Shared directory

With an Intranet, the directory can be shared within the company.
On the Internet, the directory can be shared among several branches, or by members of an association...

➔ Management of equipment directory

Location and assignment of equipment via a web site.

➔ Real estate

Search for a property according to several criteria.

➔ CMS

Content Management System.

➔ Management of a document database

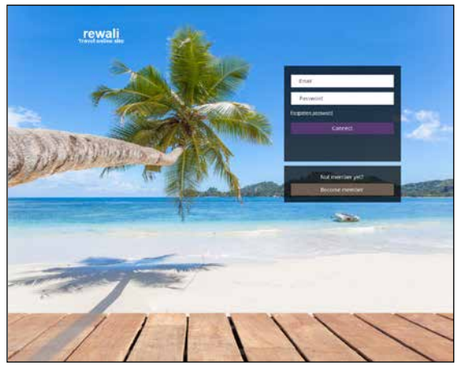
To archive and find documents using keywords.

➔ Secure payment

(see details page 30)

➔Travel agency management

Presentation of hotels, availability, selection according to several criteria, ...



➔ News, Forum, Blog, Community site, FAQ management...

... and several additional examples that can be immediately used.

ETC...

Several additional examples are also supplied as pages, or as objects in the interactive dictionary.

SAVE TIME

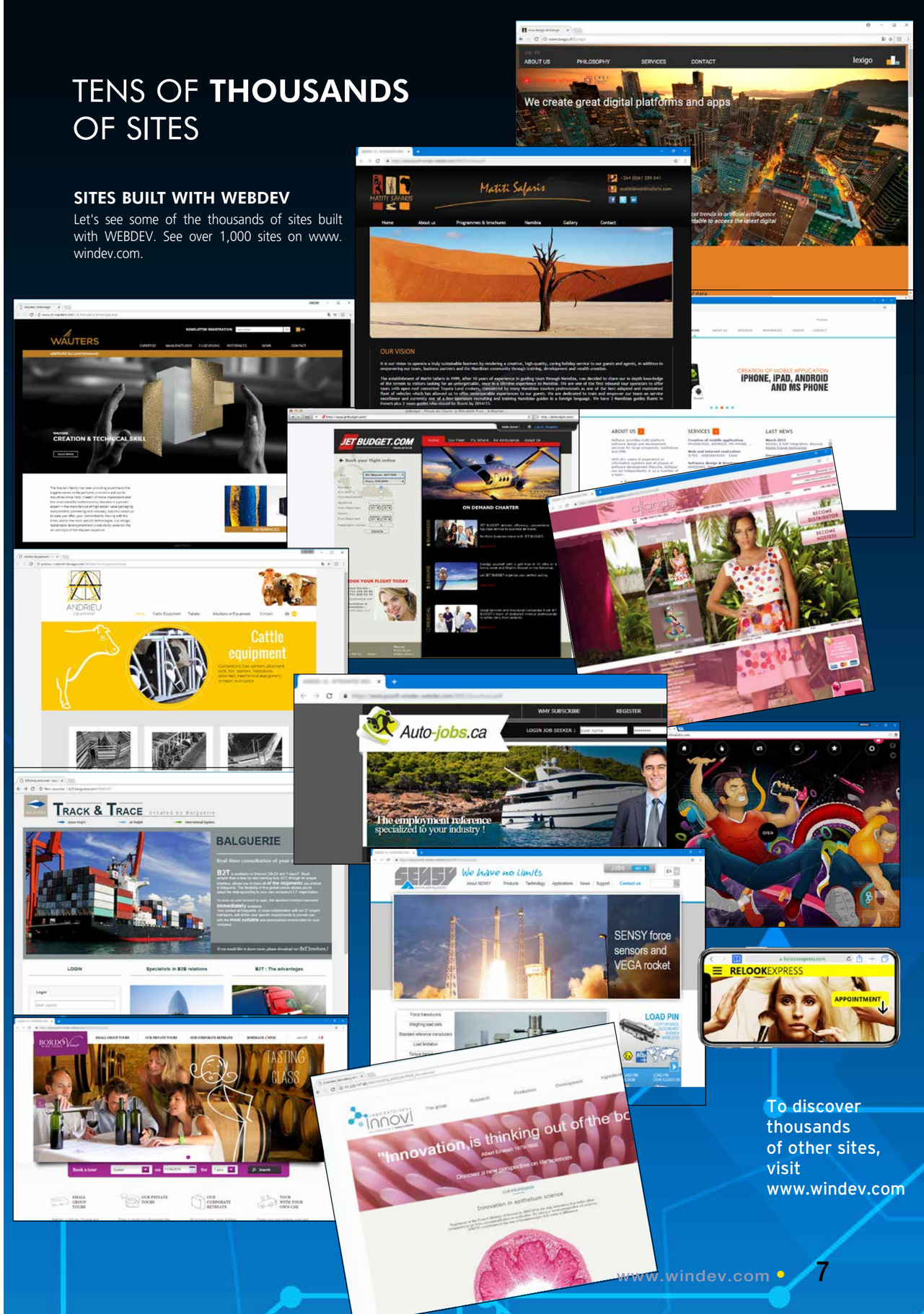
The provided sites, which can be adapted to your own needs, will save you a lot of time during the development phase.

Due to ongoing changes, the sites presented may look different from the sites provided..

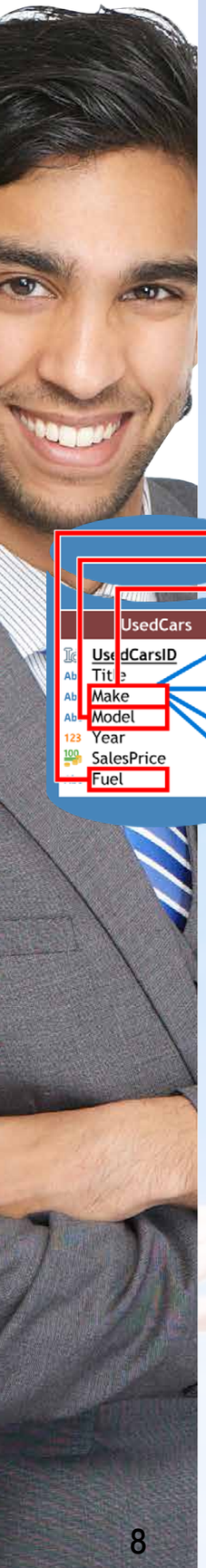
TENS OF **THOUSANDS** OF SITES

SITES BUILT WITH WEBDEV

Let's see some of the thousands of sites built with WEBDEV. See over 1,000 sites on www.windev.com.



To discover thousands of other sites, visit www.windev.com



WHAT IS A **DYNAMIC** SITE?

REMINDER: STATIC SITE

A **STATIC SITE** is a site that presents fixed pages, previously linked to each other.
It's a set of pages on the Internet that can be consulted.
In general, a static site presents "fixed" information about a company, group or association: activity, address, product, sometimes prices, a contact page...
Static sites can become quite restrictive: each modification made to the information must applied to the site, and the corresponding pages must be reinstalled.
In order to keep the product details up to date, the static site must be modified.

WHAT IS A DYNAMIC SITE?

A **DYNAMIC SITE** creates, in real time, the pages requested by Internet users, using the data from databases.
Let's take the example of a catalog that contains 300,000 items: a static site could use 300,000 different static HTML pages!
A dynamic site will only require one page, intended to receive data (product references, photo, designation, price, customer reviews, etc.).
The server will "assemble" the necessary data for each request.
(See also SPA technology, "Single Page Application" on page 38).

ALWAYS UP TO DATE

The data of the dynamic site is **ALWAYS UP TO DATE**, since it comes from the company's databases.
You display the current price, the actual stocks, you indicate to the Web user when their order was shipped, you manage schedules,...

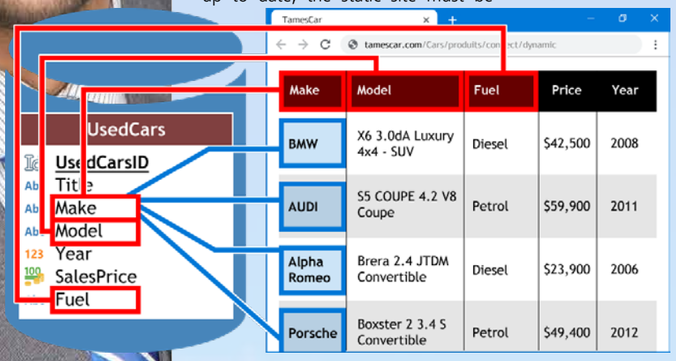
SITES THAT ARE ACTUAL APPLICATIONS

Another interesting aspect of dynamic sites created with WEBDEV is that they behave like **REAL APPLICATIONS**. All the power of the programming is at your disposal to define the processes.

EASE OF USE

Thanks to its powerful complete development environment and its vast set of features, WEBDEV makes it very **EASY** for any developer, even without any Internet-specific skills, to create reliable, sophisticated, fast and easily-modifiable websites.

(Who can do more can do less: WEBDEV also creates static sites)



ADDING A DYNAMIC SECTION TO AN EXISTING **STATIC** SITE

Today, companies that own a static site want to take advantage of dynamic features.

REUSE YOUR EXISTING ELEMENTS WITH WEBDEV

To reuse an existing **ELEMENT**, you have various options. You can :

- add dynamic pages to the existing static site
- mix static and dynamic sites
- import your static pages into the dynamic site
- ...

In all cases, you can keep what you have and improve on it.

MIX STATIC AND DYNAMIC PAGES

MIXING static and dynamic pages is the fastest solution.
The existing static site is **KEPT**, and the dynamic pages are **ADDED** and called from the static site, or replace some static pages.
It is also easy to transparently link two sites, a static one and a dynamic one.

IMPORTING STATIC PAGES

WEBDEV offers a powerful feature for importing static pages and templates (see page 48).
Existing static pages are **IMPORTED** into the environment, and are transformed into WEBDEV pages.

THE NEED FOR "REAL TIME"

A price changed in the information system. of the company? The site is updated right away.
A new product reference is added to the I.S.. ?
This product is included in the dynamic site automatically and immediately.
The stock has changed? The page is automatically updated.
Without having to modify and update pages, a dynamic site automatically displays **UP-TO-DATE DATA**.

"DYNAMISM" IS ESSENTIAL

Today, your sites must behave like applications! Your sites must be dynamic.

WEB, INTRANET/EXTRANET APPLICATIONS : WEBDEV IS KING!

WEBDEV IS THE IDEAL TOOL FOR CREATING INTRANET AND EXTRANET SITES OR WEB APPLICATIONS

WEBDEV is the ideal tool for creating Intranet and Extranet sites.
An Intranet site is a site private to a set of users: companies, customers, employees, suppliers...
Rights are accessed and managed via username and password. Access by password is automatically managed in your WEBDEV sites (see page 37).

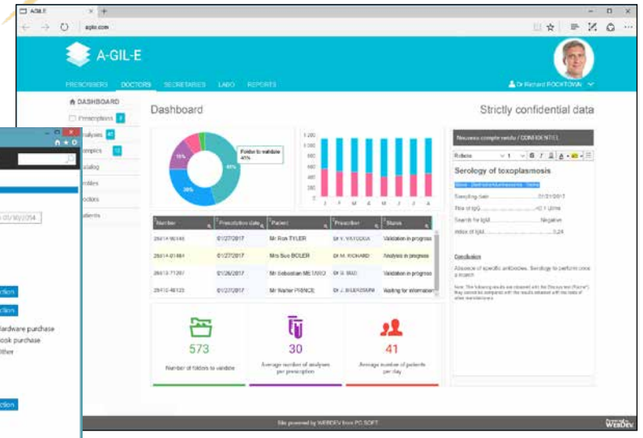
AUTOMATIC TOTAL SECURITY

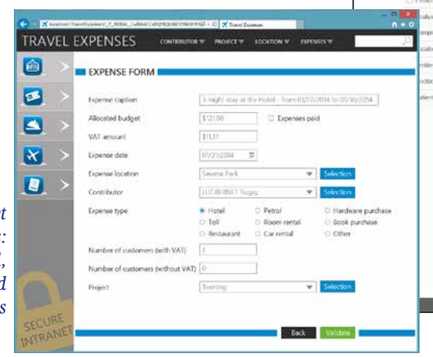
The Intranet site or the Web application created with WEBDEV is accessible through a single session.
By default, for each user, a session is automatically opened and maintained on the server.
The site's security is automatically ensured via these automatic sessions: the page address cannot be reused by "copy/paste"..

NO LIMIT

The functional richness of WEBDEV makes it possible to develop real Web applications: there are no limits.
WEBDEV is the ideal tool to create Intranet and Extranet sites, and this is why thousands of large companies have created their Intranet with WEBDEV.

WEBDEV
The easiest way to create Cloud applications





2 Extranet examples: Dashboard, and Expense Accounts

INTERNET : WEBDEV IS KING (TOO)!

WEBDEV IS IDEAL FOR CREATING A WEBSITE

An Internet site is a site accessible simultaneously by users worldwide.
Each page of this site must be suitable for SEO purposes : Google...
To be correctly optimized, a site must be "Mobile Friendly", i.e. it must work on a computer as well as on a smartphone or tablet.
WEBDEV allows the easy creation of this type of sites.

AWP TECHNOLOGY: ORGANIC SEO

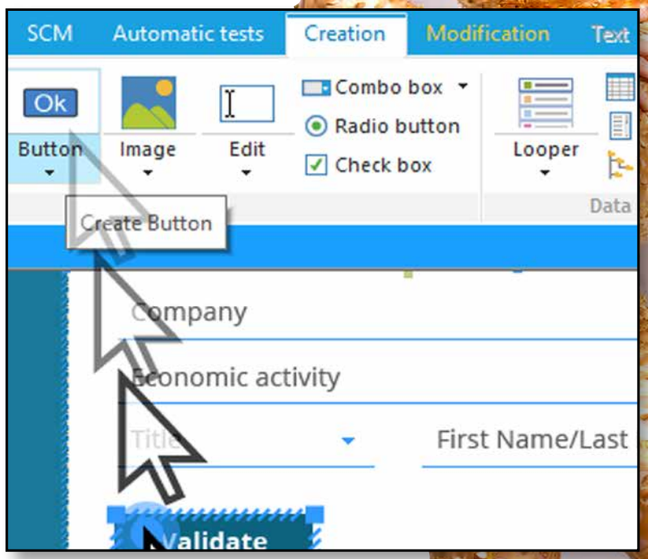
To improve organic SEO, WEBDEV proposes the AWP technology: Active WEBDEV Page.
Thanks to this AWP technology, WEBDEV allows to create independent dynamic Web pages.

Each AWP page is SEO-friendly thanks to its address (URL).
URL rewriting is supported, which allows you to optimize dynamic page content.
An AWP page of the site runs autonomously, the context is managed by programming.

PAGE CREATION : A **REVOLUTIONARY** METHOD

WEBDEV offers the best integrated, powerful and user-friendly work environment available on the market!
Create your sites visually. WEBDEV automatically generates the HTML, JavaScript, CSS and Server code needed for the site.
No previous knowledge of Internet programming is required.

REDUCE THE CODE



WEBDEV editor : graphic, create controls and pages with a few clicks!

*A **revolutionary** method ! Creating pages is easy: **drag/move** the desired controls from the ribbon, position them directly with your mouse! The custom characteristics of the control are defined **visually** via the "7 tabs"* *(see page 13)*

WEBDEV is a complete integrated environment.
All development is done in one single environment and with one single language: WLanguage, an extremely **powerful** and **easy-to-learn** 5GL.
You don't have to use several different frameworks, or to switch between languages.
Thus, WEBDEV makes it possible to develop without an extensive knowledge of the Internet.
The WEBDEV page editor enables you to easily and quickly build incredible pages. Pages are created visually by positioning the controls with the mouse.

HTML, CSS AND JAVASCRIPT

No need to know HTML, CSS or JavaScript to build beautiful and powerful dynamic sites.
WEBDEV generates all the necessary code for you.
However, WEBDEV is **open**, and if necessary, you can write (or paste) low-level HTML, CSS, JavaScript, Bootstrap, React, or PHP code directly into your WEBDEV site. You can also use frameworks: Angular, JQuery, React... (see p 34).

With WEBDEV, your teams develop 10 TIMES FASTER all types of websites and applications, Internet, Intranet, Extranet, Cloud and SaaS.

CONTROLS IN PAGES: REVOLUTIONARY WYSIWYG!

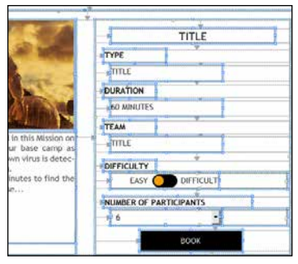
The different controls (edit, static, image, etc.) are created and positioned **visually**, interactively in the editor. What **you see** in the editor is what **the Web users will see** in their browsers.
Pages (with the controls and their detailed characteristics defined by the 7 tabs, as well as their code) are saved as **reusable elements.**
This technique simplifies programming, managing pages as **advanced objects**.
The page editor allows you to **visually** create and modify controls, regardless of the source code.
Inheritance is managed: You can be notified about any changes made to an element shared by several developers.

With WEBDEV, it is possible to modify the properties of a control **by programming**.
For example, depending on the profile of the Web user, you can hide or display specific controls. Everything is **dynamic**!

This approach for managing pages and controls allows you to **save a significant amount of time** when creating and maintaining sites, and to make them more **robust**.

PRECISE POSITIONING

You choose the type of positioning.
WEBDEV uses powerful mouse positioning algorithms to position objects with pixel precision.

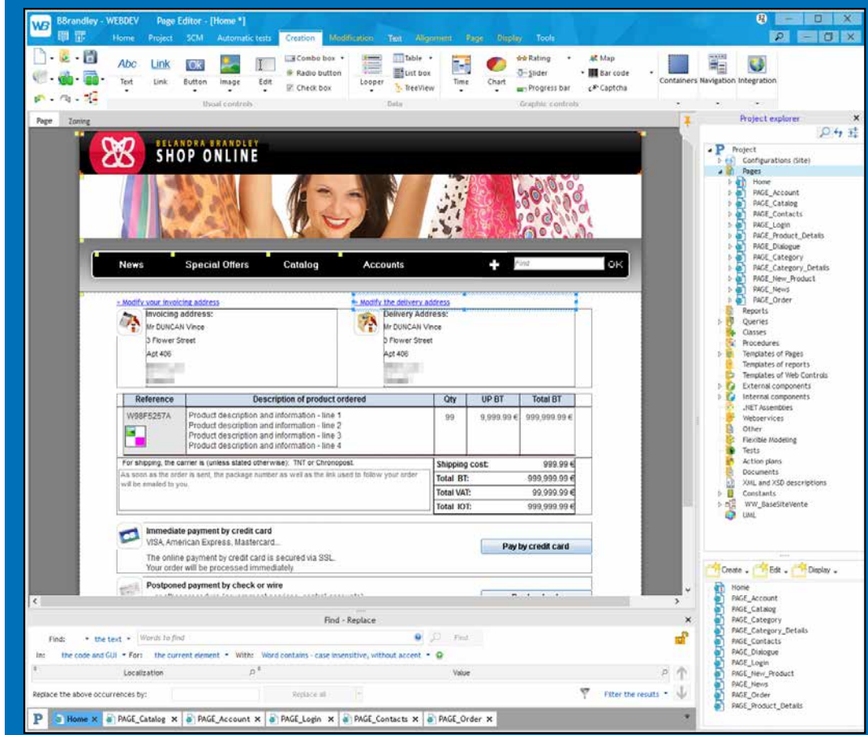


Positioning tables are available, if necessary

ANCHOR

Anchors define how the content of a page will behave when the enlarged or reduced, or when it switches from portrait to landscape.
Managing anchors with WEBDEV is very easy.

THE POWER OF VISUALS



BUILD GORGEOUS PAGES EASILY

The pages are created easily, visually, and you have several powerful controls at your disposal. A WEBDEV "Edit control" with all its integrated features, set in a page via a simple drag & drop, would add up to more than 50 lines of code in JavaScript and CSS!
You can easily imagine the number of lines of code you're saving.

ALL THE CONTROLS FOR INTERNET

The WEBDEV editor allows you to easily create and handle all the controls that will need to quickly build outstanding interfaces (see pages 20 to 27).
The main objects managed by the UI editor are:

- Text. caption (simple or rich/HTML)
- Edit and rich edit control
- Formatted display control
- Radio Button, Check Box
- List Box, Combo Box, TreeView
- Text button, graphic button
- Camera
- Static, dynamic image
- Table, Looper control
- HTML control
- Pager control
- Control Template,
- IFrame, Internal page
- SiteMapPath/Breadcrumb, Site Map,
- Chart,
- Calendar,
- Organizer, Scheduler
- Chart
- Click Area, Map Area
- Google Maps,
- Rating,
- Social Network
- Tabs,
- Layout
- Image Gallery, etc...

Remember that WEBDEV also allows you to use all the controls proposed by all the frameworks on the market: React, Bootstrap,...

TEMPLATES FOR ALL USES

WEBDEV comes with a large number of predefined page templates (ex: Material Design, etc.) that allow you to easily create sites for any device or platform.

In the following pages you will discover the main possibilities offered by the integrated WEBDEV editor.

AN INTEGRATED AND INTUITIVE WEB **CREATION** ENVIRONMENT

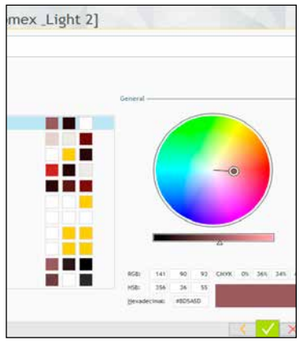
WEBDEV's WYSIWYG work environment provides comfort to boost productivity. Your teams will easily develop the sites and applications you need, and satisfy your customers and users.

WEBDEV is easy to learn: one week is usually all a developer needs.

Everything is integrated using the same operating mode, everything is visual, everything is included: your teams stay in the same environment, they develop faster.

Technical Support (by email) is also included. This translates into seamless development and budget savings.

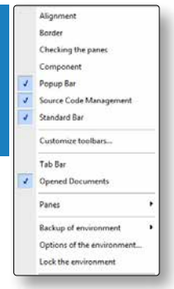
Your projects can be saved in the Cloud, making teamwork easier.
WEBDEV is compatible with WINDEV.



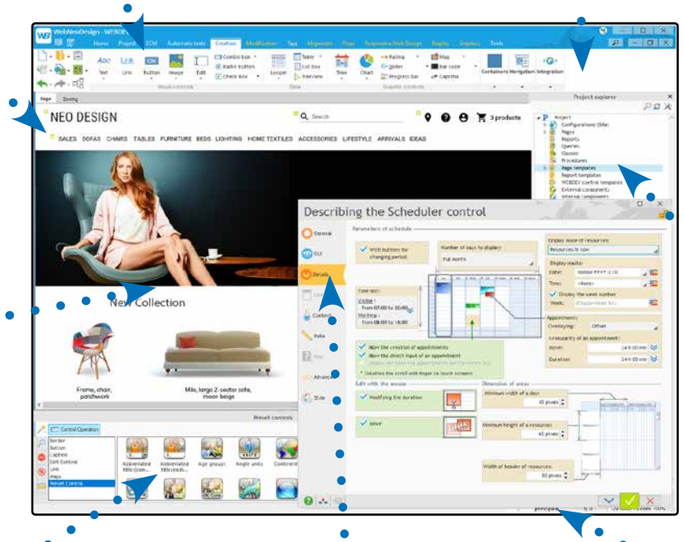
Color wheel in the environment

Ribbon & toolbar: movable, visible or hidden, configurable

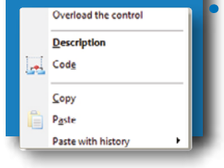
A context menu (right click) allows you to configure the panes.



A small yellow square indicates that the control is part of a template



A context menu (right click) is available to quickly access the various features



Pane: it gives an overview of the project; a double-click (or drag & drop) on an element opens it immediately

Optional display

Note: the Ctrl W key combination lets you clear your workspace by hiding the panes.

The panes propose components, controls, code, ... to save time

The editor interface is very intuitive, and very efficient.

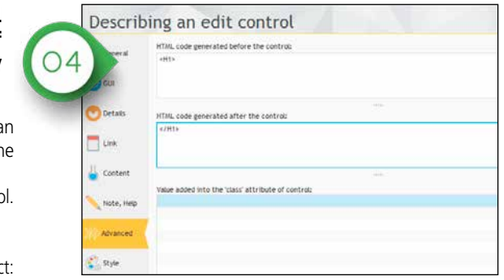
Status bar with the page name, size,...

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

The 7-tab methodology used to define powerful controls is very intuitive: no prior knowledge of the Internet is required. Everything is clearly explained. Everything is automatically generated.

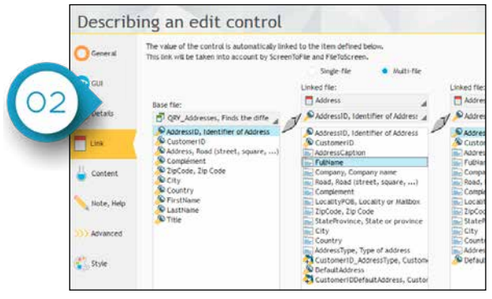
The characteristics of each control are defined through an exclusive, simple and powerful interactive dialog mode: the "7 tabs".
Each tab allows you to define the characteristics of the control. You can also modify these characteristics by programming.

The content of each tab varies according to the type of object: let's see the details of the 7 tabs for an "Edit" control.

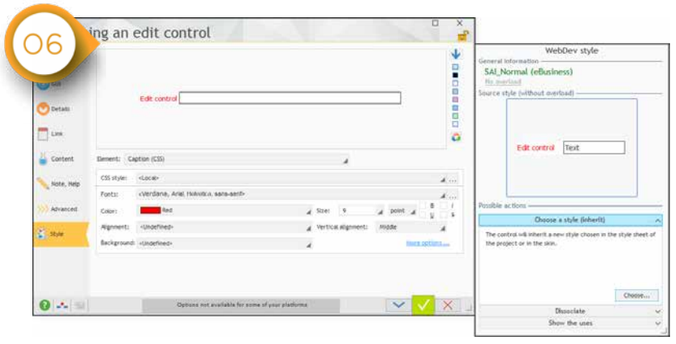


"General" tab ": name, caption, type of control, viewing style... Here, proposed masks

"Details" tab: define the input characteristics

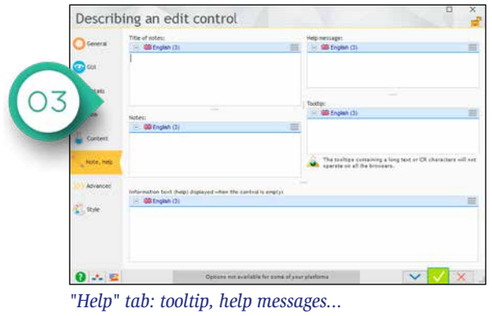


"Link" tab: to link data with pages, ...

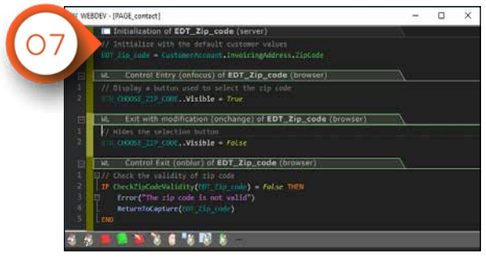


"Style" tab: define characteristics such as font size, uppercase characters...

A CSS style editor is also available



"Help" tab: tooltip, help messages...



"Code" tab: write WLanguage, JavaScript and/or PHP code directly in the event : Entry in the control, Click on the control, ...

The "7-tab" technology allows for intuitive control creation.

ZONING : EASY **LAYOUT**!

ZONING IN EDIT (EDIT AREA)

WEBDEV allows you to define edit areas in a page. This is called "zoning". These areas allow you to define the architecture of the page: header (<header>), footer (<footer>), aside (<aside>),...
Simply divide the page into logical "areas".
An area contains the controls located in it.
Zoning is usually defined in a page template and will be common to several pages of the site.
Once these edit areas defined, it is easier to edit the page.
The Layout control is also available.

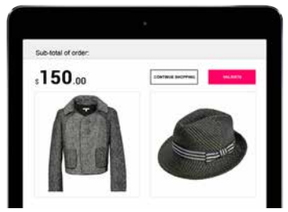
WORKING WITH A ZONE IN THE EDITOR

If the area is moved, its controls will automatically be moved with the area.
This editing mode simplifies the operations for creating and modifying pages.
A "pencil" tool lets you split a page in a visual way.
These zones are materialized and they can be easily handled in the editor.
For example, increasing the height of the header area automatically pushes down the areas located below: the body area and footer area.
When printing, the relative position of the controls found in each zone is respected as well as their anchoring.
Editing is WYSIWYG.

EASY **RESPONSIVE WEB DESIGN**!

WHAT IS RESPONSIVE WEB DESIGN?

Responsive Web Design is a development method for Web sites.
The principle of this method is to allow the same Web page to automatically adapt, during the navigation, to the size and resolution of the screen where it is displayed.
The main advantage is to be able to develop a single Web page that can adapt to smartphones, tablets or desktop computers.
The adaptation is performed in real time in the browser. This adaptation also allows you to optimize the portrait and landscape modes.

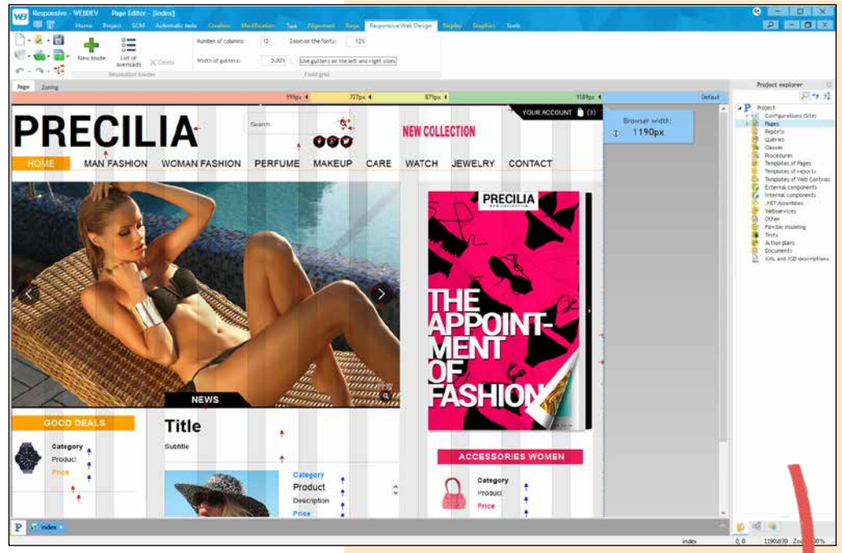


WEBDEV Responsive site displayed on a tablet

The same site displayed on a smartphone

BENEFITS OF RESPONSIVE SITES: "MOBILE FRIENDLY AND BETTER SEO

In its ranking of sites during a search, Google now favors mobile friendly sites, i.e. sites whose layout is adapted to mobile devices.
Thanks to the Responsive Web Design of WEBDEV, your sites are automatically mobile-friendly, which means higher rankings in Google search results.



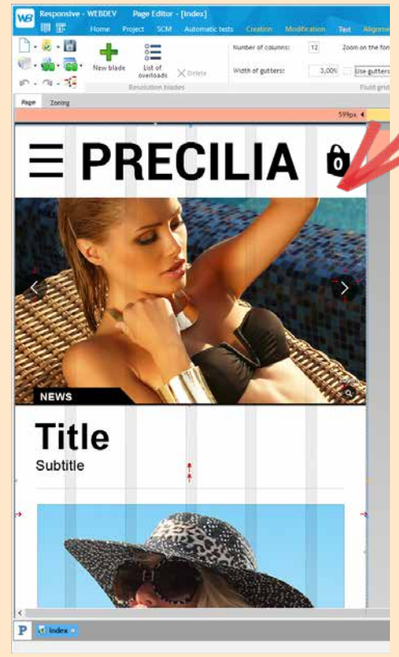
CREATE RESPONSIVE PAGES WITH WEBDEV: VISUAL!

The Responsive pages are created visually in the editor.
In edit mode, responsive pages are automatically displayed with a positioning grid.
This grid includes a set of columns of identical width.
The page controls are positioned and anchored in width to these columns.
When the width of the page varies, the grid adapts and the controls automatically adjust their position and size.
As soon as the page is created, you have the ability to see the result in different page widths in the editor directly.

To see the behavior, scan the code or visit www.windev.com/21732

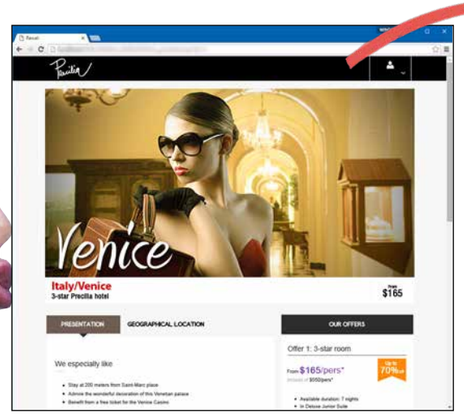
DYNAMIC SERVING IS ALSO OFFERED

WEBDEV also supports the concept of "Dynamic Serving": a single URL corresponds to 2 different pages, a Desktop page and a Mobile page;.
Depending on the browser the right page is displayed.
These 2 techniques let you automatically adapt the page's presentation to the device where it is viewed.

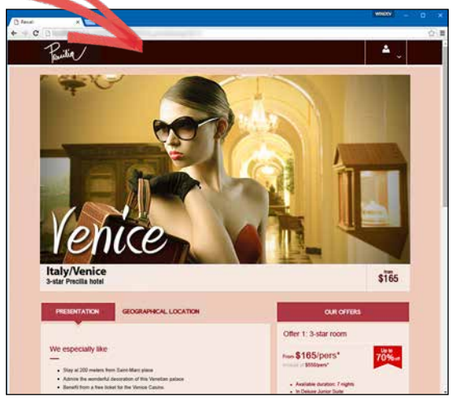


In this example, with a page displayed in large size and narrow size, the site designer has decided that:
- The font size of the title is larger on the phone (for better readability)
- Th advertising band is not visible because there is less room
- A different image (or an image cropped differently) is used.

TEMPLATES : STANDARDIZED LOOK



Site skin change.
A site during spring...



The same site during winter:
the skin has changed (color, styles, etc.)

Starting a new website or Web application with WEBDEV is child's play: choose a template, a skin, a color palette and your first page is created on a solid foundation!

PAGE TEMPLATES: STRUCTURE YOUR SITE

The page template is an essential element for building Web sites.
A page template contains the layout "common" to several pages.
The template defines the page architecture:

- page header
- menu
- column
- page footer
- ad band
- ...

(also see the "zoning" concept, page 14).
The common elements are positioned in this page template.
A template can also contain images, controls, code, procedures, ...
When creating the site, each page created can inherit from a template.
Any modifications made to the page template will be automatically propagated to all the pages that use this template.
In a page, you have the ability to "override" a property of the template if necessary.

PRESET TEMPLATES

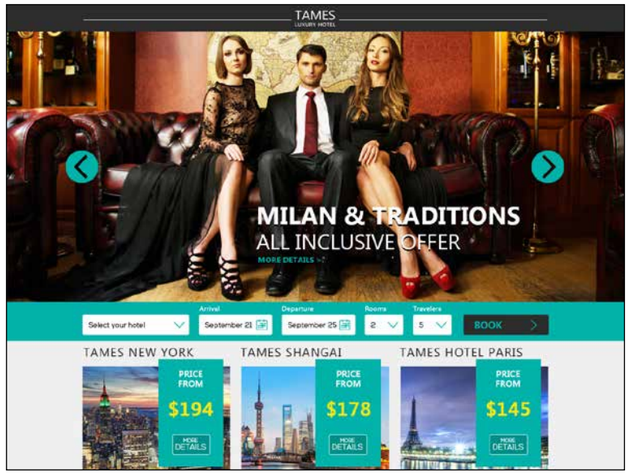
WEBDEV offers a large number of preset templates.

SKIN, TO DEFINE THE LOOK OF PAGES

The concept of "skin" lets you refine the templates.
A skin defines a set of styles, a color palette, illustrations, fonts,...
Several skins are supplied with WEBDEV.
The same template can be associated with several skins.

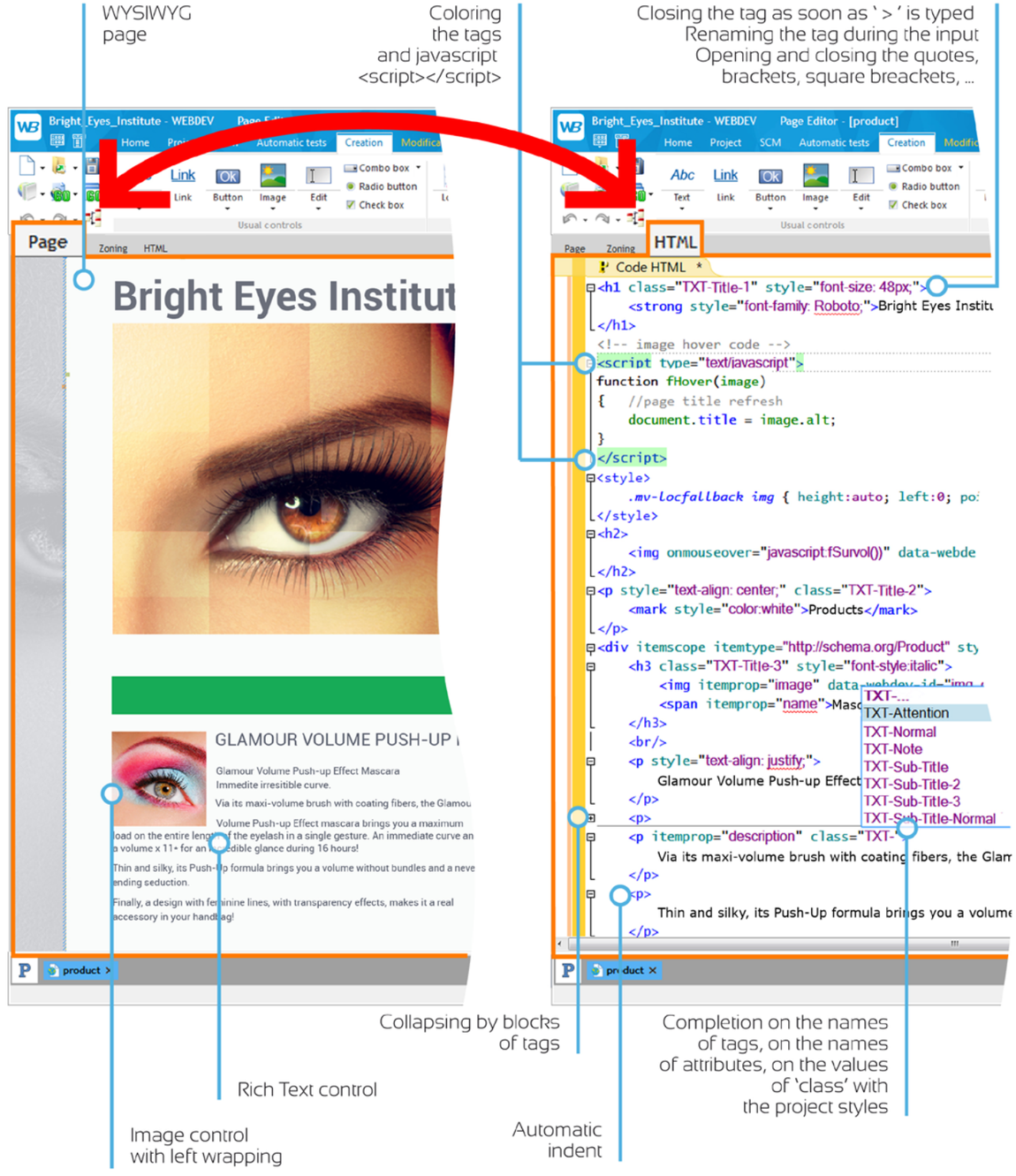
THE COLOR PALETTE, TO HARMONIZE COLORS

Another concept of style refinement is the "color palettes", which allow you to refine the skins.
A color palette is a set of harmonious colors (complementary colors for instance) used in styles of pages.
A color palette defines for example a text color for a title as well as the corresponding background color, the color of a button, etc.
A large number of ready-to-use color palettes are provided.
A skin can be instantiated with different color palettes.
The possibilities for customization are endless!



INTEGRATED **HTML** EDITOR

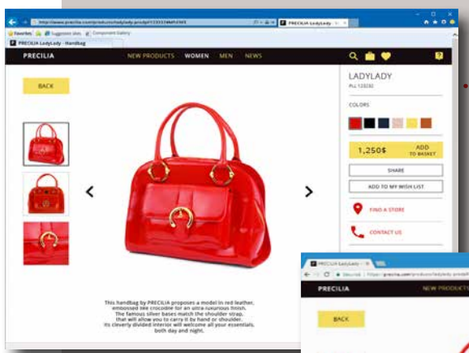
For those who want to modify the HTML code generated by WEBDEV, a visual, user-friendly and powerful editor is provided.



YOUR SITES ARE **COMPATIBLE** WITH ALL BROWSERS

WEBSITES AND APPLICATIONS CREATED WITH WEBDEV ARE COMPATIBLE WITH ALL BROWSERS

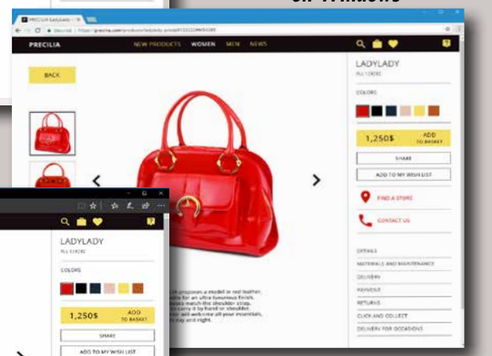
Each browser has its own special features. The behavior of the same browser can even change from one version to another. If necessary, WEBDEV generates several alternate codes for the page, so that it is displayed correctly regardless of the browser. You don't have to do anything.



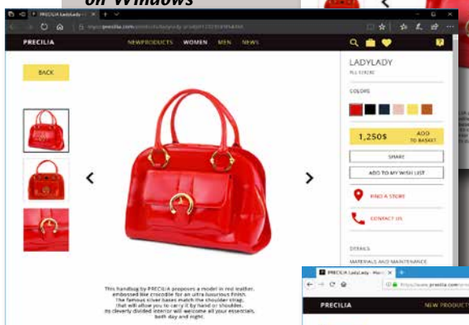
Internet Explorer
on Windows

Chrome
on Windows

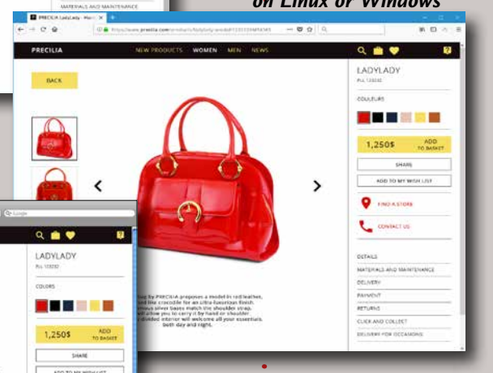
WEBDEV generates sites compatible with the W3C standard upon request



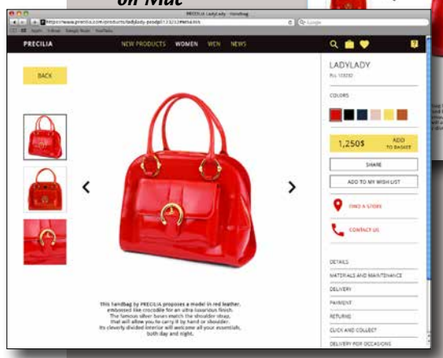
Edge
on Windows



Firefox
on Linux or Windows



Safari
on Mac



THE SAME WEBDEV SITE IS DISPLAYED IDENTICALLY ON ALL BROWSERS

WEBDEV allows you to create "Responsive" sites. WEBDEV also supports the concept of "Dynamic Serving" ": a single URL corresponds to 2 different pages, a Desktop page and a Mobile page;. Depending on the browser the right page is displayed.

WEBDEV'S MAJOR ASSET : ITS APPLICATION SERVER

A POWERFUL APPLICATION SERVER

WEBDEV includes an unparalleled, powerful application server (the "engine" that runs your program on the server).
You can program anything you want, with incredible ease.
Code is written in WLanguage, a 5th generation language.

All the types of processes are possible with WEBDEV.

Your sites behave like true applications.
Here is a non-exhaustive list of processes that you can run in your sites

- access to blockchains: read bitcoin transactions...
- IoT: Sigfox, LoRa, MQTT, X10...
- encrypting data
- generate PDF on the fly
- apply a certificate to a PDF Document
- interact with a reservation site: booking.com,...
- analyze in real time the page content of entire third-party Web sites
- apply modifications to DOCX and XLSX documents
- perform all the desired calculations
- read and write in databases
- start queries
- modify images: change the color of a T-Shirt or a car for a manufacturer
- generate bar codes
- generate interactive graphics
- interact with the back office
- manage payments by credit card
- manage the security access of the site , the site's pages or to the site's controls
- manage log files
- send emails
- send SMS
- manage surveillance bots
- perform a desired management process: reservation, stocks, order taking, location, announcement, document base, directory, ...
- manage communities, forums, blogs, FAQ, wiki,...
- search engine
- scan and documents archiving
- virtually try clothes, jewelry, glasses, makeup, hair styles
- work with non-latin languages: chinese, russian,...
- analysis of the user behavior
- ...

A COMPLETE APPLICATION SERVER

The WEBDEV application server manages the hosting of sites, WebApps, REST and SOAP Webservices, runs your scheduled tasks.

YOUR CODE IS COMPATIBLE WITH WINDEV AND WINDEV MOBILE

WLanguage is ***cross-platform***.
You can reuse it in Windows, Linux, Mac, Android, iOS,...

INHERENT SECURITY

By default, the sites built with WEBDEV are protected against SQL injection.
The context cannot be copied.

WEBDEV : THE TECHNOLOGY OF THE FUTURE

WEBDEV : MODERN DEPLOYMENT

With WEBDEV there is no need to learn 5 different frameworks... Knowing that these frameworks often become obsolete a few months later, and that the new version will not necessarily be compatible with the previous one... With WEBDEV your code will work for years to come
With WEBDEV you have an environment where everything is integrated.
With WEBDEV you don't have to learn the subtleties and different behavior of each browser version (Chrome, EDGE, Firefox, Opera etc.) for each HTML tag, or to manage all these particular cases by hand, like in the old days.
With WEBDEV you have an environment that manages all browsers.
With WEBDEV you have one single language. Everything is written in the same language, data sharing is easier.
You have technical support at your disposal.

POWERFUL CONTROLS

WEBDEV offers all the types of controls required to create Internet pages and Web applications. Let's take a closer look at some of them.

EDIT CONTROLS : WITH MASK

The WEBDEV edit controls allow you, as the other controls, to define a large number of parameters, visually and intuitively via the "7-tab" interface or by programming. It is easy to define powerful input masks, without having to type a single line of code. Formats are shown as soon as the control is being entered.

Examples of input masks

Among the input masks provided: duration, capitalize first letter, file name and path, e-mail address etc...
Note that HTML5 input masks are also offered.

EDIT CONTROL : HINT TEXT

The WEBDEV edit control offers hundreds of setting combinations.
Among these possibilities, the edit control can contain hint text.
When the web user starts entering information in the control, the hint text can become the caption above the edit area. Therefore, the Web user can always read this hint during the input.

The empty edit control...

... during the input: the hint text moves above the text entered

PASSWORD INPUT

The WEBDEV edit control offers the possibility to enter passwords.

An eye is displayed at the end of input area.
A click on the eye allows the Web user to see the password.
This is useful to avoid typos!

DISABLE AUTOCOMPLETE

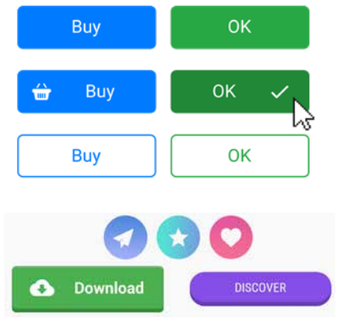
Browsers automatically offer an autocomplete feature for forms inside a page.
When the user starts entering information in a form (a delivery address for instance), all the controls in the page are filled automatically.
This feature is dangerous for confidential data.
With WEBDEV, you can disable this browser feature control by control via an option in the "7 tabs": Disable autocomplete.

HTML EDIT CONTROL

This type of control lets users enter rich content.
A toolbar automatically comes up as a control header, and lets the user define the rich formatting.
The data is saved in HTML standard.

BUTTON CONTROL

A button control can contain text, an image or can be defined using CSS.
A button can be customized based on its state: idle, hover, click, focus, grayed.

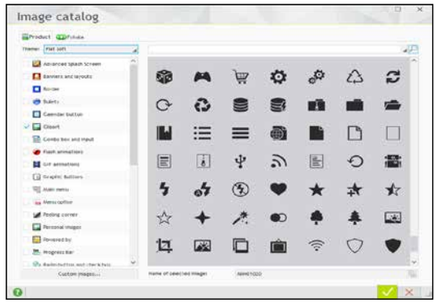


INTELLIGENT BUTTON PROTECTED FROM "MULTI-CLICK"

Multiple clicks on validation buttons are ignored by default. A user who clicks 3 times the "Validate" button won't receive 3 orders...

COMPLETE CLIPART WITH OVER 10,000 IMAGES AND BUTTONS

WEBDEV comes with over 10,000 pieces of clipart.
You can reference your own images and illustrations to add to the catalog.
The clipart content is rich and varied: images, icons, frames, animations, graphic buttons, bands, shapes.



MENUS

WEBDEV lets you create drop-down menus (horizontal and vertical) in WYSIWYG mode as well as "tab" menus and "popup" menus.
You can dynamically add (by programming) menu choices, sub-menus...
Menus are tactile. They are generated in full CSS mode and adapt to the Responsive mode.

Pop-up menu example

CAPTCHA CODE

A Captcha control is available.
Google Captcha can also be used in a WEBDEV site.

Google's Captcha control

TABS

Tabs are easy to manage.

Example of a page with tabs.

DRAWER CONTROL

A Drawer control lets you expand and collapse a display area.

IMAGE CONTROL

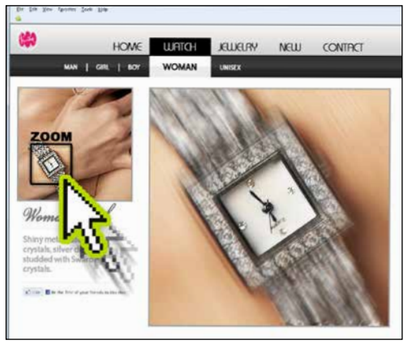
The Image control allows you to display images in standard Web formats: Jpeg, Gif, Tiff, PNG, SVG...
The images can be clicked to start a process. See also the "Image Gallery" control on p 26.

THUMBNAIL CONTROL : AUTOMATIC

A Web site often manages images or photos that are also used as thumbnails, for selection purposes for instance.
WEBDEV automatically manages the dynamic generation of these thumbnails.

IMAGE WITH AUTOMATIC ZOOM

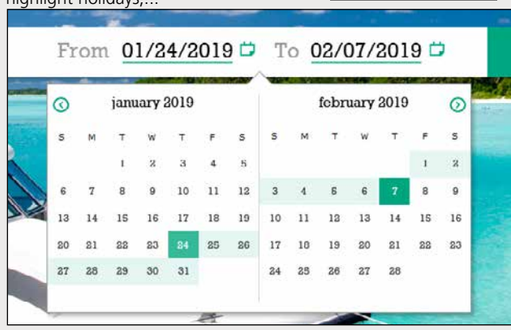
When the zoom effect is enabled on an image, hovering over the image with the mouse cursor automatically opens an area next to the image where the section of the original image is enlarged, showing the details of this section.



When the cursor hovers over an area of the image, it is automatically displayed and zoomed in

CALENDAR DATE EDITING CONTROL

The calendar control is used to create a control included in a page or to open a "popup" calendar to enter the date.
A large number of options are offered for customization and presentation: frame the current day, cross out dates in the past, show a date range, highlight holidays,...



POWERFUL CONTROLS (CONTINUED)

continued from page 21

IMAGE EFFECT

Images can benefit from automatic effects.
Among these effects, the "automatic movement" is very popular. This effect simulates the light move of a camera over an image: without having to program anything, the displayed image comes to life and slightly moves, slowly and smoothly in its section.

CSS3 ANIMATIONS ON THE CONTROLS

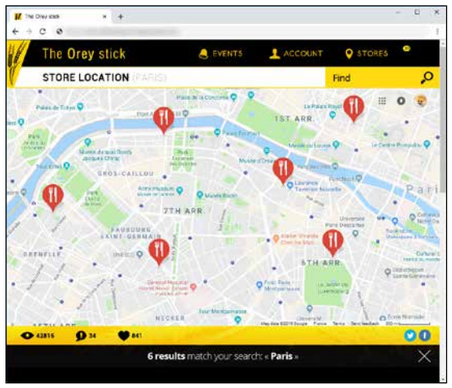
WEBDEV allows you to easily define effects on image controls: acceleration, clipping, fading, automatic zoom, fade in, hover zoom, photo effect, panoramic movement, blinking, shift, sweep, inclination, rotation, ...
Peeling corners are also supported.
You can also assign a CSS3 animation found on the Internet to a WEBDEV control. The animations declared in the style sheet are listed in the editor.

CLICK AREA (MAP AREA)

The click areas are used to perform hypertext processes: depending on where a web user clicks in an image, different operations are launched.
Defining the click areas is very easy via the geometrical areas.
Several areas can be nested.
If necessary, you can get the click coordinates, at the pixel level.

"GOOGLE MAP" CONTROL

You can include a Google Maps control in a site.
It is easy to enrich the map: set markers, display a route, define zoom factors, ...



"VIDEO" CONTROL

The "Video" control lets you play videos of various format: Microsoft (Wmv), Webm, Mpg, Ogv, Flash (Flv), QuickTime (Mov), ...
The features for read, pause, fast forward, ... are supported.
Video display is also managed by HTML 5.
YouTube videos are supported.

SLIDER & RANGE SLIDER CONTROLS

Slider and Range Slider controls are also available.

RATING CONTROL

This control allows the user to enter a rating, or a site to display a rating.
The visual symbol used by default is a star, but it can be modified (smiley, hand, heart, etc.). The rating can be a decimal number.

BREADCRUMB, SITEMAPPATH (BREADCRUMB TRAIL, NAVIGATION SCHEME)

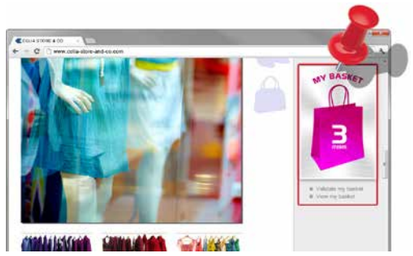
A "Breadcrumb" (which was called before a "SiteMapPath") is a linear menu that is built as the user browses through a site.
The "breadcrumb" term refers to a useful navigation scheme
It allows the user to easily go back to a previous page.
Breadcrumbs are generated automatically.
A site map is also generated automatically.

SOCIAL NETWORK CONTROL

The "Social network " control is a toolbar containing pictograms used to establish the link to the main social networks of the Web : Facebook, Twitter, LinkedIn, Instagram, Pinterest....

To use the identifiers of a Web user for authentication, see page 37.

FIXED AREA ON THE SCREEN



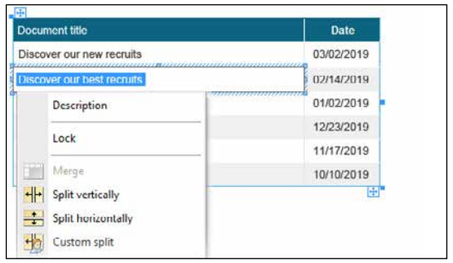
Even if the user scrolls the page down, the basket will remain visible at the same position

This fixed anchor allows one or more controls to remain visible when the user scrolls. The area is said to be "pinned".

The elements anchored in such way move with the scrollbar and therefore, they remain visible while the rest of the page scrolls.

HTML TABLE

The HTML Table enables you to easily create static presentation tables in your pages.



CLICKABLE SWITCH CONTROL

"Clickable switch" controls are increasingly popular in Web pages.

TOKEN CONTROL

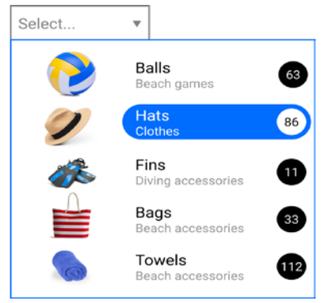
Token controls are very easy to include in your pages, and they are widely used for multiple sorting criteria.
This is a new type of control which is available in WINDEV, WINDEV Mobile and WEBDEV.
In WEBDEV, the Token control has an additional feature.

The `..CaptionHTML` property makes it possible to modify the appearance of the token by inserting HTML code.

Examples of tokens in a Token control

"POPUP" COMBO CONTROL

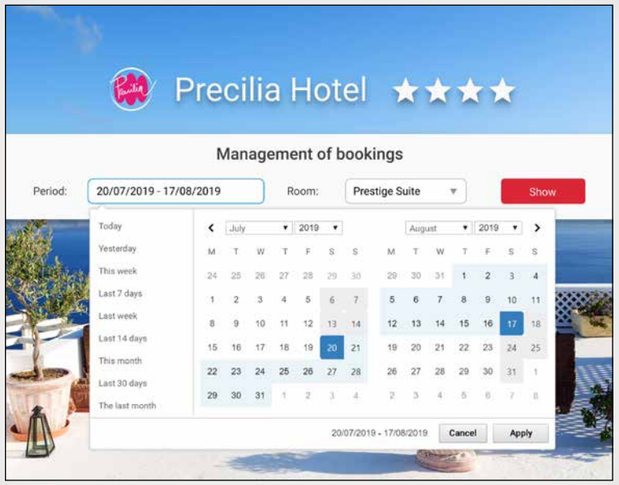
WEBDEV allows you to easily create combos that display a small "PopUp" page when you expand them.
The expanded area of this combo displays a PopUp that you have previously created.



A graphic combo popup, containing a Looper

INTEGRATION OF EXTERNAL COMPONENTS

This example calendar with date range selection comes from a JavaScript component.
Integrating controls from different frameworks (Bootstrap, React, etc.) is easy with WEBDEV (see p. 34).
WEBDEV is open to all technologies.



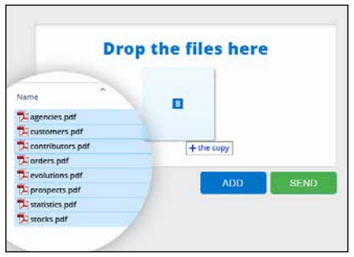
SOPHISTICATED CONTROLS

In addition to the controls presented in the previous pages, WEBDEV offers very sophisticated controls

continued from page 23

THE UPLOAD CONTROL (HTML 5)

The Upload control allows you to upload a file from the browser toward the server. File picker, drag & drop, multi-selection, progress bar, ... are supported out of the box.



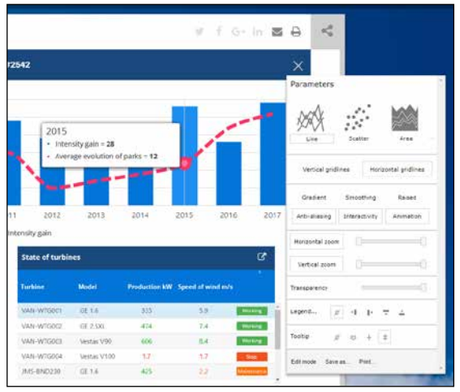
The upload can be done in the background.

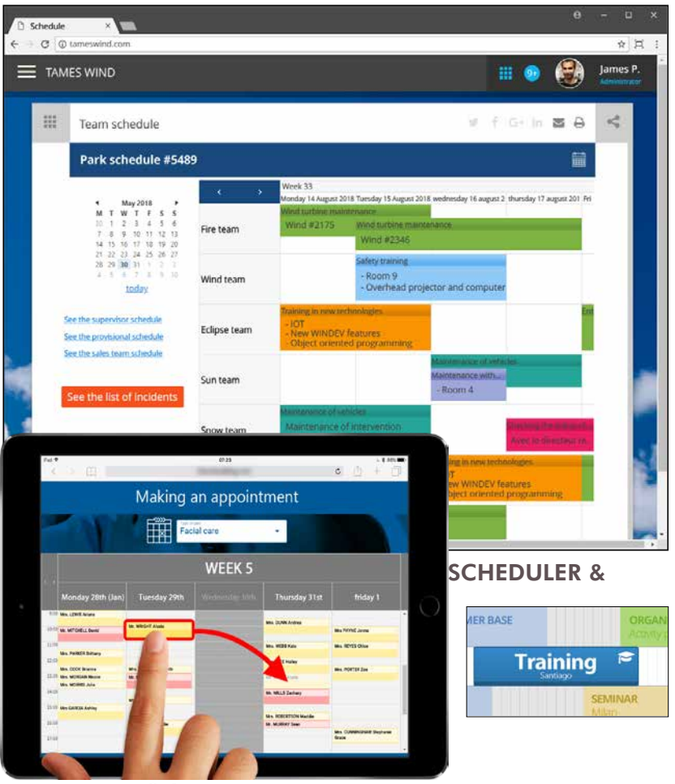
SCHEDULER CONTROL

The scheduler control is used to manage the schedule for multiple resources.
It automatically links with data (data binding).
This control saves weeks of programming.
The scheduler control is adapted for touch devices (tablets, smartphones).
The operating modes to create, move, delete appointments are compatible with the "multi-touch" environment, and can therefore be performed with the fingertips.
The configuration level is very granular, and can use CSS.
An "Organizer" control is also available.

INTERACTIVE CHART CONTROL

The WEBDEV Chart control offers many types of charts, in 2D and 3D mode, in static and interactive mode: line, column, semi-circular, pie charts, ...
A chart can be displayed in real time : the chart evolves according to the data received.
A menu allows the user to dynamically modify the parameters: chart type, legend display, etc,...
A crosshair helps you read the data precisely.
Animation effects are available.





SCHEDULER &

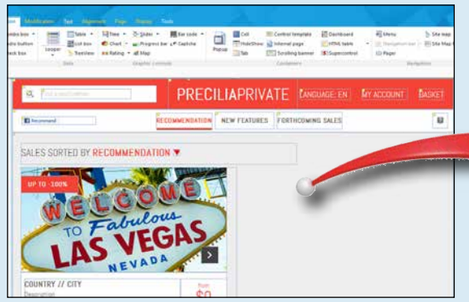
SLIDING BANNER CONTROL

The Sliding Banner control is used to display several contents successively, either automatically, or further to an action performed by the Web user.
The banner can contain controls and processes.
A sliding banner is often used in site header.

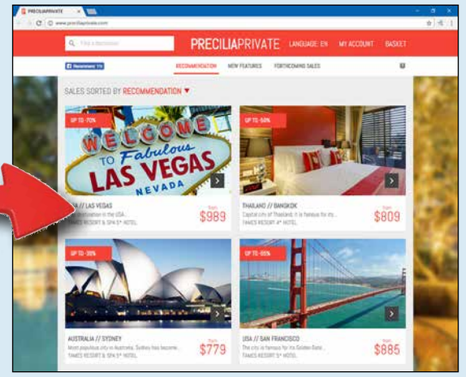
The banner changes its plane automatically or on request. The planes can contain controls

THE **LOOPER CONTROL**

"LOOPER " CONTROL " : A VERY POWERFUL CONCEPT



Looper control being defined in the editor



Looper control at runtime

A Looper control is a set of controls repeated horizontally and/or vertically, a defined or undefined number of times.

Linear Looper

Loopers are filled either by programming, or via a direct link to data files (data binding), or from queries.
For example, the number of repetitions can be the number of records in the query,...
Each attribute of each control can be modified for each row.
For example:

- line color
- font color (amount in red if negative)
- photo of an item...

The Looper control includes a menu for automatic export to Word, Excel, ... (see p 27).

PAGER CONTROL

The pager used to quickly browse the pages (and its code) is automatically generated for a looper as well as for a table.

Example of automatic pager

"DASHBOARD" CONTROLS

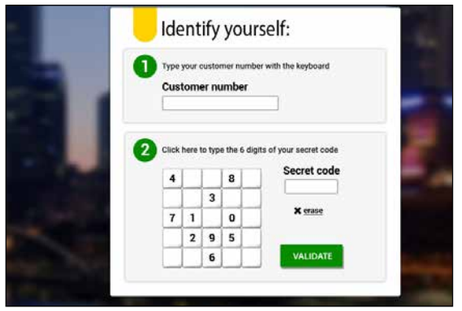
WEBDEV allows you to easily create dynamic dashboards. A dashboard control is made of widgets (internal pages).
The configuration of the dashboard by the user is managed automatically.
The end user can customize and adapt the dashboard.

CONTROLS ADAPTED TO MOBILE USE

When sites created with WEBDEV are run on a mobile device (tablet or smartphone), the behavior of the controls adapts to touchscreens.

AND OTHER WEB CONTROLS

WEBDEV offers many other controls such as TreeView, Camera, Java Applet, Iframe, Cell, Layout, Link, List Box, Line, Control Template, Internal Page, TreeView Table,...
You got it all.
And, in the next 2 pages, you will discover 3 impressive controls: pane, image gallery and table.



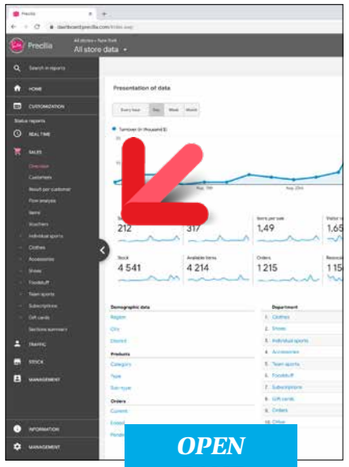
Thanks to the openness of WEBDEV, you also have access to all components

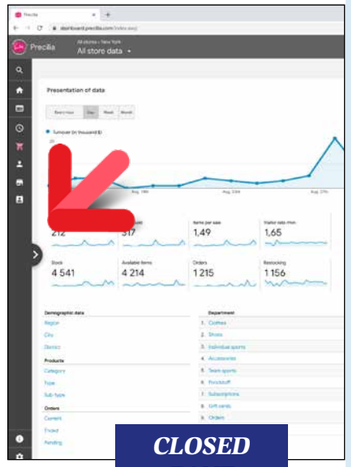
SOPHISTICATED CONTROLS (CONTINUED)

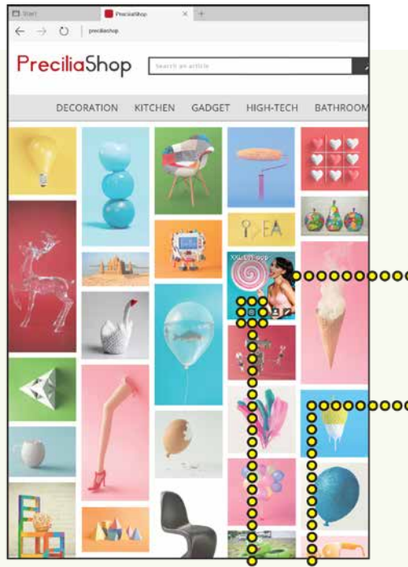
continued from page 25

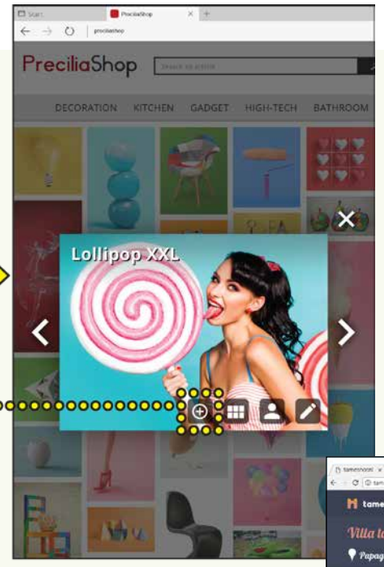
"AUTOMATIC PANE" CONTROL

The use of sliding panes in Web sites and applications is becoming more and more popular.
These panes can contain controls, menu options, charts, internal pages, ...
WEBDEV manages these operating modes automatically.
The closed pane shakes when the mouse hovers over its area in order to be seen!





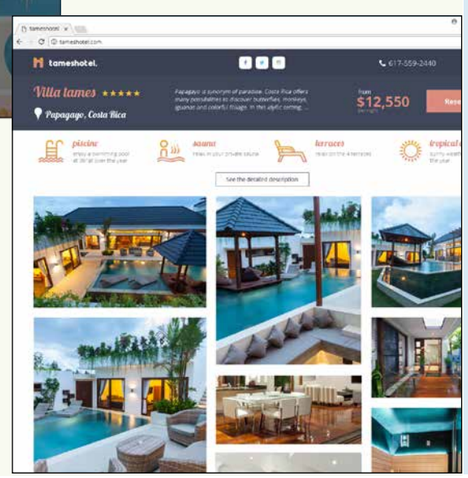




This control allows you to save weeks of development.
An image is displayed in a cell.
In this cell, other controls can be inserted into the image and/or stacked to the image: static, button,...
When the browser is enlarged, either the number of images increases or the size of the images increases.
The Image gallery control is responsive.

IMAGE GALLERY CONTROL

This control, based on a Looper control, is used to manage the display of several images without programming.
The images can have differents sizes and proportions: the Image Gallery control performs a harmonious display.
The navigation between images is automatically managed.
The control displays the images found in a directory, coming from a database or defined by programming.



TABLES (DATAGRIDS)

POWERFUL TABLES

The "Table" control is a powerful control.
A Table can be automatically fed by a data file or by a query (binding).
To update only the necessary elements, the Table control makes Ajax calls.
A Table can also be filled by programming in server code or browser code.
Over 80 WLanguage functions are available to handle the Table control by programming.

RICH FEATURES

The Table control offers many types of columns: text, link, numeric, currency, date, time, check box, image, container.
3 display modes are available : with scrollbar, with pager, or display all the content in the page
You can define breaks.
A table can allow single selection, multiselection or no selection.
A table can be in read-only mode or allow input.

The Table control allows you to program all the desired behaviors.
End users automatically benefit from many features:

- Resize columns
- Filter, search
- Move column
- Export to Excel, Word...

In Responsive Web Design Mode, the columns automatically become rows on phones

It is possible to search in the table via the magnifier

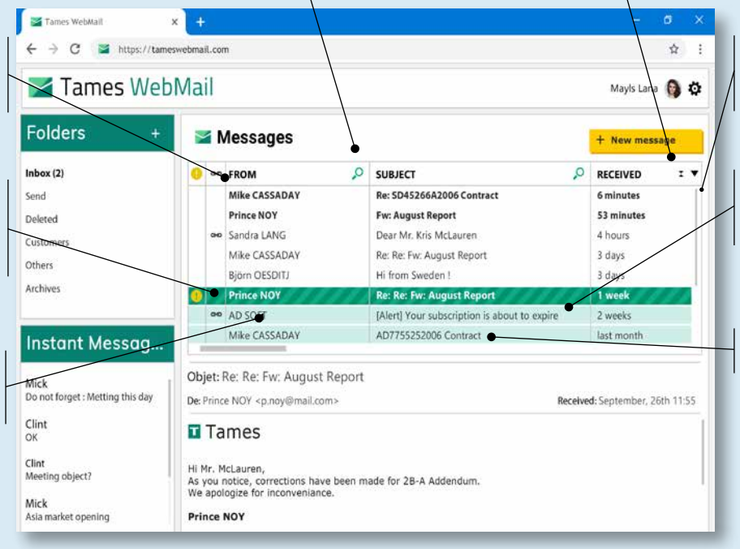
Columns can be sorted

Columns can be resized

The background of the selection bar can correspond to an image

Table cells can be in edit

An hourglass is automatically displayed when a long process is performed.



A scrollbar automatically replaces the pager

Table rows allow "multiselection"

Anchor and automatic scrollbar

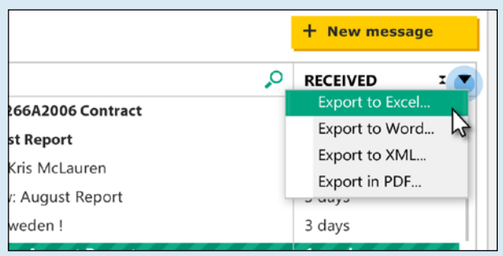
Automatic management of a "cache" (partial fetch) that only loads the data necessary to display and scroll through elements smoothly for the human eye

AUTOMATICALLY EXPORT TO XML, WORD, EXCEL AND OPEN OFFICE

For Table and Looper controls, an automatic export menu to XML, Word, Excel and Open Office... is proposed to the Web user.
The data found in the table or in the looper will be automatically exported to the selected tool and format.
In Intranet use, users can easily build their simulations under Excel!

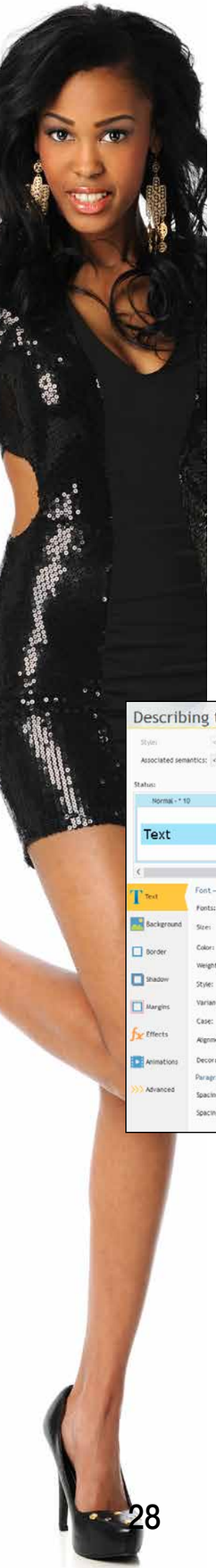
NOTHING TO PROGRAM

There is nothing to program for Web users to benefit from these export features.
You can disable this feature, of course.



...OR PROGRAM EXPORTS

If you want to automate automatic export from your sites, programming commands are available in the WEBDEV 5GL.



HTML5

HTML5 AND W3C

In WEBDEV, you don't need to write HTML code, WEBDEV generates it automatically for you!
The HTML code generated by WEBDEV respects the HTML5 standard and complies with the W3C recommendations.

Compliance with the HTML5 standard guarantees page compatibility on all browsers on the market that support the standard.

WRITE HTML CODE DIRECTLY

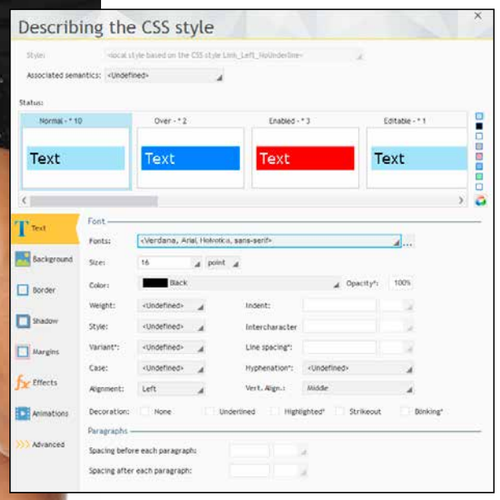
If necessary, you can edit the HTML code of controls and pages (see page 17).

COMPATIBILITY OLDER BROWSERS: HTML4

To ensure compatibility with older browser versions, mainly used on the Intranet, WEBDEV also allows sites to be generated using the HTML4 Transitional standard.

CSS3

CREATING STYLES : CSS WITHOUT KNOWING CSS



To create a style with WEBDEV, the developer or web designer does not have to know CSS3.
The style is created visually using the "7 tabs" technology.
WEBDEV generates the corresponding CSS style
The styles can be modified in the editor at any time, the modifications are of course applied to all the pages and controls that use the modified style.

MODIFY THE CSS CODE OF WEBDEV STYLES

The generated CSS style can be modified, if necessary, directly in the.css file .
A CSS style created by WEBDEV and modified outside is still recognized by the editor.

CSS STYLE EDITOR

A CSS style editor is also offered with WEBDEV.
You can write your own CSS code in the CSS style editor, or paste a code from the Internet.

IMPORT EXISTING CSS STYLES

You can import existing CSS3 styles into your WEBDEV projects.
In the WEBDEV environment, the imported styles are proposed in the same way as the styles created with WEBDEV.

REFERENCE EXISTING CSS STYLES

WEBDEV also allows you to reference external CSS style sheets.
Styles are presented directly in the editor, and can be used immediately.

ANIMATIONS AND EFFECTS ON CONTROLS

The WEBDEV environment offers many effects and animations: fade in, zoom on hover, blinking, rotation, 3D twirl, etc.
These effects are available on all controls and can be configured: duration, acceleration line, ...
You do not need to know CSS to use these effects. WEBDEV generates the necessary CSS code.

REFERENCE EXISTING CSS ANIMATIONS

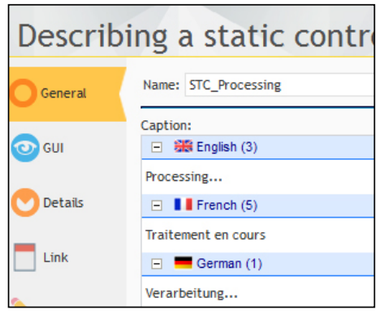
There are other special effects, available on the market as CSS animations. For example: pendulum, flotation, explosion...
To apply this type of third-party animation to a control, simply reference the CSS style sheet containing the description of the animation in the project.
Simply select the name of the animation to use, its duration and its repetition in "Animations", in the "7 tabs" window for editing the style of the control.

64 LANGUAGES IN YOUR SITES

A Web site or Web application has a worldwide audience: any web user in the world can take a look at it!
Therefore, developing multilingual sites is often required.
It is even a requirement for countries that have multiple official languages: Belgium, Switzerland, Luxembourg, Canada...
WEBDEV brings an integrated and powerful solution for supporting languages.

64 LANGUAGES PER SITE

Up to 64 different languages are supported by the sites you develop. All you need to do is pick the languages in the configuration screen (these can be modified at any time).



Example of text entry in several languages

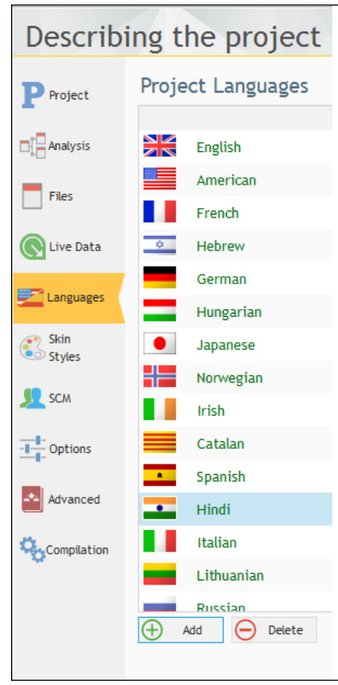
Simply enter the captions in the different languages selected (Latin and non-Latin languages: Chinese, Russian, etc.) and WEBDEV takes care of the rest.
To change the language dynamically in the site, simply call the WLanguage function `Nation`.
Note that even the text of image buttons will be translated!

PLAN FOR THE FUTURE

Imagine how much simpler it'll be to develop multilingual sites or to make an existing site multilingual since translations can be added later.

AUTOMATIC TEXT EXTRACTION

A tool available separately (WDMSG) lets you extract all the project "text"and reintegrate it automatically after translating it
This is useful if you want your site translated by a translation agency.



ELECTRONIC INVOICING
AUTOMATE SUBMISSION

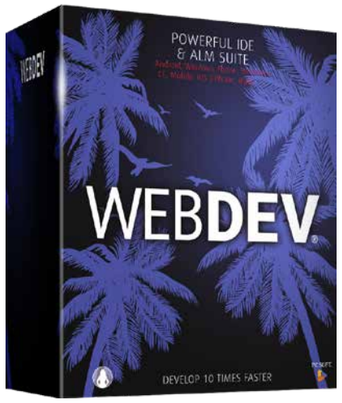
WEBDEV facilitates the automatic preparation and submission of electronic invoices.

WINDEV MAKES IT POSSIBLE TO AUTOMATE THE SUBMISSION

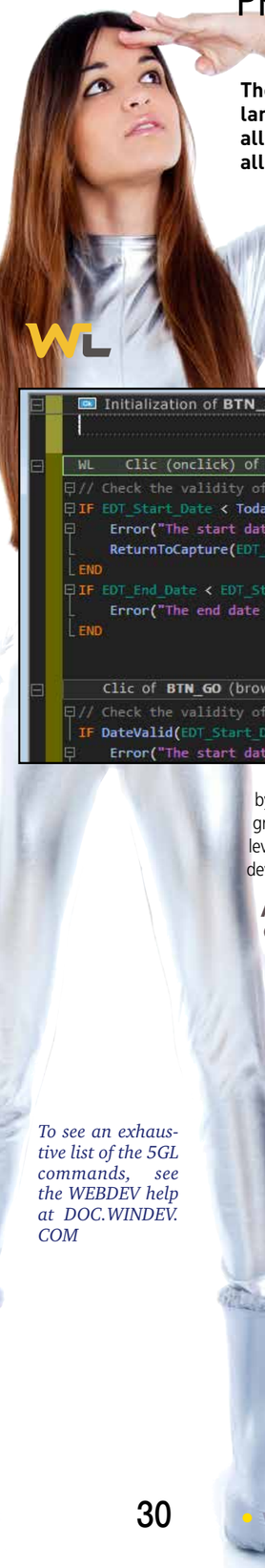
WEBDEV makes it easier to automate the submission of electronic invoices: all the features for electronic invoice submission are available in WINDEV.
- Easy PDF creation
- Managing the certificates
- REST Webservices
- Native JSON
- ...

The development of an automatic invoice submission functionality (single or batch) is easy.

EXAMPLE: FACTUR-X (HYBRID INVOICE) 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.
WEBDEV has all the necessary XML functions to generate and sign XML files.
WEBDEV makes it possible to create PDF files according to the A-3 archive standard.



THE HEART OF WEBDEV: **ITS LANGUAGE** PROGRAM **EVERYTHING** YOU WANT



The integrated WEBDEV 5GL language - WLanguage - allows you to esily describe all the necessary processes.

INTERNET PROGRAMMING HAS NEVER BEEN THIS EASY NOR THIS POWERFUL

The WEBDEV 5th generation language, WLanguage, already used

```
Initialization of BTN_GO (server)

WL    Clic (onclick) of BTN_GO (browser)
// Check the validity of dates in browser code
IF EDT_Start_Date < Today() THEN
    Error("The start date is already exceeded.")
    ReturnToCapture(EDT_Start_Date)
END
IF EDT_End_Date < EDT_Start_Date THEN
    Error("The end date is before the start date.")
END

    Clic of BTN_GO (browser)    AJAX
// Check the validity of dates in server code
IF DateValid(EDT_Start_Date) = False THEN
    Error("The start date is not validated.")
```

by hundreds of thousands of programmers worldwide, brings an extra level of confidence which makes site development a lot faster.

A POWER UNMATCHED ON THE MARKET

Imagine: You can easily program ANYTHING you want for your site: perform calculations, string processing, image processing, PDF editing, data access, bar code printing, document scanning, image storage, log management, certificate application, data encryption, ...

INTERNET PROCESSES

In Internet, the code is structured between Server and Browser :

- the code can be executed on the server, by the application server
- the code can be executed on the browser, on the Web user's computer.

Both Browser and Server codes are written in WLanguage.

To see an exhaustive list of the 5GL commands, see the WEBDEV help at DOC.WINDEV.COM

WLANGUAGE: POWERFUL, INTUITIVE

WLanguage allows for faster programming and better code quality.
A WLanguage command often corresponds to hundreds or thousands of lines of code in JavaScript: your teams develop faster, the risk of bug decreases.

ENGLISH OR FRENCH?

WLanguage is available both in English and French.
Easy to remember English commands makes coding intuitive, and maintenance easy.
WLanguage commands (`hReadFirst, hReadNext, SSLActive, hFound,` etc.) are easy to learn and easy to maintain.

NO DEAD ENDS

The WEBDEV 5 GL is extremely powerful, it offers over 2,500 programming functions.
You'll never be stuck.
WEBDEV also allows you to write HTML, JavaScript or PHP code.
All the usual Web resources can be integrated into a WEBDEV page: CSS3, JQuery, Angular, React, ASP.Net,...

CODE EXAMPLE: SEND AN EMAIL

Sending emails is easy.
The command is simply `eMailSendMessage`.
You can add attachments. Emails are sent in a background task.

OPTIMAL DATABASE INTEGRATION

WLanguage is optimized to manage table data. It offers a predictive input for table names and columns.

EASY WEBSERVICES

Creating and consuming SOAP and REST webservices is very easy. (See p 33).

OOP (OBJECT)

The Object-Oriented Programming (OOP) is supported by WEBDEV: multiple inheritance, constructor, destructor, public, private, polymorphism...
The use of OOP is optional and can be mixed with traditional programming (see p. 32).

JSON

JSON is managed natively in WLanguage.

AUTOMATIC GENERATION OF HTML, JAVASCRIPT AND CSS

Browsers only understand HTML, JavaScript and HTML code.
The WLanguage code that will be executed on the Browser automatically generates the corresponding HTML, JavaScript and CSS code.

NO NEED TO KNOW JAVASCRIPT, CSS AND HTML

You don't have to know JavaScript, HTML, CSS or PHP to develop with WEBDEV.
However, WEBDEV allows your teams to use JavaScript, HTML, CSS or PHP code, if they prefer.

PROFILER: OPTIMIZE THE SPEED OF YOUR CODE

WEBDEV comes with a large number of tools, including a profiler, which measures the speed of each instruction in your code.

RAD

Note that the code and pages can be automatically generated by the WEBDEV RAD and wizards, from a data description (an "analysis").

WINDEV AND WINDEV MOBILE COMPATIBILITY

WLanguage is common to WEBDEV, WINDEV and WINDEV Mobile: your code is cross-platform.
When you have existing WLanguage programs, you can reuse them directly.

WLanguage brings a structured 5GL to Internet development.

Voted "Most productive language on the market"
by the readers of "Programmez" (Program) magazine

THE CODE EDITOR **GUIDES** YOU

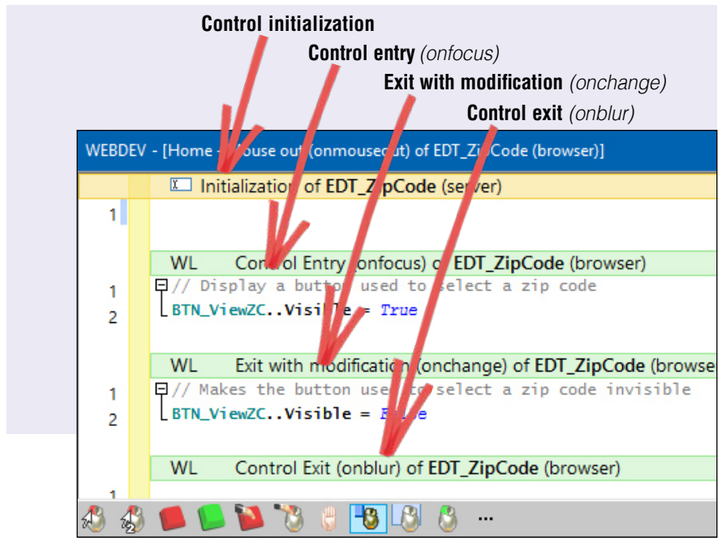
The code editor is a major contributor to WEBDEV's efficiency.
Coding is intuitive, fast and done directly in the relevant control.

A REVOLUTIONARY METHOD

The unique code editor technology helps create quality code and develop faster.

THE WEBDEV DEVELOPMENT METHOD

The most common events for a control are proposed by default in the code editor, and materialized by a color bar.
For example, for an "edit" type control,



the default events are:

- initialize the control,
- entry in the control,
- exit from the control,
- whenever modified.

Simply type the corresponding code in the corresponding section.
The code that will be executed on the Browser can be written in WLanguage or JavaScript, as desired.

SERVER CODE AND BROWSER CODE

Simply write your code under the corresponding bar.
The yellow bar indicates that the code written is WLanguage and that it will be executed on the Server.
The **green** bar indicates that the code written is WLanguage and that it will be executed on the Browser.
The **pink** bar means that the code written is PHP.
The **blue** bar means that the code written is JavaScript code.
It is visual and intuitive!

ALL EVENTS ARE SUPPORTED

The less common events are offered in a list.
All events are supported: click, double click, key down, key pressed, key up, mouse button down, mouse button up, mouse out, mouse over, focus lost, focus gained, modification, selection of control content, call to help, load, submit,...

SYNTAX HIGHLIGHTING

To make coding easier and more readable, each word is colored according to its type.

COLLAPSED/EXPANDED

The code editor includes a convenient expand/collapse code feature: you can hide tested code for better readability!

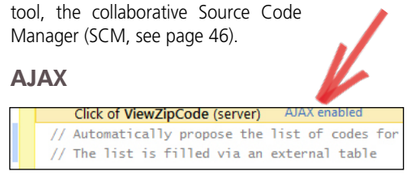
UML

WEBDEV automatically creates the class diagram by a reverse analysis of the code.
Conversely, a UML diagram generates the classes' code.

SOURCE CODE MANAGER

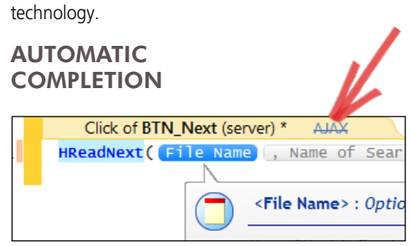
WEBDEV comes with a versioning tool, the collaborative Source Code Manager (SCM, see page 46).

AJAX



As for AJAX (refresh only strictly necessary data in the page), simply click on "Ajax" on the bar to use this technology.

AUTOMATIC COMPLETION



When typing a command, the type of parameter expected is proposed in a drop-down list. A tooltip also provides information about each parameter of the function used.

REAL-TIME ERROR CHECKING

If a syntax error occurs, it is detected in the code editor, even before the project is compiled!

UNIT TEST OF PROCEDURES AND CLASSES

The creation of test suites is totally integrated in the environment. To directly test a procedure or a class, simply use the popup menu that offers to create (and then replay) a new unit test.

CODE COVERAGE

The code editor indicates the "Code Coverage" of the project: each line of code that has never been executed is reported.

The code editor is a major component of the legendary simplicity of WEBDEV.

Note:
the code editor, like the environment, can have a white or black background

OOP

Developing a dynamic site (linked to data, and including processes) requires a programming phase.
WEBDEV is open to all development methods.

PROCEDURAL PROGRAMMING OR OOP

The programming language used in WEBDEV is WLanguage, the famous 5GL, renowned for its power, richness and intuitiveness.
Developers can choose between procedural programming and Object Oriented Programming (OOP). The object oriented approach allows for code evolution and makes future maintenance easier.

OOP

WLanguage syntaxes allow modern and efficient object-oriented programming.
Base class methods can be redefined visually from the project explorer; virtual methods are automatically generated.
Management of the instances' memory is completely automated in most cases, when allocating as well as when freeing memory.

ALL THE OOP NOTIONS

The OOP concepts are supported:
- Classes
- Abstract classes
- Interfaces
- Inheritance, multiple inheritance
- Reflection
- Overload (dynamic dispatch)
- Abstract and virtual methods (polymorphism)
- Properties (get and set)
- Constructor
- Destructor
- Data encapsulation : public, private, protected
- Automatic freeing
- "is one" operator and downcast
- Low reference
- Association
- ...

XML, JSON, ...

WLanguage is optimized to process XML and JSON documents.
The structures of the documents are imported, serialized and deserialized directly in WLanguage.
The code editor offers assisted input on the names of the document elements, syntactic coloring,...

INTEGRATED **DEBUGGER**: FINE TUNE YOUR CODE EASILY

POWERFUL YET USER-FRIENDLY DEBUGGER

To fine tune your interactive Web site, the debugger lets you run your site's code step by step, and visualize or modify the contents of given variables.

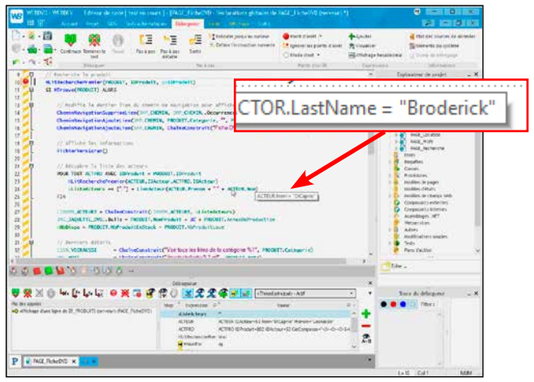
ADVANCED FEATURES

The debugger is very powerful and offers advanced features:
- step-by-step execution, skip functions, instantly exit a function, execution up to a given line,...
- autostop, which stops the execution for each change to a variable's value or to a given expression
- automatic visualization (can be turned off) of all the variables in the line being executed (watch)
- visualization of expressions that contain functions
- display the value of the variable under the tooltip
- decimal or hexadecimal result
- real-time call stack
- trace of code run
- 32 and 64 bits
- ...

REMOTE DEBUGGING

You can debug a server remotely: you can debug the server located at your isp without going there.

The debugger saves you a lot of precious time when fine tuning your application.



SOAP & REST **WEBSERVICES**: CREATION, CONSUMPTION

RELY ON WEBDEV'S EASE-OF-USE TO CREATE WEBSERVICES

WEBDEV allows you to easily consume, create, deploy and host SOAP and REST Webservices.

EASY CONSUMPTION OF REST WEBSERVICES

It is very easy to use REST Webservices from WEBDEV.
Just call the URLs of the Webservice.
The data returned by the Webservice can be in JSON format.
WEBDEV supports JSON natively.

EASY CONSUMPTION OF SOAP WEBSERVICES

It is very easy to import SOAP Webservices into WEBDEV.
Simply import the WSDL description from the Webservice.
The procedures and types of the Webservice automatically appear as types and functions that can be used in the project.
Thus, the elements from the Webservice appear in the project as regular project elements.

EVERYTHING IS MANAGED

The management of Webservices is very powerful; here is a list of some of the managed features:
- Array type results (SoapArray)
- Data binding Webservices
- Inclusion of Webservices
- Attributes in wsdl
- Multiple Responses and Headers
- Message signature
- WS-Addressing
- Circular references in schemas
- SPNEGO authentications, ...

EASY CREATION OF REST WEBSERVICES

The description of a REST Webservice is performed easily from the Webservices editor.
Simply describe the entry points of the external interface of the Webservice: method name, expected parameters, return value as well as type of request (GET, POST, PUT, DELETE ...).
You can also specify a documentation note as well as examples for using the entry point and a description regarding the format of return value.
WEBDEV generates the necessary procedures or classes.

EASY CREATION OF SOAP WEBSERVICES

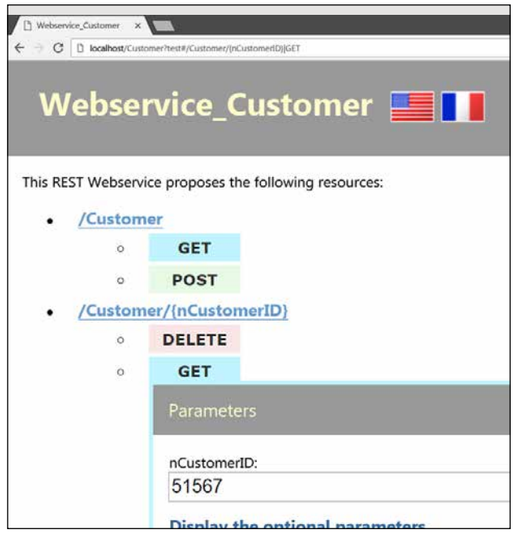
SOAP Webservices are easy to create: simply define the set of procedures that make up the Webservice interface.
The WDSL description file is automatically generated.

EASY WEBSERVICE DEPLOYMENT

Webservices are hosted on a computer that includes a WEBDEV application server..
The setup procedure is automatically generated.
Everything is managed from the WEBDEV administrator as a "classic" site, all the tools are available: traffic statistics, etc... (see site administration p 54).

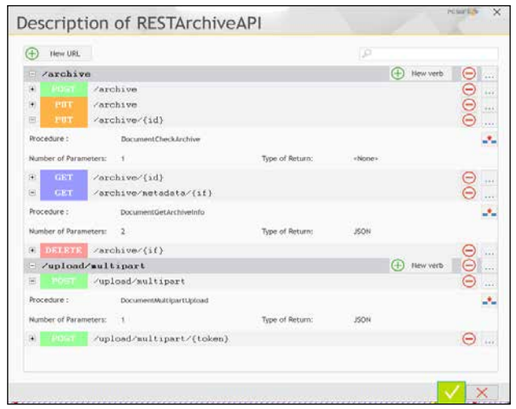
EASY WEBSERVICE HOSTING

The hosting technology is based on the robust WEBDEV standard application server.
The servers can be located on your premises, at a host or in the cloud (PCSCloud for example).
The Webservices can be consumed by any type of application, created in WINDEV, WEBDEV, WINDEV Mobile or with any other third-party language.



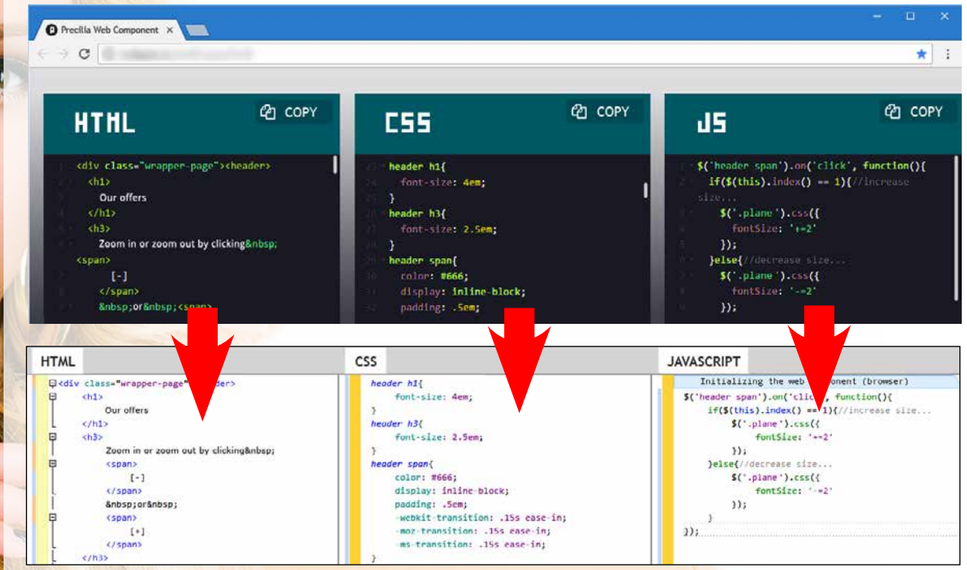
Visualization and test page automatically generated

Result of a REST Webservice: Http code, Http header, content (JSON by default), etc.



Editing a REST Webservice in the editor

ANGULAR, REACT, EMBER, VUE, BOOTSTRAP, JQUERY...



WEBDEV allows you to easily integrate in a page Bootstrap components, JQuery.UI, Angular, React.
External web resources (Angular component, Bootstrap, etc.) are generally delivered in three parts :
- HTML code
- CSS code
- JavaScript code.

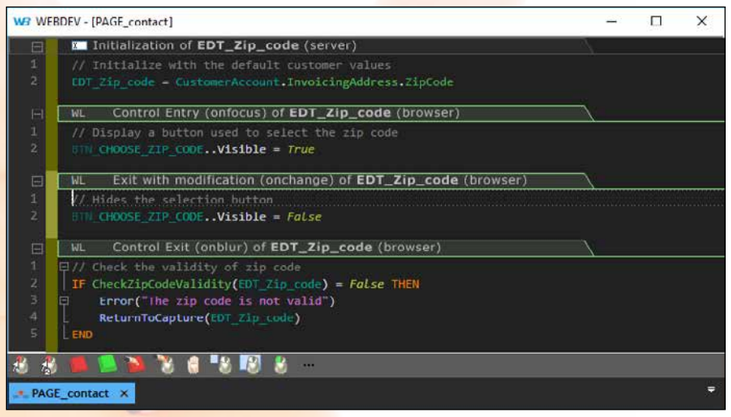
Dependency files may also be supplied (images, ...).
WEBDEV offers a very simple method to integrate any external web resource into a WEBDEV site. Simply use the "Web component" control, and import the component codes into it.

To interact with the external component, just initialize, read and write the JavaScript variables of the external resource in WLanguage.

BROWSER WLANGUAGE CODE

The code of a website is divided into the "Server" code and the "Browser" code.

The current trend is to move as many processes as possible onto the browser: the server is unloaded, there is less data transferred, and the user experience is much more fluid.
WEBDEV follows this strong trend. WEBDEV significantly extends the capabilities of WLanguage in "Browser" mode.
This allows you to create a lot more processes that will be run on the browser.
The site is faster, more reactive, it consumes less bandwidth, it is less server-intensive.
OOP is also available for Browser code.



NATIVE CONNECTORS: GOOGLE APPS, SAP, LOTUS NOTES...

WEBDEV AT THE SERVICE OF SAP

SAP ECC is a widely used ERP. A site built in WEBDEV can access SAP ERP data natively (via BAPI). The access to the data is directly performed by SAP, the tracing of accesses is maintained as well as the management of priorities.
A family of WLanguage functions

enables you to establish a connection (with authentication) and call BAPIs and pass them parameters.
A wizard helps import automatically the structures used.
There is no need to install the SAP GUI module.
All the WEBDEV features are available.

QUERIES BASED ON SAP

The report generator (see p 45) can be used to create queries on data found in a SAP database.

NATIVE ACCESS TO LOTUS NOTES

WEBDEV sites can access Lotus Notes in native mode. Access to e-mails found on the Lotus Notes (Domino) mail server, in incoming and outgoing modes, is standard in native mode.
Access to contacts, appointments, tasks and documents found on the server is easy. This is used to create Intranet sites that are totally integrated to the I.S. of the company.. .
The usual security of Lotus Notes is respected via the Lotus certificate.

OUTLOOK NATIVE ACCESS

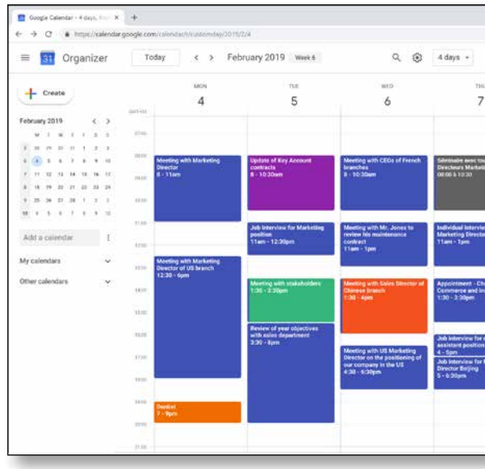
WEBDEV sites can access Outlook in native mode. Access to Outlook mails, in incoming and outgoing modes, is standard.
Access to contacts, appointments and tasks is easy, in read and write mode.
This is used to create Intranet sites that are totally integrated to the I.S. of the company.. .

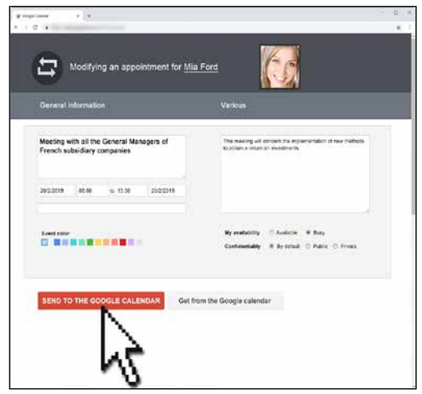
NATIVE ACCESS TO GOOGLE APPS

Aside from the ability to connect to Google application, WEBDEV offers native access to Google application data: Google Calendar, Google Maps, Google Contacts, Picasa...
This allows data to be retrieved and then displayed in a custom format on the site.,

Let's see an example of code that lists the gMail contacts and that displays them in a WEBDEV table.

```
Connection is gglConnection
Connection.Email="WebDev@gmail.com"
Connection.Password="password"
GglConnect(Connection)
Contacts is array of gglContact
Contacts=GglListContact(Connection)
TableDisplay(TABLE_Contacts)
```





Example of native access to Google Calendar, to be used directly in a WEBDEV page

HTTPS SECURITY

SECURITY

As you know security and confidentiality are of the utmost importance on the Internet.
Usually, when using a website, the data circulating between the computer of the Web user and the Web server is not protected : the data can be accessed by any eavesdropper.
The confidentiality and the authentication of the data source are not ensured by default.

SECURE HTTPS CONNECTION

The most effective way today to protect the Web user's information is to use a secure connection such as TLS (Transport Layer Security, the most reliable successor to SSL) or SSL.
This TSL connection insures the encryption of the data that travels between the user's computer and the Web server that hosts the site.
This protocol also allows the Web user to authenticate the owner of the visited site.
To secure a site or part of a site with TLS (or SSL), it is necessary to obtain a TLS (or SSL) certificate from a recognized certification authority (e. g. Norton VeriSign, Thawte, GeoTrust, etc.).
Once this certificate has been obtained, simply install it on the server that hosts the site.
Please note that there are several levels of certification, from simple encryption to the "SSL Extended Validation" authentication which allows the display of a green address bar in some browsers.

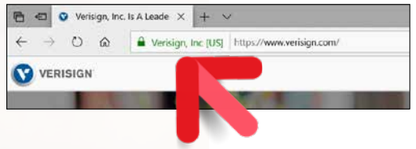
HTTP, HTTPS

The URL used for the secure connection to the site will start with "`https://`" instead of the classic "`http://`".
Web users can also check that there is a padlock in their browser status bar, which is proof of the secure transaction in progress, or a URL written in green, as well as the identity of the site they are visiting.

SECURITY: EASY IN WEBDEV

The secure mode is supported by the sites created with WEBDEV .
Thanks to `SSLActive()`, it is possible to combine a non-secure information part with a secure space.
The same site can easily switch from non-secure mode to SSL/TLS secure mode.

"Client" certificates are also available.



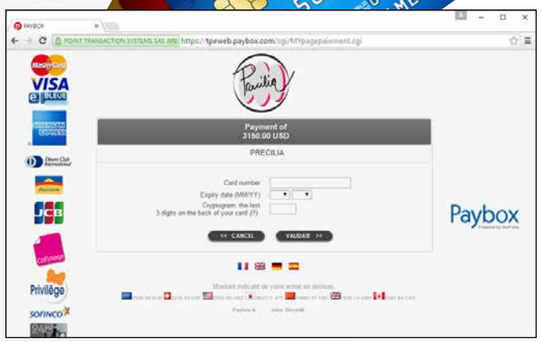
SECURE **PAYMENT**

SECURE PAYMENT BY BANK CARD

Two main methods can be used to receive payments by credit card.
Directly collect the customer's payment information (credit card number, expiration date, code) and then perform the transaction with the bank. This method is less and less used.
The most common method consists in switching to a specialized payment page provided by a financial institution.
Once users have validated their order on your site, they are redirected to a payment page managed by a third party who ensures the bank transaction, and returns the payment approval or rejection.
In this implementation, only the payment approval needs to be processed.

FINANCIAL INSTITUTIONS

You can directly choose a bank as an operator, which will offer you an online payment service to interface with.
You can also use a multi-bank operator such as Verifone PayBox or PayPal. This method is used to easily choose and change the bank account that will be credited.
Implementation this solution is easy with WEBDEV, thanks to the "PayBox" and "PayPal" components that come as standard.



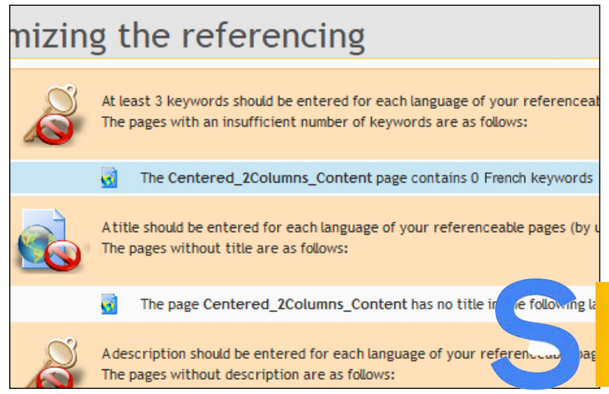
Paybox by Verifone

PayPal

SEO: ORGANIC SEO OF YOUR SITES

OPTIMIZE YOUR SITES

WEBDEV helps you improve your sites' organic SEO.
A wizard analyzes the composition of the site pages and indicates the possible changes to improve the ranking of the pages in search engines (Google, Yahoo, etc.).
The wizard also checks that the links among pages can be detected and used by the engines' spiders.
A lot of other rules are also checked.
Thus, your sites will rank higher in search engines.



OPTIMIZE EACH DYNAMIC PAGE ("URL REWRITING")

Thanks to the "AWP" technology, WEBDEV allows you to optimize each dynamic page.
A URL rewriting mode is used to define several addresses for the same page according to its content.
This page and its dynamic content will rank higher in the search engines. A page can be renamed.
For example, the page address can contain the name of the object (bike, mountain bike, oak dresser, etc.), which will improve the page SEO.

http://www.tames.com/TAMES_WEB/EN/Car/ferrari/Model/ferrari_488-gtb.awp

SECURITY OF YOUR SITES: **PASSWORD** ACCESS

CONTROL ACCESS TO WEBSITES AND APPLICATIONS: GROUPWARE

Secure password access to a site or to some if its pages may be necessary: it comes as standard in WEBDEV!
The "User Groupware" features allow you to define passwords and access level for people or groups of people.

Access control is easily defined from the supervisor's editor. No programming is needed, simply activate the "Groupware" option.

GROUPWARE: AN ENHANCED SECURITY CHECK

Access control enables you to filter the access to several elements: menu choices, buttons, controls, groups of controls, pages, reports, ...
The protected elements are inactive and either grayed out or hidden based on your choice.

THE SUPERVISOR MODE

The security manager will be able to easily configure the user rights.
A friendly editor allows you to define and manage these rights.
If you want, the rights of the users or group of users can be created or modified by programming.

LDAP

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

AUTHENTICATION WITH FACEBOOK, GOOGLE, TWITTER, LINKEDIN LOGIN DATA, ...

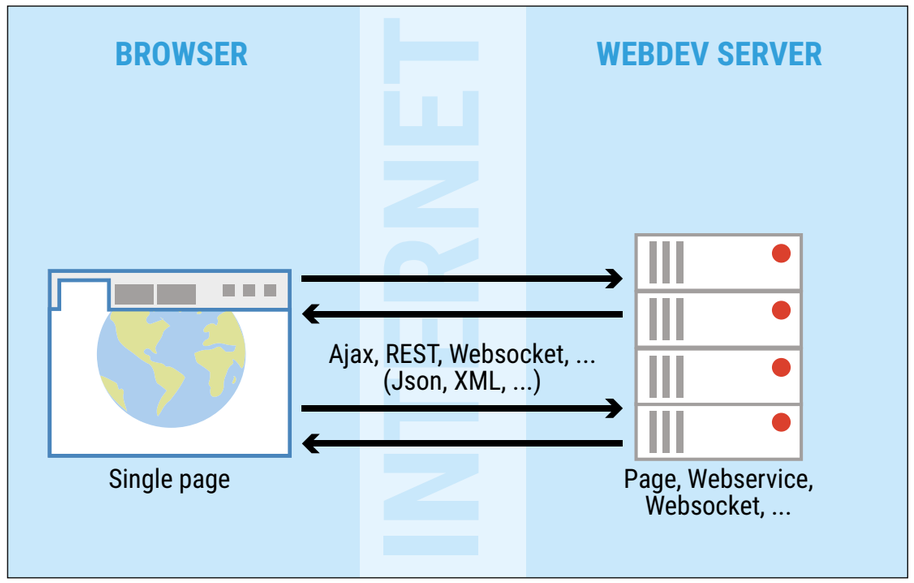
To authenticate Web users, it is also possible to use the users' login data from Facebook, Google, Twitter, LinkedIn, Amazon, Dropbox, Instagram, Yahoo... (oAuth 2.0 protocol).
Note that your site will not know the identifiers of the Web user.

Automatically make your sites secure, without coding anything!

SPA: SINGLE PAGE APPLICATION (AN ENTIRE SITE IN A SINGLE PAGE)

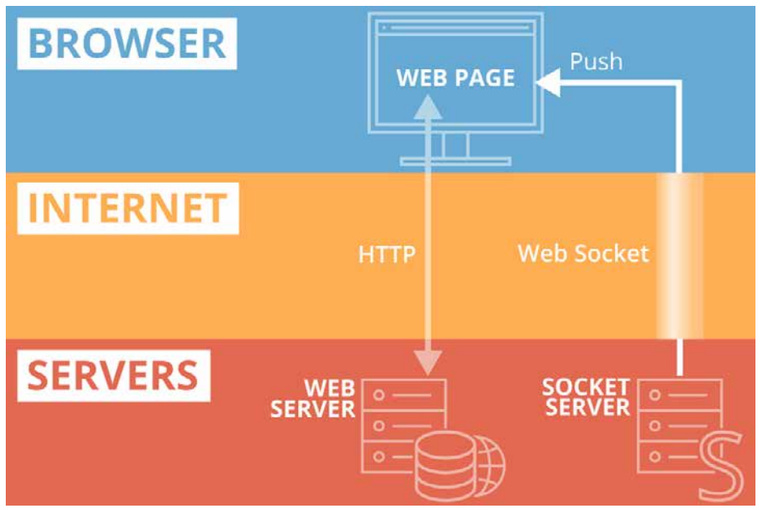
WEBDEV allows you to create Web Applications contained in a single page (Single Page Application, SPA).
Simply use the concept of plane. A plane is a set of page controls.
Each plane can be visible or not.
It is possible to switch between planes from any control process:
- click on a button
- code of the page according to some criteria...

Thus the appearance and the content of the page evolve during the navigation without any return to the server.
In SPA mode, the data displayed in a plane is automatically initialized when the page containing such plane is loaded.
Several methods can be used to refresh the data of a plane that is already displayed (such as a quantity in stock):
- call to an Ajax process
- call to a Webservice (via a timer for example).
- via a Websocket...

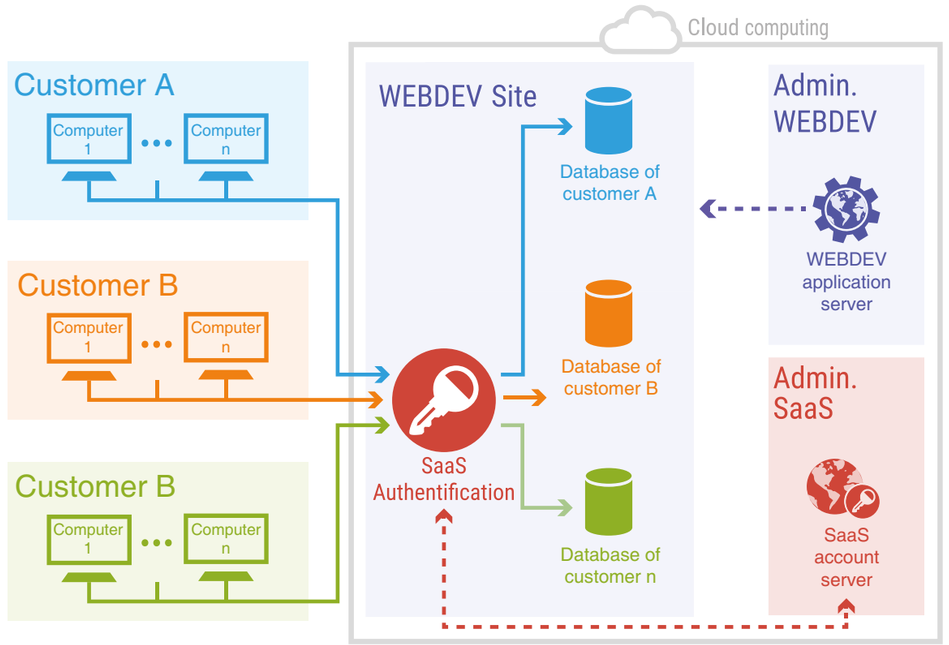


WEBSOCKET PUSH SERVER

Using Websockets is the only way to notify the browser without the browser having to ask for it.
To this end, WEBDEV offers a family of browser functions: the Socket functions.
This set of functions is used to manage the transmission of information via a Websocket.
`SocketConnect` allows you to connect to the socket server and open the communication channel.
`SocketAccept` allows you to listen in asynchronous mode to the opened socket and specify the WLanguage code that will be called when receiving a message.
`SocketWrite` allows you to send a notification to the server, to ask the server to recalculate statistics for example.
Using Websockets allows you to send ("push") data to a site.



SAAS : EASILY CREATE APPLICATIONS IN SAAS MODE



WEBDEV
Easy SaaS

SaaS (acronym for "Software as a Service") is a Cloud-based software delivery model.
Customers do not pay to own a license of the software itself, but to use it.
The data is stored on the servers of the application provider, no longer in the company's servers.

EASY SAAS : MARKET YOUR SAAS SITES

WEBDEV provides the necessary tools to easily implement SaaS solutions:
The SaaS administrator lets you describe the use authorizations.
The management of customer accounts makes it possible to define the rules for using the site: authentication, number of connections allowed, connection time,...
This is managed directly from the administrator's interface, or by programming via WLanguage functions.
At runtime, the site checks the connection authorization and the user's rights via a set of WLanguage functions.

SAAS ADMINISTRATOR

The administration software can work with or without human intervention. It allows you to create company accounts, user accounts according to an initial configuration, without human intervention.
The interface is offered in Web mode.

API FOR SAAS MANAGEMENT

Among the WLanguage functions available to manage accounts, you'll find:
- account creation and deletion
- account modifications: add users, time slots, number of users,...
- initialization of a database by cloning a reference database
- definition of connection to the database...

SAAS AUTHENTICATION API

Among the elements to manage in a SaaS site, you will find:
- Connection and disconnection
- Company identifier
- Company password
- User identifier
- User password
- IP address check
- Maximum number of connections
- Maximum connection time
- Authorized connection time, etc...

CUSTOM PRICING MANAGEMENT

Pricing management is easily performed via a simple setting.

SaaS becomes easy with WEBDEV.

MODELING A DATABASE : CHILD'S PLAY

When you create a dynamic site or a web application, you need to define the data tables. If these don't exist you need to define them. With WEBDEV, this is incredibly easy..

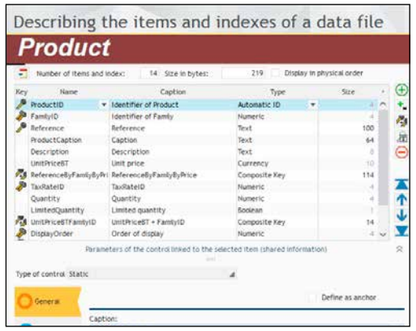
WEBDEV uses a visual representation to describe how data is organized. WEBDEV supports all the analysis methods.

DEFINING A NEW STRUCTURE

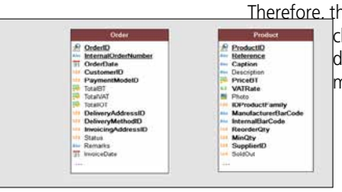
Let's look at a simple but representative example of how to define a new structure: the definition of the "Product" and "Order" tables.

1. Let's create the "PRODUCTS" table ": simply specify its name and some general information.

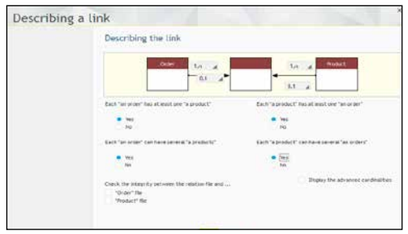
2. Let's create the table's structure: each column is defined or retrieved from the data dictionary.



3. The "ORDERS" table is created the same way.
The CUSTOMERS place orders.
Therefore, these 2 tables must be linked in the analysis. After clicking the "link" tool in the icon bar, simply draw a link between these two tables using the mouse.



4. WEBDEV then asks some simple questions in natural language to automatically determine the type of link between the two tables.

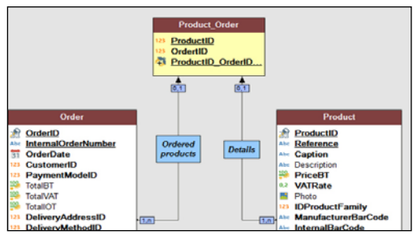


The questions are childishly simple. For example:
Each "product" belongs to at least one "order": yes or no?
Each "product" can belong to several "orders": yes or no?
Etc...

Based on the answers to these questions WEBDEV sets the right cardinality attributes and determines whether a relationship table is needed!.

5. Then, WEBDEV asks for the rules to apply in case of deletion or modification (referential integrity).
Prevent the deletion of a Product that has an Order: yes or no?
Etc...

6. That's it, the tables are linked, your work is done.
The query editor will find the right joins automatically, and each editor in the development environment will know how to work with the data...



A link table is automatically created.

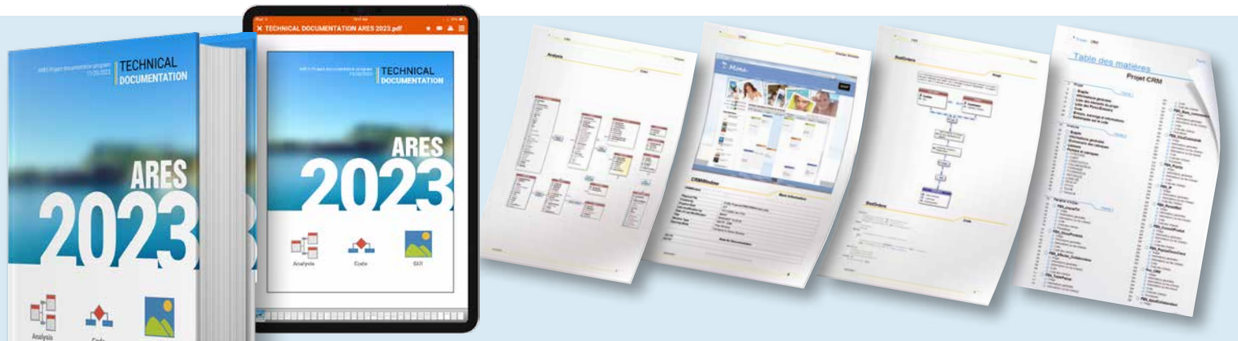
All you have to do now is print the documentation (optional) and generate the pages and the code with RAD, or start a new development... It's that simple.

IMPORT EXISTING DATA

If you already have an analysis or data, you can simply drag and drop the structure into the data model editor!

GDPR

Data affected by the GDPR regulation is identified in the analysis. The documentation includes a GDPR section.



THE TECHNICAL (AND GDPR) DOCUMENTATION IN ONE CLICK

WEBDEV allows you to edit the full analysis and programming documentation of the site. The documentation is built by reverse analysis of the site, so it is always up to date. A documentation can contain several thousand pages, be edited in PDF, HTML, in a word processor, etc.

ALL THE DATABASES: MYSQL, ORACLE, AS/400, SQL SERVER, MONGO DB...

A dynamic site or a Web application uses data. WEBDEV can access any database on the market. WEBDEV is open, it lets you reuse what you already have.

- HFSQL*
- MySQL*
- Oracle**
- Informix**
- SQLServer**
- PostgreSQL*
- MariaDB*
- SQLite*
- IBM DB2**
- IBM AS/400**
- Sybase**
- Netware SQL
- Ingres
- Progress**
- XML*
- Access
- xBase*
- ASCII*
- Excel*
- Hadoop*
- Mongo DB*
- Memcached*
- Redis*
- Etc...

*: standard native connector
**: optional native connector

ALL DATABASES ARE SUPPORTED (NON-EXHAUSTIVE LIST)

WEBDEV can read and write in any database.
Here are some of the databases supported (please see table opposite).

HFSQL, A POWERFUL SQL DATABASE, INCLUDED

WEBDEV comes with HFSQL, a powerful client/server SQL database, already used by million of sites.
HFSQL can be freely deployed with your WEBDEV sites.
HFSQL features are detailed page 42.

NATIVE CONNECTOR

WEBDEV can natively access MySQL, Oracle, SQL Server, PostgreSQL, SQLite, AS/400, DB2, Informix, Sybase directly (modules available separately).
Installing these native connectors is easy (one simple file).
BLOB and Long Raw controls are supported.
Access performances are impressive.

NATIVE SUPPORT FOR "AS/400" AND "ISERIES" DATABASES

WEBDEV accesses AS/400 databases directly (module available separately), without ODBC driver, OLE DB or ActiveX.
WEBDEV can retrieve and export DDS, run CL commands, manage a Dataqueue,...
It is totally included in the environment, and the speed is impressive.
Request or download the AS 400 brochure!

BIG DATA

WEBDEV can natively access data stored in Big Data format, such as Hadoop and Mongo DB.

ALL DATABASES VIA ODBC OR OLE DB

WEBDEV supports all the databases with an ODBC or OLE DB driver.

SQL SCRIPT = WEBDEV ANALYSIS

An analysis defined in WEBDEV can be converted into an SQL script to create new SQL databases, and any SQL script can be converted automatically into a WEBDEV analysis to leverage existing code.
This offers total openness.
The existing structures are imported by Drag and Drop into the data model editor.

THE STORED PROCEDURES

If the third-party database supports stored procedures, these are accessible by applications written using WEBDEV.

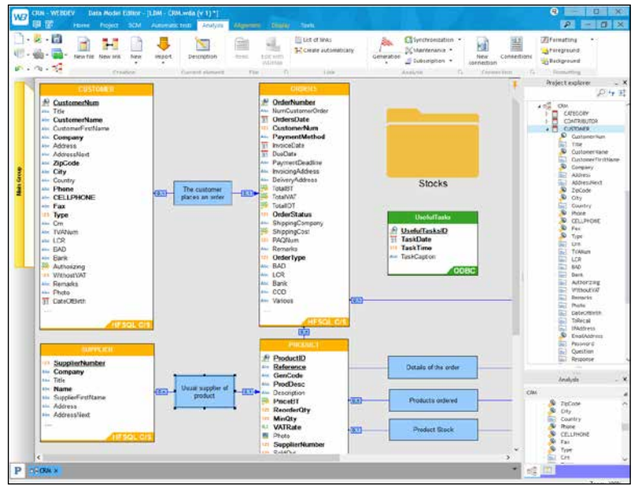
PROGRAMMING IS IDENTICAL REGARDLESS OF WHICH DATABASE IS USED

Regardless of the database used, you will also be able to use SQL or WEBDEV 5GL commands, WLanguage (`hReadNext`, etc.).
This again shows WINDEV openness by allowing you to easily switch database.

YOU ARE USING WINDEV...

If you use WINDEV, note that you can share the project and its elements (code, classes, windows, queries, reports, ...) between the 2 environments, and export your applications to WEBDEV.

WEBDEV allows you to create a new site and its data, or to create sites linked to existing data, regardless of the Database.



Description of a data structure in WEBDEV

ORACLE
Microsoft SQL Server
HFSQL
MySQL
PostgreSQL
IBM DB2
Informix
SYBASE
SQLite
hadoop
MariaDB
redis
mongoDB.
• • •

HFSQL : FREE WINDOWS AND LINUX CLIENT/SERVER SQL DATABASE

WEBDEV supports all the databases on the market.

WEBDEV SUPPORTS ALL MAJOR DATABASES

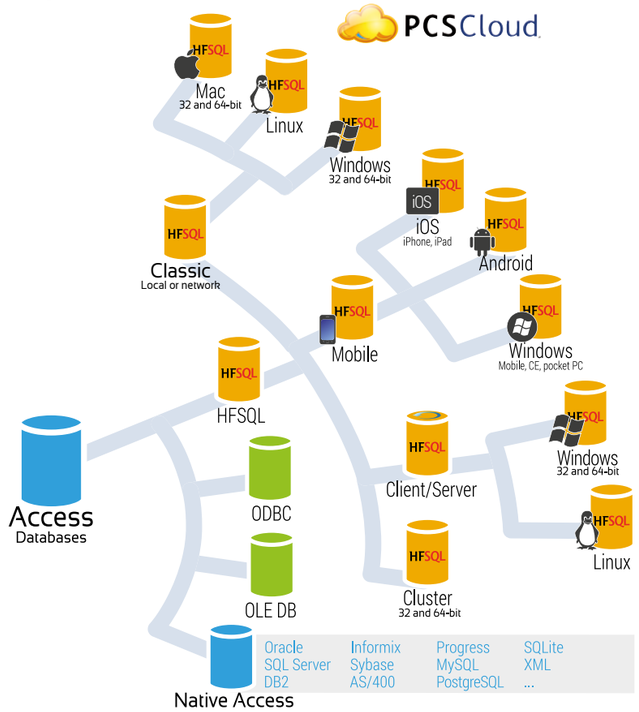
WEBDEV works with all the databases on the market (see page 41).

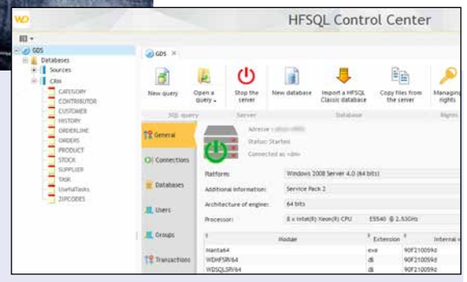
A PROVEN DATABASE COMES WITH THE PRODUCT: HFSQL

HFSQL comes as standard with WEBDEV.
It is a robust and reliable database, already used on millions of sites worldwide.

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

HHSQL enables you to work with large volume of data (up to 329 quadrillion rows).
You can plan for the natural data growth with peace of mind.





HFSQL "CONTROL CENTER"

The Control Center allows you to monitor all the servers and all the databases installed on the network of your company or installed remotely via Internet.
This center also allows you to:
- visualize and print data
- directly execute queries
- manage the user accounts (groups), rights, list of current connections
- edit precise server use statistics: computers, queries, logs, parameters...
- disconnect users
- manage transactions: view, cancel, ...
- manage backups (hot backup)
- view the record locks
- schedule tasks
- replicate servers
- display the number of rows processed
- manage clusters
- ...

SHARING DATA WITH BACK OFFICE

Site data can easily be shared in real time with back-office applications, to process orders, send packing lists and invoices, picking orders...
WINDEV is the ideal companion to WEBDEV for building solid Back Office applications.

SITE REPLICATION / BACK OFFICE

Replication between the site and the back office can be useful.
HFSQL supports database replication and server replication, unidirectional and bidirectional, scheduled or continued.
Replication can be automated, ro fully customized.

HFSQL : EXTREMELY FAST

Data access speed is impressive.
This provides better response times for your site, be it an Internet or Intranet site.

TOTAL INTEGRATION

The integration with the development environment is extensive.
At any time, in all the editors, you have immediate access to all the information regarding the tables and columns.
The integration between the interface and the database allows for easier and faster programming.

CONFIDENTIALITY: 128-BIT ENCRYPTION, AES

On the Internet, the data will be on a server: with HFSQL, you can easily protect the data against illegal access attempts.
Data and index encryption is standard.

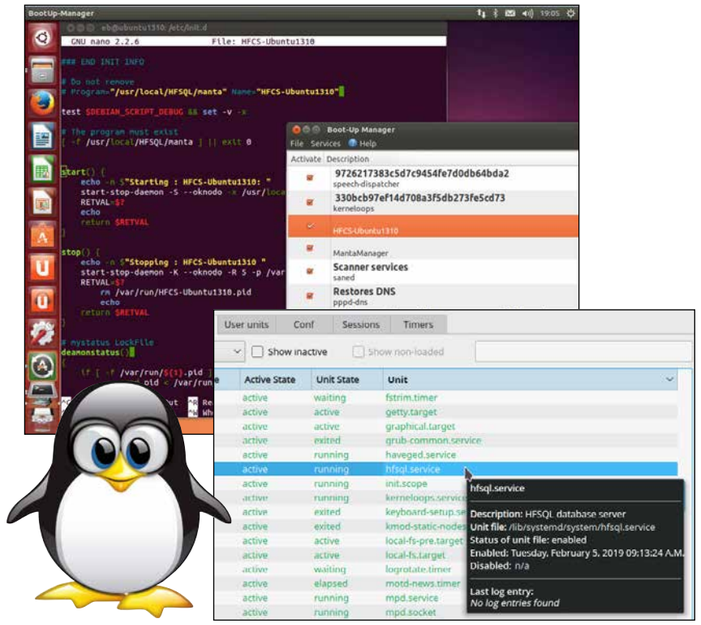
ADVANCED FEATURES

HFSQL offers advanced features: cluster, integrity, log, transactions, triggers, automatic management of concurrent accesses, Unicode, zero-down-time maintenance...

OPEN TO OTHER PROGRAMS

The native connectors, the ODBC and OLE DB drivers provided with HFSQL let you read and write from third-party programs or applications.

HFSQL®



SQL AND WLANGUAGE

Data access is done via SQL or via the powerful WLanguage functions.
You have the ability to mix SQL commands and WLanguage commands in the same program.

SECURITY : "SQL INJECTION" IMPOSSIBLE

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

FULL TEXT SEARCH

The "full text" search allows for very fast string searches inside your data.
This is useful for your search engines.
The index supports rich text (RTF, HTML), ignoring their tags during the indexing process.
Results are offered according to a relevance order ("ranking").

UNALTERABLE TABLES (FILES)

HFSQL offers an "unalterable" table type: what is written cannot be modified.
This type of table is useful for complying with some standards.

HOT BACKUP

You can trigger a database backup while the database is being used.
The backup can be triggered by programming or through a manual action.
You can also perform incremental backups.

EASY INSTALLATION AND CONFIGURATION

HFSQL installs instantly, without requiring any operations. The management of databases is automatic.
Support for structure modifications (a record goes from 40 to 60 characters for instance) is automatically managed (SDD technology).

GDPR

Personal data affected by GDPR are identified, which makes it easier to follow the regulation.

HFSQL DEPLOYMENT : FREE

Using HFSQL can save you hundreds of thousands of dollars when deploying.
A non-negligible benefit.

HFSQL Client/Server is your best ally for your sites!

CLUSTER (SERVER FARM)

Thanks to the cluster feature, a set of physical servers appears as a single server to the clients.
The potential failure of a physical server does not prevent access to the database (high availability, fault tolerance).
The read load charge is distributed on all the servers (load balancing for reading).
When a user is connected to a server that fails, the application won't be disconnected but automatically reconnected to a valid server (automatic fall over).

FEATURES
128-bit encryption
Referential integrity
Logs
Replication
Transactions
Triggers
Unicode
Import Export
Cluster
Unalterable tables
Compress/Decompress memos (blobs) on the fly
TECHNOLOGIES
Automatic maintenance (DSS)
Concurrent access management
Automatic reconnection
No management
Resume automatically after incident
Automatic deployment

Discover HFSQL with this 24-page documentation available www.windev.com

VISUAL QUERY EDITOR

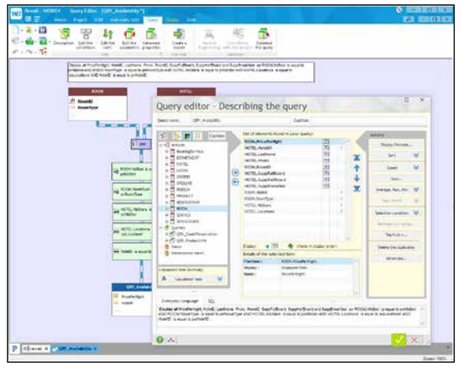
To help you create databases queries, WEBDEV offers a visual query editor.

NO NEED TO KNOW SQL TO CREATE POWERFUL QUERIES

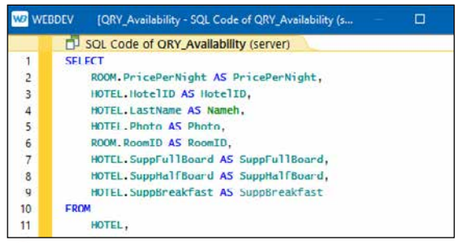
Thanks to the visual editor, all you need to do is choose the columns to include, specify the selection conditions using the wizard, and the query is built.
You can, of course, modify the SQL code generated by the query editor.
The queries are run on HFSQL (Classic, Mobile and Client/Server version) and on all the other databases.
You can use WLanguage code with queries (hRead* commands).

VISUAL QUERIES

The query is also generated both in natural language, which makes it easier to check that there is no error!

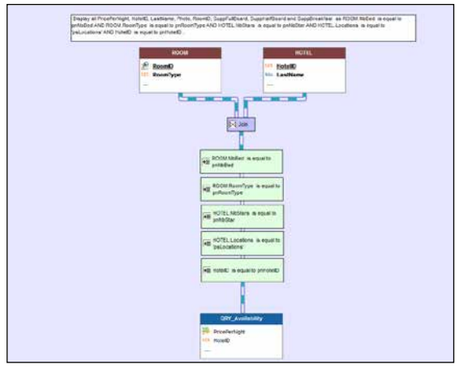


The query editor



1 *The SQL code is automatically generated*

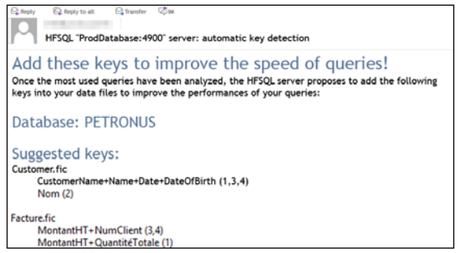
Once validated, the query is displayed visually in the development environment, which makes it easier to understand when you need to make changes.



3 *Once the query has been defined, it can be viewed.*

OPTIMIZED EXECUTION

With HFSQL, the choice of the best index will be performed at run time, taking into account the real weight of each index in the table.
If additional keys are needed to improve performance, the HFSQL server reports this.



Suggestions are even sent to you directly by email!

QUERIES BASED ON QUERIES...

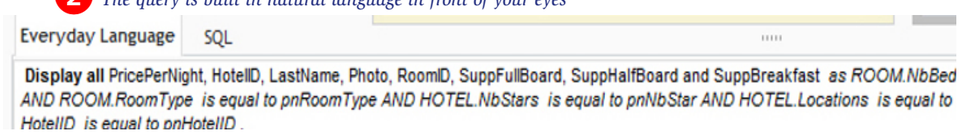
The result of a query can be a visualization table, a printed report, or even a HFSQL table.
A query can use as the source for another query.

QUERIES BUILT ON ANY DATABASE

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

The query editor makes accessing your data much easier to program.

2 *The query is built in natural language in front of your eyes*



REPORT EDITOR : GENERATE **PDF**S ON DEMAND (INVOICES, ETC.)

The WEBDEV report editor solves the Internet reporting problem.
And it makes creating prints easier.
Generating a PDF invoice after an order is placed is child's play!

PDF INCLUDED

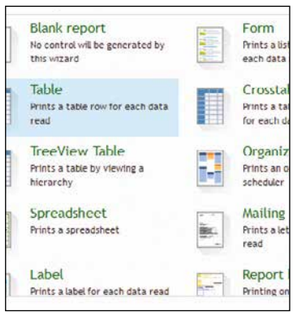
You can create reports in PDF as standard, no need to buy or install an additional tool.

A PDF report generated with WEBDEV

PDF/A AND SIGNATURE

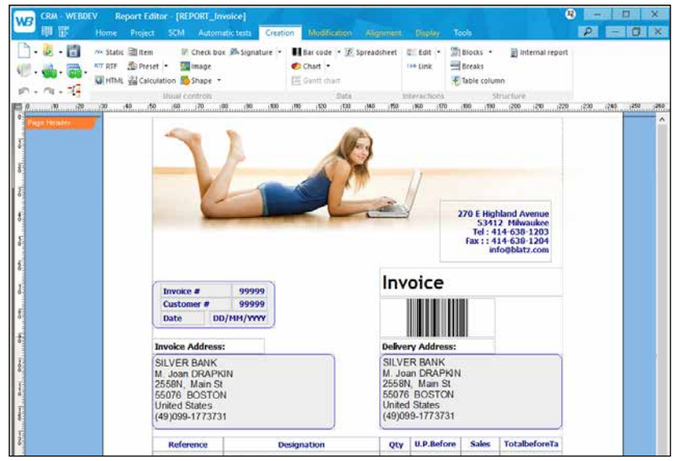
You can create signed PDF/A (standard ISO archive), and signed PDF (RGS).

CREATE A REPORT: EASY



Choosing the type of report to create

A wizard helps you create high quality reports; it asks questions so you won't forget anything!
On an Intranet, reports are printed on a printer accessible from the server.
On the Internet, the report will be sent to the Web user in a specific format: PDF, HTML, DOCX, ...



A report being created in the environment

ANY DATA SOURCE

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

PDF "PAGE BACKGROUND" MANAGEMENT

The report editor supports page backgrounds and pre-printed forms such as tax forms.

IMAGES: AUTOMATIC

Including images (JPEG, PNG, BMP, TIFF, PCX, GIF, etc.) in reports is extremely simple.
The image can be preset (logo, for example), or come from your program or from a file (product photo, etc.).
You can also easily print drawings originating from your program.

SOURCE CODE IN THE REPORT

WEBDEV allows you to include any executable WLanguage source code anywhere in a report: this enables you to create your most custom reports without any problems.

AUTOMATIC BAR CODES

WEBDEV automatically generates bar codes (horizontally or vertically).
The supported formats are: QR Code, UPCA, UPCE, EAN13, EAN8, CODE128, CODE39, CODE93, CODE11, intervaled 2 of 5, CODABAR, BC_MSI, Datamatrix, PDF417, ...

MAIL REPORTS

With WEBDEV it's easy to create a dynamic report (the invoice for the product a user just ordered online for instance) and mail it immediately (in PDF format for example).

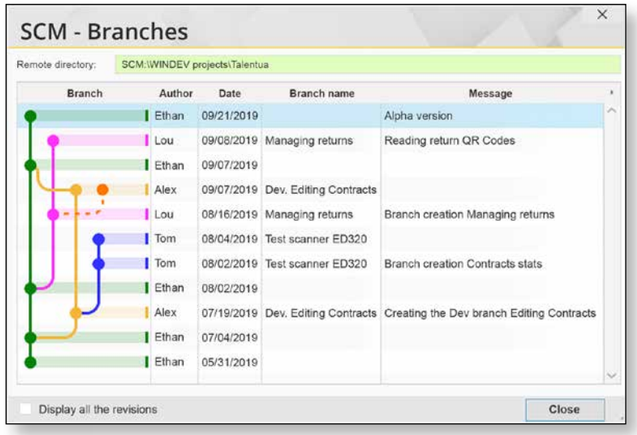
FREE DISTRIBUTION OF REPORTS

Furthermore, you don't pay any royalty to distribute your reports along with your WEBDEV sites.

With WEBDEV, making sophisticated reports are made easy!

SCM automatically manages "dependences": files used (images,...). SCM detects them in the project and saves them with the project.

TEAMWORK
VERSIONING TOOL (SCM)



THE REPOSITORY

With SCM (Source Code Manager), the project elements are grouped in a shared database. Before it is used, an element is checked out, and then once modified, it is checked back in. Therefore team members use up-to-date elements.
WEBDEV's SCM stores all the elements of the project: procedures, sets of procedures, classes, pages, reports, components, queries, analyses, dependencies (images,...), ...

TOTALLY INTEGRATED

Totally integrated with the various editors, the versioning tool (SCM) provides better team work, modification and version history, management for concurrent versions of a site (branches), and automates the backup of the source code.
Sized to accommodate teams of 1 to 1.000 developers, SCM facilitates and standardizes exchanges between developers without imposing constraints.

POWERFUL FEATURES

- SCM is totally integrated in the development environment.
- The database manages several projects ; if several projects use the same element, this one can be shared.
- A history of all elements (pages, code, queries, ...) is stored in the database. A complete or partial purge is possible.
- The project is found on each development computer ; therefore, you have the ability to develop with the offline computer.
- Branch management is covered.
- "Diff" (differences) between 2 elements is available source, page,...

REMOTE WORK

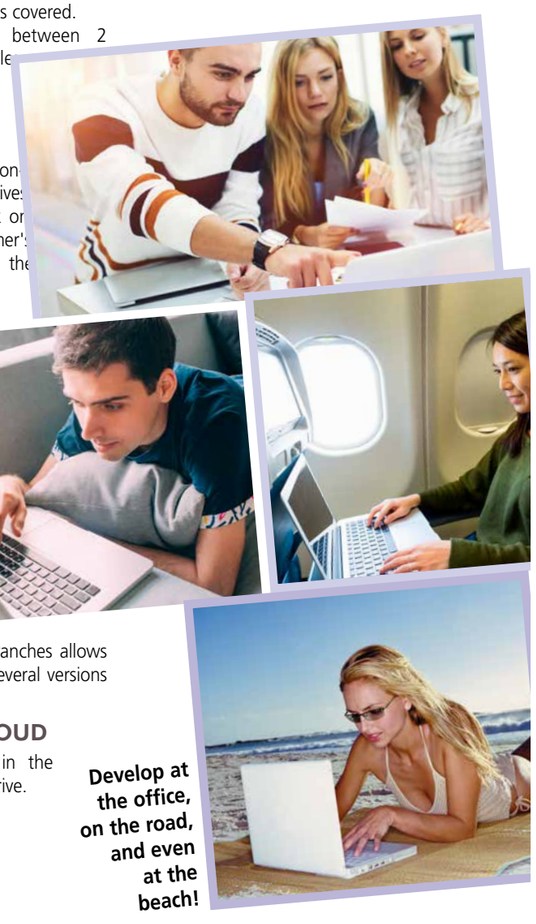
SCM accepts remote connections. This feature gives you the ability to work on a project from a customer's location without losing the modifications.

SINGLE DEVELOPER

SCM is useful even if you develop on your own: it keeps a history of the modifications for all the elements and acts as a backup and archiving tool for the versions.
The management of branches allows you to easily manage several versions of the same site.

SCM DRIVE : CLOUD

SCM can be hosted in the cloud thanks to SCM Drive.

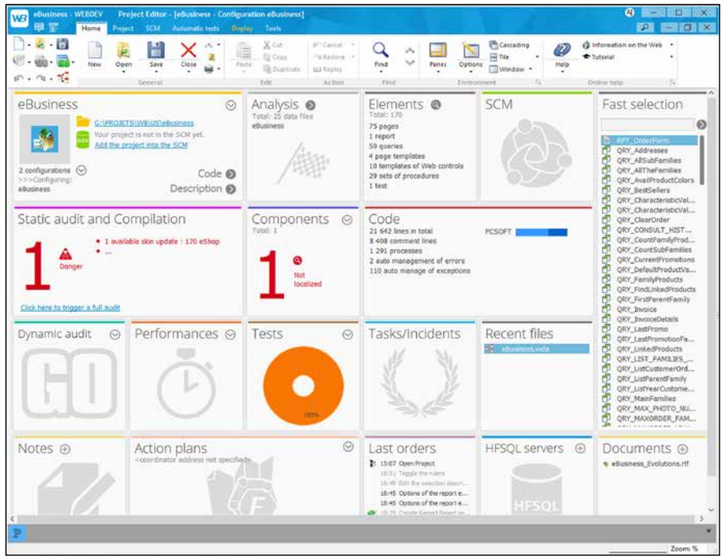


Develop at the office, on the road, and even at the beach!

MANAGE YOUR PROJECTS
DASHBOARD & CONTROL CENTERS

PROJECT DASHBOARD

The dashboard provides a global vision of the project, its progress and quality.
Lights come on when some (configurable) levels are reached: number of bugs, missed deadline... and show what optimizations to perform.



The project dashboard provides an overall view of a project's progress.

ALM : PROJECT MONITORING CONTROL CENTER

The Project Monitoring Center is used to check the schedule for each task assigned and performed by each team member and also monitors the requirements management and the quality control.
A Gantt chart is created.

REQUIREMENT AND TASK MANAGEMENT (BACKLOG ITEMS)

The Project Monitoring Center allows you to define and follow the status of each requirement for each version of the project. A requirement corresponds to a feature that must be developed in the software.
Each requirement can be linked to several tasks (development task, test task, documentation task, ...), bugs, business rules...

AGILE METHODS

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

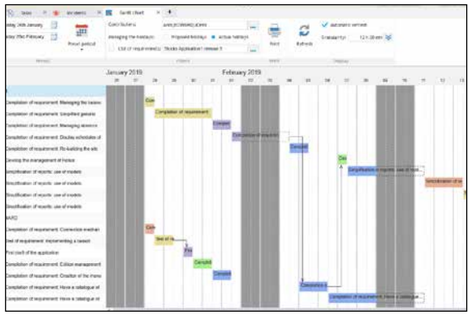
TIME TRACKING

A time management tool is included with the environment.
Based on an intuitive communication method, this tool regularly asks to validate in real time

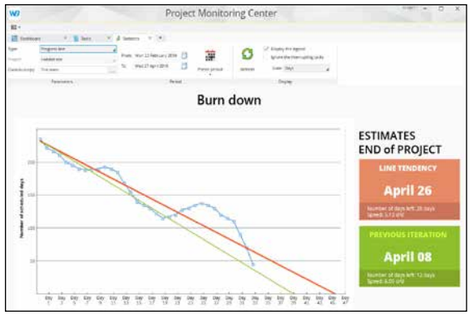
QUALITY CONTROL

Quality control lets you follow bugs.

Managing project is made easier.

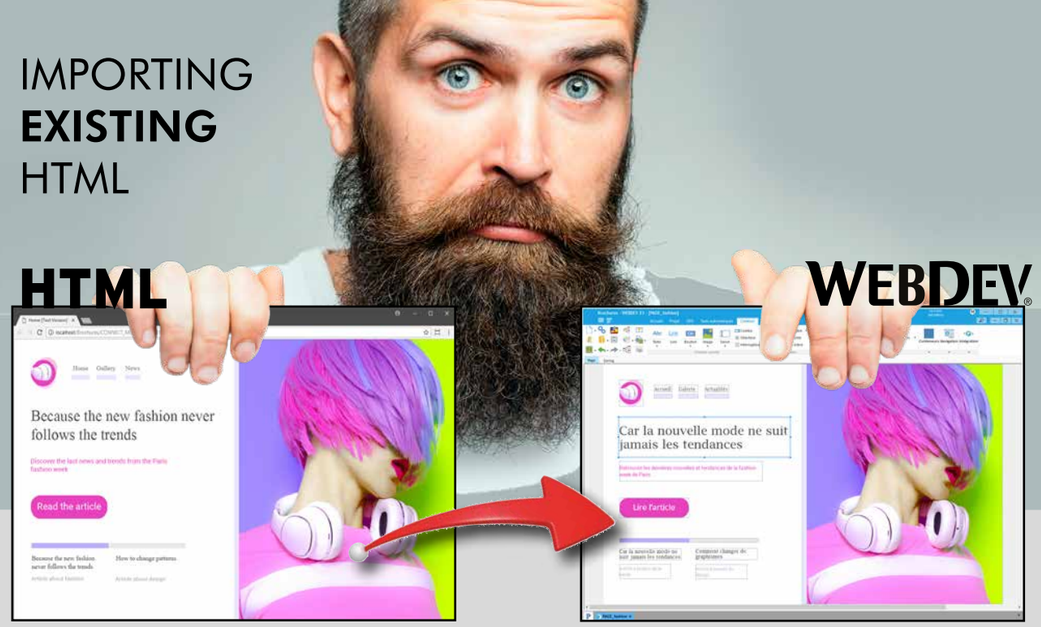


Manage the development team's schedule in real time



With the given parameters, the end date estimated here is April 26th

IMPORTING **EXISTING** HTML



The initial static page...

The same page imported in the WEBDEV editor

Importing pages is also useful for creating a "style book" compatible with an existing site, to preserve the site's look and feel. CSS style sheets are imported.

IMPORTING EXISTING HTML CODE

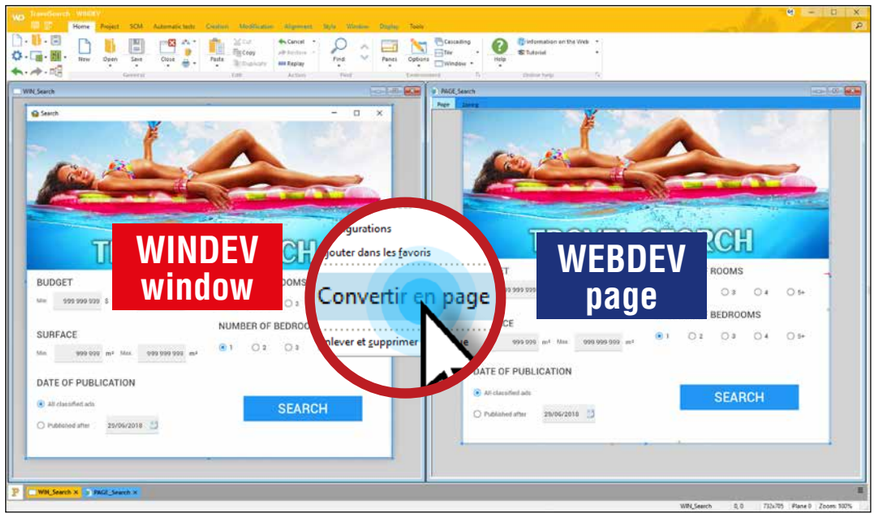
WEBDEV has an interesting feature: "suck in" existing HTML pages.
The page is imported into WEBDEV, and each text, image, link and so on... is automatically converted into a WEBDEV object.
The overall style of the page is kept.
This enables you to easily retrieve existing code.

IMPORTING EXISTING DREAMWEAVER CODE

You have the ability to import Dreamweaver pages, templates and libraries. When importing a page created with Dreamweaver, if a Dreamweaver template is detected, it is automatically converted into a WEBDEV page template. If this template is detected in another imported page, it will be automatically substituted with the previously created page template.

WEBIFICATION OF WINDEV APPLICATIONS

Sharing applications and windows with WINDEV saves a lot of time when transforming a Windows application into an Internet application.



IMPORTING AND SHARING A WINDEV APPLICATION

Windows created with WINDEV are directly changed into pages. Controls and code are retrieved. You share classes, procedures, reports, queries between WINDEV and WEBDEV projects (and even WINDEV Mobile).
A powerful wizard shows you the code changes to make. For example, if the application writes to the PC disk, the wizard reminds you that this is not allowed by by web browsers.
The transition from Desktop to Web has never been easier!

GENERATE **PHP** CODE

PHP WITHOUT KNOWING PHP!

All the power of WEBDEV (WYSIWYG editor, data model editor, UML, query editor, advanced controls, WLanguage, etc.) is available to create PHP sites.
If you choose to, the pages and the code (in WLanguage) are automatically converted to PHP code.
Without knowing PHP, you easily create dynamic PHP sites!

PHP RAD

The WEB RAD method is also available to generate PHP sites in just a few clicks.
Automatically generate your sites from the data model editor.

DIRECT INPUT OF PHP CODE

In the WEBDEV code editor, you have the ability to write (or paste) PHP code.

```
PHPConstant is dynamic array
PHPConstant = ListConstants()

FOR EACH ELEMENT TheConstant OF PHPC
    LooperAddLine(LOOP_TICKETS, TheC
END

PHP    Local Procedure ConstantValue (PH

function ListConstants()
{
$arrCts = get_defined_constants();
if (count($arrCts) == 0) {
return array();
} else {
return array_keys($arrCts);
}
}

PHP    Local Procedure ListConstants (PHP

function ConstantValue()
{
```

Here, the process in red is a piece of PHP code.

You're never stuck.
You can mix PHP code and WLanguage code in the same page.

ADVANCED CONTROLS AS WELL

In addition to the standard controls (edit control, static control, etc.) most WEBDEV advanced control types are available in PHP: gallery, scheduler, organizer, charts, table with automatic scroll bars, looper controls, calendar, tab, rich edit control, HTML text, automatic ruler...
This is used to simplify the coding phases. This brings strong security to your sites: input masks preventing the input of data outside of the expected format.

WEB 2.0: AJAX IN PHP

WEBDEV PHP sites use Ajax.

ADVANCED TYPES

In addition to standard PHP types, WEBDEV allows you to use advanced types in your code.
The programming is easier and more secure.
The advanced types are: date, time, duration, data source, associative arrays, structures, numeric...
Powerful syntax and operators are also available: `FOR EACH`, string operations, optional concatenation, "start with" operator,...

CODE SHARING

Using WLanguage allows for sharing code between pages and PHP sites, WEBDEV standard sites and even with WINDEV applications!
This allows you to save a lot of time and to increase reliability via the reusability.

AUTOMATIC MANAGEMENT OF PHP SECTIONS

The management of PHP sessions (contexts) is automatic. All you have to do is declare the variables that must be retrieved during the next execution of the page.
There is no serialization process to code.

PHP 7 & 5 COMPATIBILITY

WEBDEV generates PHP code compatible with both PHP 7 and PHP 5, as well as with the older PHP 4 version.

HFSQL ACCESS

Access to HFSQL (Classic, Network and Client/Server) is insured through SQL commands.

ACCESS TO MYSQL, POSTGRESQL, ORACLE

Access to MySQL, PostgreSQL and Oracle databases is supported.
Note that all the databases that propose an ODBC driver are accessible.

Access to AS/400 is native (module to purchase separately).

WAMP & LAMP

WAMP (Windows, Apache, MySQL, PHP) and LAMP (Linux, Apache, MySQL, PHP), technologies based on 4 components, are supported by WEBDEV.

WEBDEV
Open to all standards

CALLING PHP SCRIPTS

You can call an external `.php`script from a PHP page or a standard WEBDEV page via the `PHPExecute` command. You can use either a POST method or a GET method, the result is returned in a string.

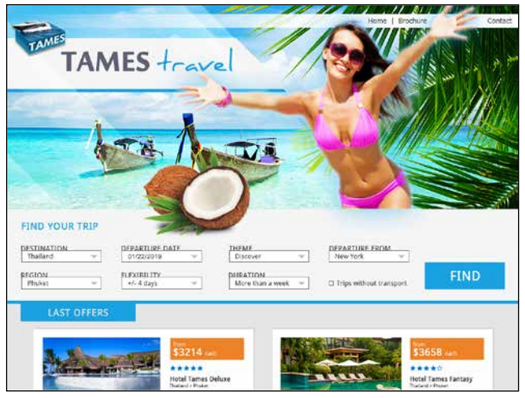
AUTOMATIC CONFIGURATION AND SETTING OF WEBDEV

During the installation, the Apache Web servers are automatically detected and configured, like standalone Apache servers.

ACCESS TO FREE HOSTING

Generating a PHP site allows you (among other things) to access "free" hosting services for your dynamic sites. This option can be useful for sites from associations or small companies that don't want to use dedicated hosting.

PHP becomes easy with WEBDEV!



WEBDEV allows you to host sites and applications with a hosting provider, in the cloud, or internally.

EASY HOSTING IN THE **CLOUD**

CLOUD

The Cloud for WEBDEV applications (www.pcscloud.net) offers pre-configured and optimized operating platforms for your WINDEV, WEBDEV or WINDEV Mobile applications.
These operating platforms enable you to host your WEBDEV sites and your Webservices.
They also allow you to make your HFSQL databases accessible from anywhere in the world, from fixed points or mobile terminals.

You have the ability to replicate your data from a proprietary server.

CLOUD PLATFORM

A PCSCloud platform is a virtual server.
This server is fully dedicated to you, you're the only one who can deploy sites on this server.
You can adjust at any time, and very granularly, the compute power needed for your platform (CPU, RAM, disk, etc.) and this way reduce the cost to the bare minimum.
You're freed from the server's administration, you can concentrate on your the core competency of your business.

CLOUD BENEFITS

The Cloud allows you to free yourself from hardware constraints, and allows you to easily manage the evolution of your resources.
In case of punctual needs, you can easily create additional configurations.

Deploying a site in the PCSCloud.net cloud is easy: it only takes one click from the WEBDEV environment!

HOSTING WITH A HOSTING PROVIDER

SELECTING A WEBDEV HOSTING PROVIDER

On WINDEV's website you can find a list of hosting companies (worldwide) that support WEBDEV dynamic sites.
You can also contact your existing hosting company.

HOST (FOR FREE) AND TEST YOUR SITES IN 1 CLICK

PC SOFT offers to host your test sites.
The setup is easily performed in 1 click from the environment.

DEDICATED SERVER

The site is hosted on a computer that you "rent" from your provider.
You're responsible for administering the machine and you're the only one to use it, it is dedicated to your company.
You are the only one who can install sites on this computer. You can administer your sites remotely thanks to the tools provided by WEBDEV.

SHARED SERVER

Shared hosting consists in hosting your site on a computer that is shared with other companies that will be able to deploy their own sites on it. The computer resources are shared.
On a shared server, you do not administer the system, you can only deploy your sites. Performance also depends on the activities of the other sites, but the hosting costs are cheaper than on a dedicated server.

HOSTING

There are 4 types of hosting:
- Internal server (on-premise)
- Dedicated server
- Shared server
- Cloud platform

INTERNAL HOSTING (ON-PREMISE)

WEBDEV allows you to host sites and applications created with WEBDEV directly in your company.

THE WEBDEV APPLICATION SERVER

The WEBDEV Application Server is needed to run dynamic sites.
It is installed on the hosting machine.
The WEBDEV Application Server runs on Windows and Linux.
The WEBDEV Application Server setup program automatically detects the installed Web server: IIS, Apache....
The configuration of the IIS or Apache Web servers is performed automatically when installing the application server.

SUPPORTED WINDOWS VERSIONS

All versions of Windows "server" are supported: Windows 2022, 2019, 2016, 2012,... 32 and 64 bits.
"Non-server" Windows versions (Windows 11, 10, 8, 7, etc.) are also supported.

SUPPORTED LINUX DISTRIBUTIONS

Linux distributions evolve often. WEBDEV supports both the older distributions and the new distributions.
At the time this document was created, the following stable distributions have been tested: Debian 8.11, OpenSuse Leap 15.0, Ubuntu 16.04...
Support for higher versions is ensured if these distributions are compatible. Do not hesitate to ask PC SOFT to find out about the latest changes.

AUTOMATIC CONFIGURATION ON APACHE (WAMP LAMP)

If you're using an Apache Web server, when installing the WEBDEV application server, the "Apache" Web servers (especially the ones used by EasyPHP) are detected and automatically configured.

DOCKER OF THE APPLICATION SERVER

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 write or script!
Thus, you can easily create Docker containers for your WEBDEV sites.

WEBDEV
Deploy and administer your sites easily.

SILENT SETUP

The automatic configuration of the hosting server can be done in a "silent" way (i.e. without manual intervention). This is useful for hosting providers, as well as for companies that manage the hosting of their sites themselves.
The setup is fully configurable, and it becomes possible to set servers in batches (create instances of the WEBDEV application server automatically).

AUTOMATICALLY MOVE A SITE FROM ONE SERVER TO ANOTHER

Its is really easy to move a live site from one machine to another.
The move takes care of all the required elements for the sites as well as their operating configuration: everything is automatic.

STATIC SITES HOSTING

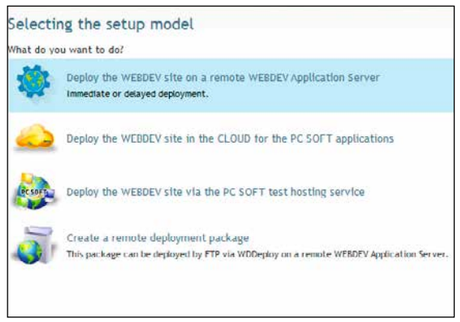
A static site doesn't require any WEBDEV Application Server to run, only a Web server and an FTP server are needed.
A static site can easily be hosted at a "commercial" hosting provider (Free, Comcast ...).

PHP HOSTING

A PHP site doesn't require a WEBDEV application server to run.
PHP hosting can be done at a "commercial" hosting provider (Free, Comcast ...).
It can also be done internally.
The server computer must have a PHP engine and an FTP server.
Sites are easily deployed from the WEBDEV environment.

DEPLOY YOUR SITES AND WEB APPLICATIONS EASILY

Once a site or a Web application is built, it must be installed on the server.
WEBDEV comes with a powerful deployment and setup tool that manages all the possibilities: cloud, hosting provider, internal hosting of your company.



CLOUD DEPLOYMENT IN ONE CLICK

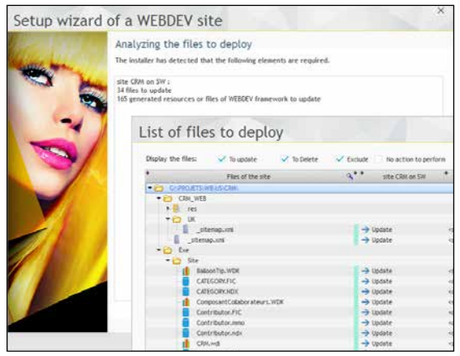
Deploying a WEBDEV site in the Cloud is simple.
In the deployment window, specify the identifier of the PCSCLOUD account and the password in the deployment wizard, select the platform where you want to deploy the site, and you're done!.

DEPLOYMENT IS FULLY SUPPORTED

To deploy a site remotely on a hosting provider, simply answer a few simple questions.
The deployment can be performed in a fully secure way using the HTTPS and FTPS protocols.

DEPLOYMENT BY PHYSICAL MEDIA

In some special cases (security, etc.) it is sometimes necessary to physically install the site (USB, DVD, other) on the server.
WEBDEV allows you to create a complete "installation package" of the site that can be copied to physical media.



DEPLOYMENT FOR LOAD BALANCING

A site that attracts a lot of traffic may need to be deployed onto several parallel servers.
WEBDEV allows you in a single operation to deploy or update a site over multiple hosting servers.

WEBSERVICE DEPLOYMENT

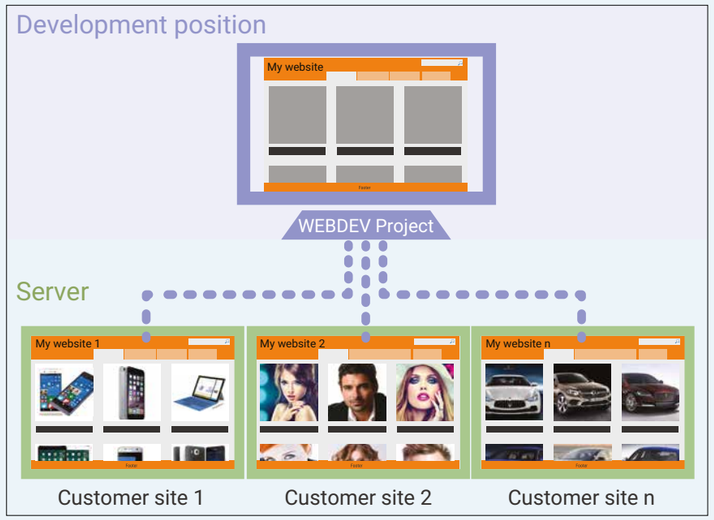
Deploying REST or SOAP Webservices is as simple as deploying sites.

THE DEPLOYMENT OF SITE UPDATES, WITH ZERO DOWNTIME

A site is constantly evolving.
When the site evolves, only the modified elements will be updated, which limits the transfer volume.
WEBDEV compares the elements on the live site with the ones on the development computer, and preselects the elements that have been modified.

MULTIPLE DEPLOYMENT OF THE SAME SITE ON THE SAME SERVER

WEBDEV allows you to deploy several copies of the same site on the same server, from a single project.
This allows a consultant to offer copies of the same site to multiple clients.
You can also manage all the proposed sites via a SaaS module supplied with WEBDEV (see SaaS p 39).



Of course, you can also manually define the files to install, exclude a folder, only deploy a specific language...
Updates can be deployed without disconnecting Internet users.

SCHEDULED UPDATES: AT NIGHT...

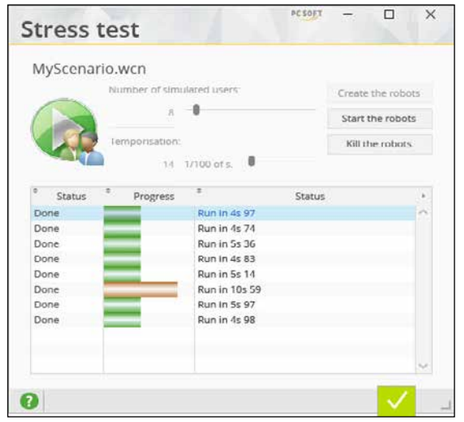
WEBDEV offers the scheduling of a specific date and time for an update.
The elements to update are transfered to the server instantly, but their actual update will only be performed at the date and time you've specified.

ARCHIVING

This archiving feature performs a backup of all the site's elements before performing a site update.
It is thus possible to return to the previous version of the site.

TESTS: STRESS, REGRESSION...

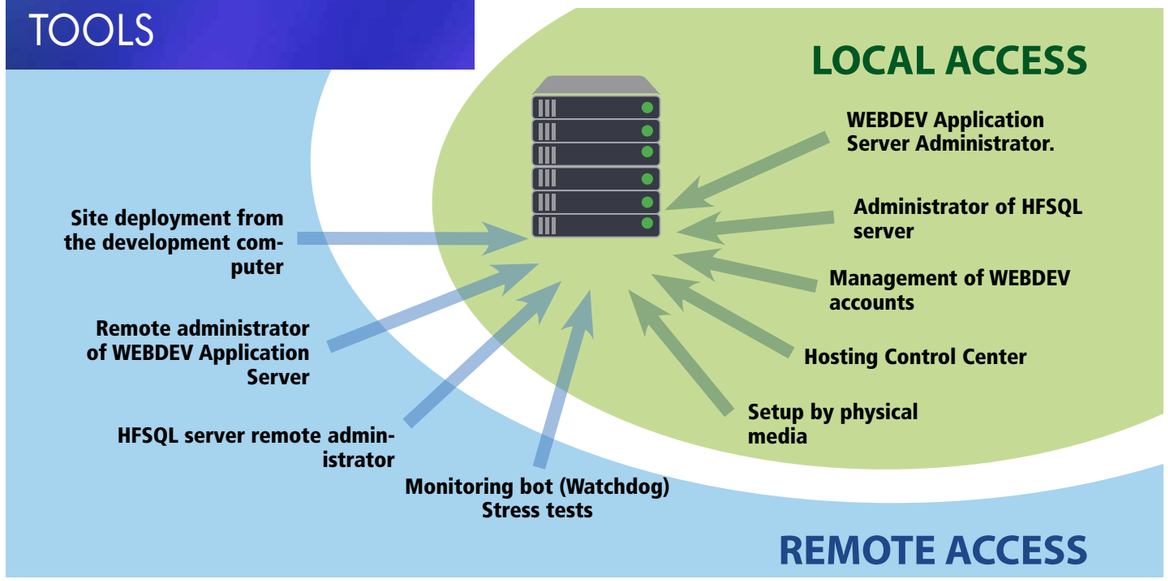
The quality of your site requires a set of appropriate tests.
WEBDEV comes with a test tool that allow you to make sure that the settings of your server allow the desired maximum number of simultaneous connections.



The provided tool also lets you execute a set of scenarios to check for regressions.

Deploying and managing your sites: easy with WEBDEV!

MANAGEMENT TOOLS



ENVIRONMENTAL POLICIES

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. Also, we favor pulp coming mainly from recycled wood (from furniture mills for instance) and from controlled forest clearing. As for the delivery of the software, on request they are available without packaging or "paper" documentation. A license for 10 developers can be supplied upon request with only 2 sets of paper documentation for instance.

MANAGE YOUR SITES AND APPLICATIONS WITH EASE

MANAGEMENT: LOCAL OR REMOTE

The WEBDEV application server is supplied with an administrator that can be accessed remotely, allowing you to configure the server and to monitor its activity.
Several parameters can be specified: maximum number of connections authorized by the server, maximum number of connections for a given site, maximum number of instances per web user, lifespan of contexts, and so on,...
Note that the administrator can also be installed as a service, without any interface, on the server computer.
You also have the ability to specify the rights for each user.

SECURE SITE ACCESS

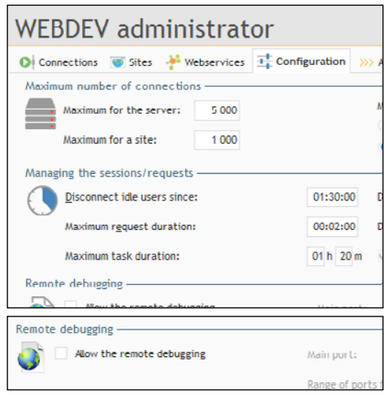
The administrator can enable security options such as :

- navigation by IP address (to prevent session theft)
- protection of the AWP context identifier (HTTPOnly cookie).

The remote administrator

MONITORING ROBOT

A sophisticated monitoring robot is supplied with WEBDEV. It can be used to monitor the availability of WEBDEV sites, HTTP servers, NNTP servers, SNMP servers, file servers, mail servers, WEBDEV application servers, HFSQL server...
The frequency and the repetition of the tests to be performed are configurable. In case of trouble, based on your choice, the server sends a warning by email message, by message sent to a specific application (internal messaging application, etc.), to a control screen (visual warning and/or sound warning), by starting a WLanguage procedure to a third-party programming (send an SMS for instance).
The WEBDEV application server can also email a report containing the details of the errors that occurred.



TRAFFIC STATISTICS OF YOUR SITES

It is important to have accurate statistics about visits to your sites.

USING GOOGLE ANALYTICS

Google Analytics is a very popular tool for measuring site traffic.
Google Analytics can measure the number of views for each page of the site, load time, navigation path, resource loading time (images), bounce rate, user environment (hardware, Geographical location, language, browser, ...), the origin of the navigation (source page, advertisement, ...), etc.
WEBDEV can automatically integrate the trackers necessary for statistics for Analytics into your sites.
You can also track specific events: interaction with a social network,...

INTRANET & EXTRANET STATISTICS

WEBDEV is also provided with a comprehensive statistical management tool for the dynamic pages of your sites.
They work on intranet and extranet sites: the collected information remains confidential.
Among the information collected: Number of page views, number of unique visitors, number of visitors per page, users' site of origin, country of origin, browser used, and even pages having a technical problem!

FRONT OFFICE, BACK OFFICE (AND MOBILE)

WEBDEV sites can easily operate with existing applications.
But the compatibility and integration between WEBDEV and WINDEV make them the ideal package for developing Front and Back Office applications very quickly!

FRONT AND BACK OFFICE

The Front Office is the customer-facing part: usually the interactive Internet site.
Basically, the Front Office manages the requests for information and order taking.
The "Back Office" refers with the internal company processes: order processing, inventory management, statistics, production orders,...
In short, the Back Office processes the orders.

WINDEV & WEBDEV REPRESENT THE IDEAL PLATFORM TO START A GLOBAL APPLICATION

To create Internet and Intranet sites that manage data (Front Office), PC SOFT offers the WEBDEV integrated environment.
It is the only integrated environment (from modeling to setup, including database support and maintenance) that allows you to easily develop robust sites managing data in real-time.

For all internal business applications (Back Office), PC SOFT offers a developer's dream: A professional development environment and application lifecycle management for Windows: WINDEV.
And if you want to use your applications on mobile devices, just recompile them using WINDEV Mobile.

WINDEV lets you create in record time the most complete, high-performance applications.
You'll use the powerful integrated database or any other database on the market.
WINDEV, WINDEV Mobile and WEBDEV are compatible; their development environment is similar. They share projects, objects, code, classes, reports, analysis...

LEGACY APPLICATIONS?

WEBDEV is totally open, which allows it to interface with any existing database, via ODBC, OLE DB or in native access.

WEBDEV and WINDEV are compatible:

- project
- analysis
- tables
- components
- reports
- code
- classes
- windows, pages
- ...

TEST MORE THAN **1000 SITES** DEVELOPED WITH WEBDEV

OVER 1000 EXAMPLES

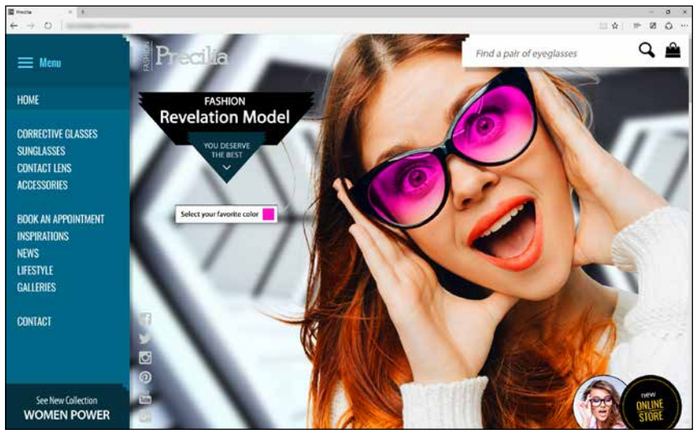
To test sites developed in WEBDEV, the easiest is to connect to www.windev.com. In the WEBDEV section, a page proposes a list of thousand sites developed by WEBDEV users.

ALL FIELDS, ALL LANGUAGES

These sites represent all kinds of fields, in all kinds of languages, all built by different companies using WEBDEV.

INTRANET SITES

For obvious confidentiality issues, Intranet and Extranet sites cannot be listed.
Multinational companies have developed strategic Intranet and Extranet sites that are distributed in hundreds of branches and subsidiaries.



BE A **MAJOR PLAYER** ON THE INTERNET

YOU'RE A MANAGER

You need a solution that allows your teams to **QUICKLY DEVELOP** the powerful Internet and Intranet applications your company needs: WEBDEV is the ideal solution.

WEBDEV ensures that you'll stay within budget, have great performance and remain within schedule.

YOU'RE A DEVELOPER

You know how to develop.. With WEBDEV you'll instantly know how to create static and dynamic sites.

WEBDEV allows a natural methodological approach, which results in the **SUCCESS OF ALL YOUR PROJECTS**.

YOU'RE AN INTERNET SPECIALIST

WEBDEV provides the solution to your problem: use side by side with existing sites, imported sites, dynamic sites that use databases in real time.

You will be able to **REUSE** your existing elements and your web skills without limits.

COMPATIBILITY WITH WINDEV

WINDEV is a very successful IDE. WEBDEV is **COMPATIBLE** with WINDEV and WINDEV Mobile.

Both products are implemented the same way.

It is very easy to convert a WINDEV application into a WEBDEV Internet or Intranet site.

MANAGING THE LIFECYCLE OF YOUR SITES

WEBDEV is a **COMPLETE DEVELOPMENT PLATFORM** that integrates all the modules required for development and maintenance.

This ensures the success of your projects.

WEBDEV is famous for **BEING EASY TO LEARN**.

ORDER WEBDEV TODAY !

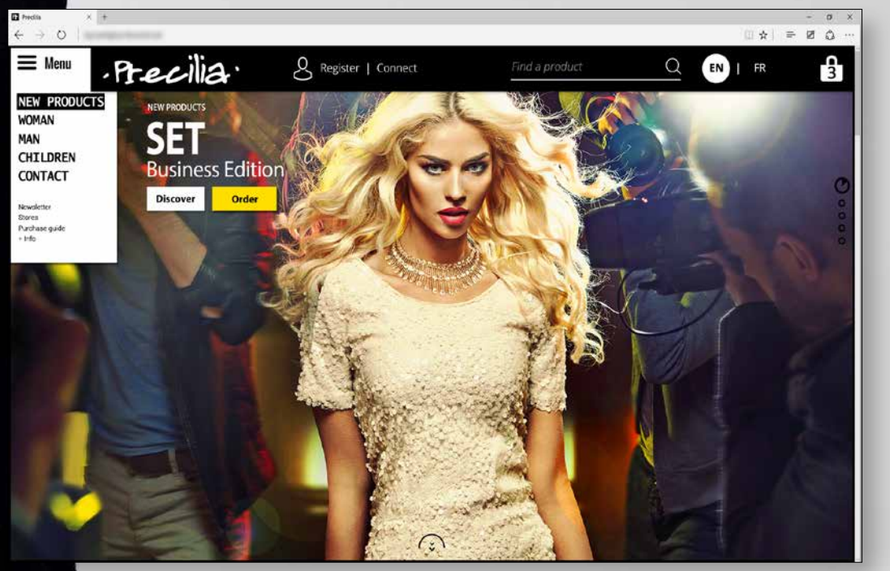
Each day that goes by, you and your team are wasting precious time.

WEBDEV allows you to quickly become productive in the development of **POWERFUL INTERACTIVE WEBSITES**, which are a requirement for all companies today.

Don't let your competition beat you; you can take advantage of the easiest and most powerful professional development environment for creating Internet and Intranet sites that manage data.

WEBDEV is a very complete and powerful tool, yet it is very simple to use.
The ROI is very quick: you'll quickly save money with WEBDEV.

TAKE A STEP AHEAD: ORDER WEBDEV TODAY

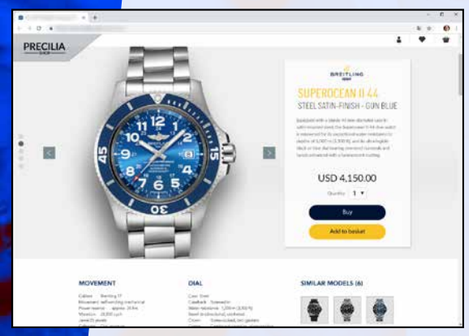


PHP
SaaS
Cloud
Linux
Wamp, Lamp
HTML5
SPA
Responsive
...

Develop all types of sites and web applications

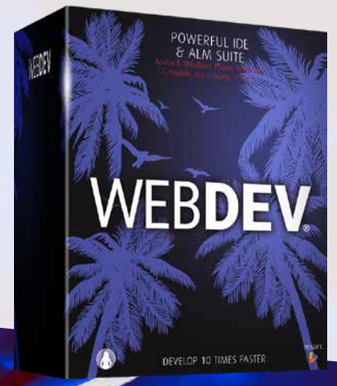
Some examples of sites and applications that can be easily created with WEBDEV (non-exhaustive list).

Some sites are Intranet sites, other are Extranet sites and other Internet sites.

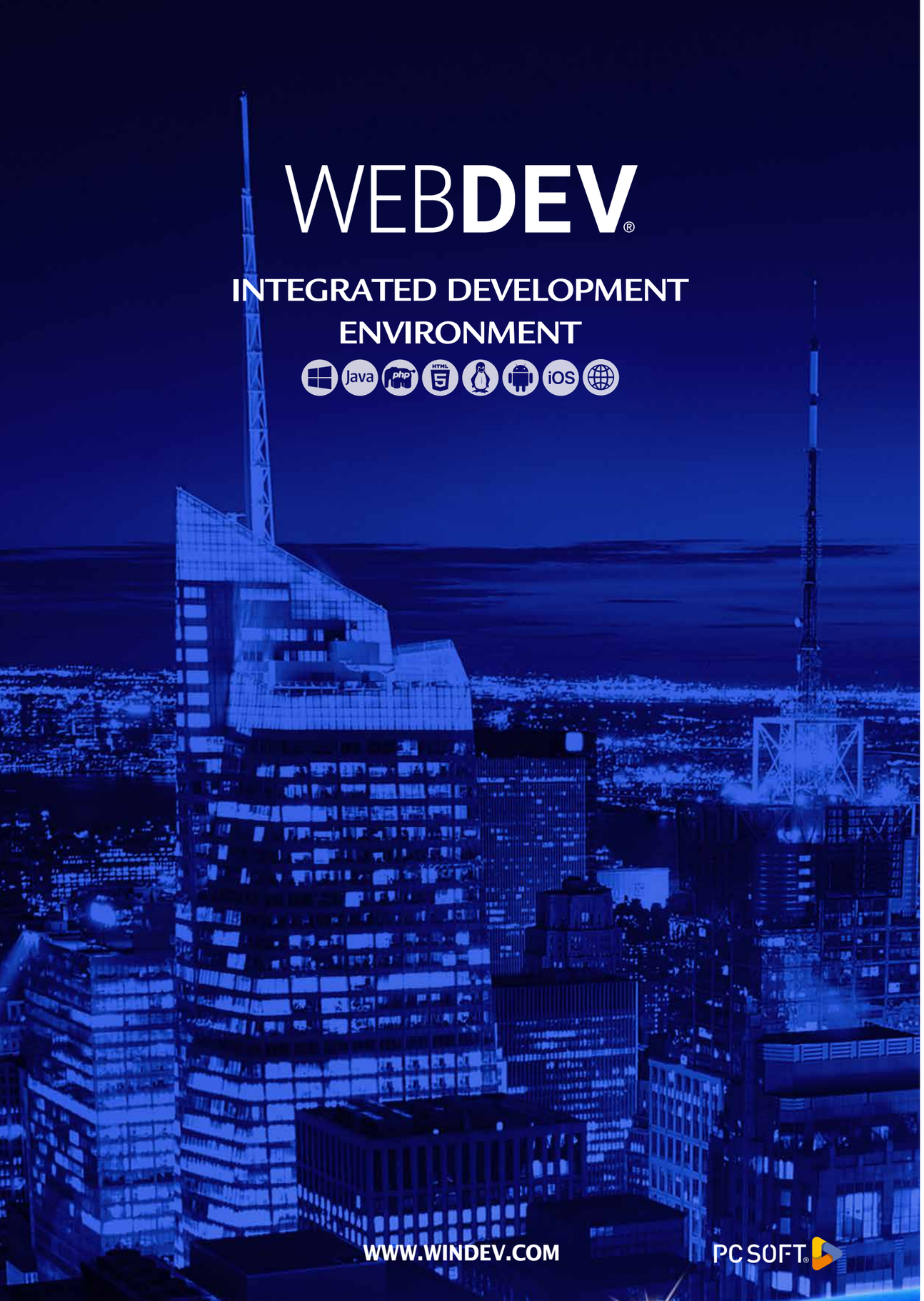


- E-commerce site with secure payment
- Bills paid via Internet
- Managing your customers' orders
- Allowing your customers to consult the progress status of the order: received, entered, processed, correct, shipment tracking,...
- Real-time stock access
- Dynamic creation of images according to entered parameters:
  - virtually try clothes
  - presentation of a car with the color and options chosen
  - customize a T-shirt according to the image uploaded by the customer
- Online definition of a software's options, calculation of the package price, and instant download after payment
- Reservation of airplane seat or boat cabin on a map
- Executive dashboard in real time, with company revenues, estimated margins, stock inventory...
- Shared schedule of a geographically distributed team
- Appointment scheduling
- Job schedule of a maintenance team
- For a mail-order company, put all the technical documentation and manuals of all the products offered online
- Natural language search engine for a text database (FAQ, ...)
- Scanning and archiving all the accounting documents received (invoice, packing slip, etc.) in order to be able to view them at any moment
- Event reservation: seminar, dinner, show, etc,...
- Management of a shared yearbook: company directory, students in a school, alumni, club members, etc, ...
- School canteen management: payment, menus, absences, ...
- Real estate ads, cars, auctions, ...
- Management and consultation of medical analyses
- Entering travel expenses
- Management of equipment inventory
- Dating site
- Wiki management
- B2B portal
- Discussion forum
- Package tracking
- Mailing list management
- Management of "bonus" points of a loyalty card: current number of points, maturity, automatic display of available rewards, management of reward's cashing, etc,...
- EDM
- Remotely monitor a production line
- Company Intranet Portal

And any other site you can think of! There are no limits.



WEBDEV : DEVELOP EVERYTHING!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