

WEBDEV®

INTEGRATED DEVELOPMENT PLATFORM WEB

Internet, Intranet, Cloud, Web 2.0, Ajax, HTML5, PHP All databases

Multi-platform CODE: Windows, .Net, Linux, Java, PHP, Internet, Ajax, Android, Windows 10 Mobile-

UWP, iOS (iPhone, iPad) v...

5GL development

NEW
VERSION

WEBDEV®
POWERFUL IDE
& ALM SUITE

21

DEVELOP TO

WELCOME TO THE INTERACTIVE INTERNET WORLD!

Today, Internet and Intranet sites are linked in real time to the enterprise data and they behave like full blown applications. **WEBDEV 21 is the best solution for creating these sites.**

With **WEBDEV 21**, your teams create these sites and applications 10 times faster. You'll stay within budget.

Trust tens of thousands of developers worldwide, like them choose the fastest platform for developing and deploying your Internet and Intranet sites and applications: **WEBDEV 21**.

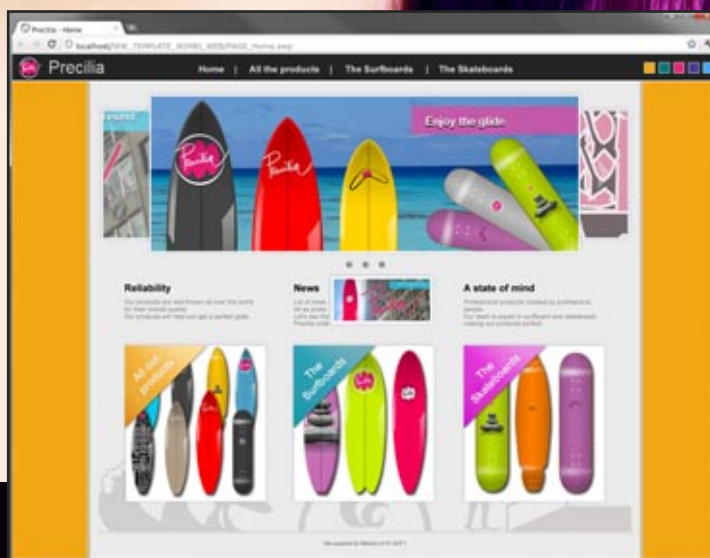
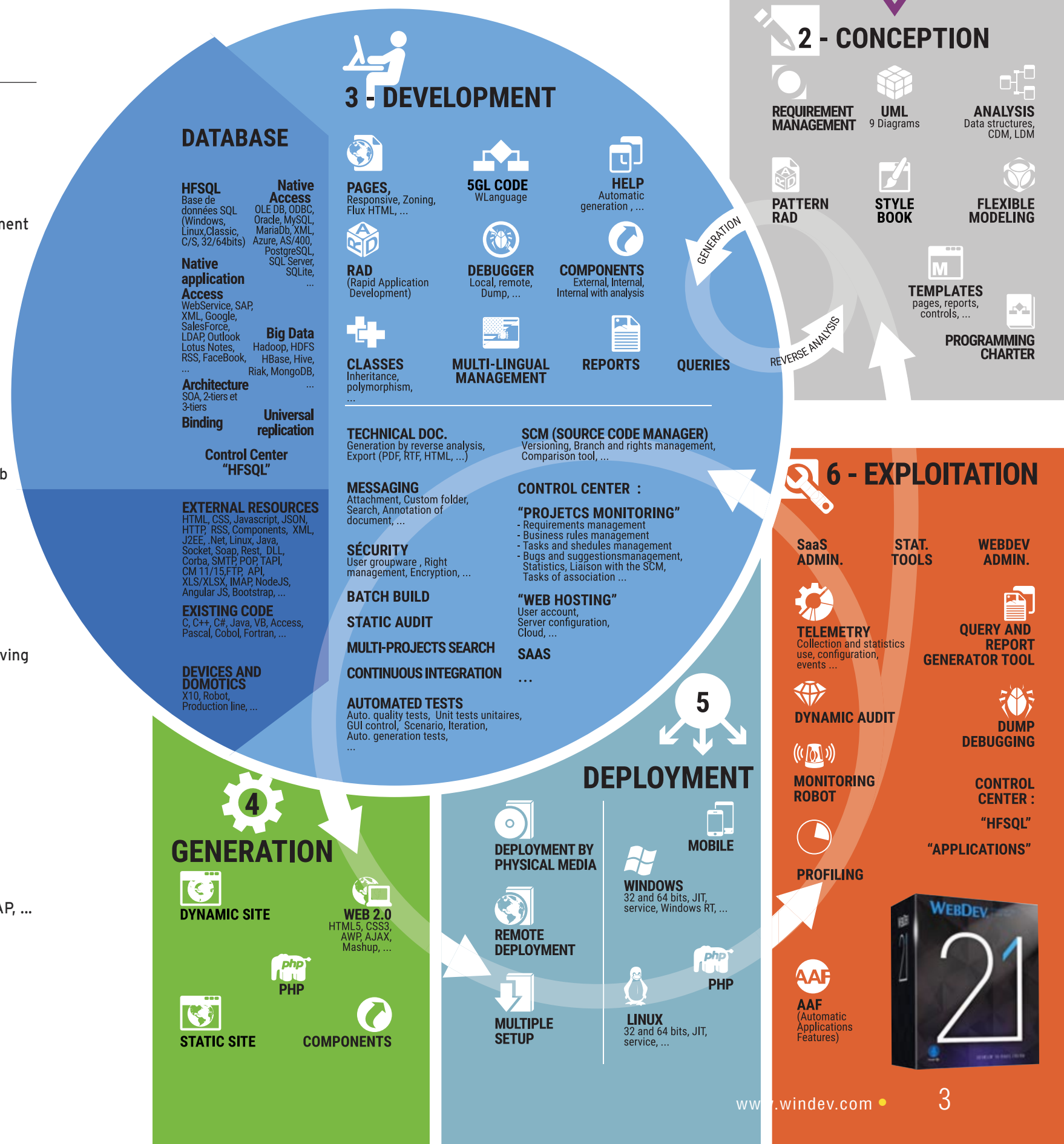


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THE MOST POWERFUL IDE AND ALM SUITE



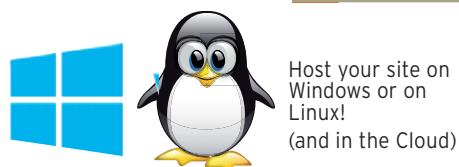
QUESTIONS ANSWERS

We're going to answer the questions we're most often asked about WEBDEV

You are sure to find answers to some of your questions.

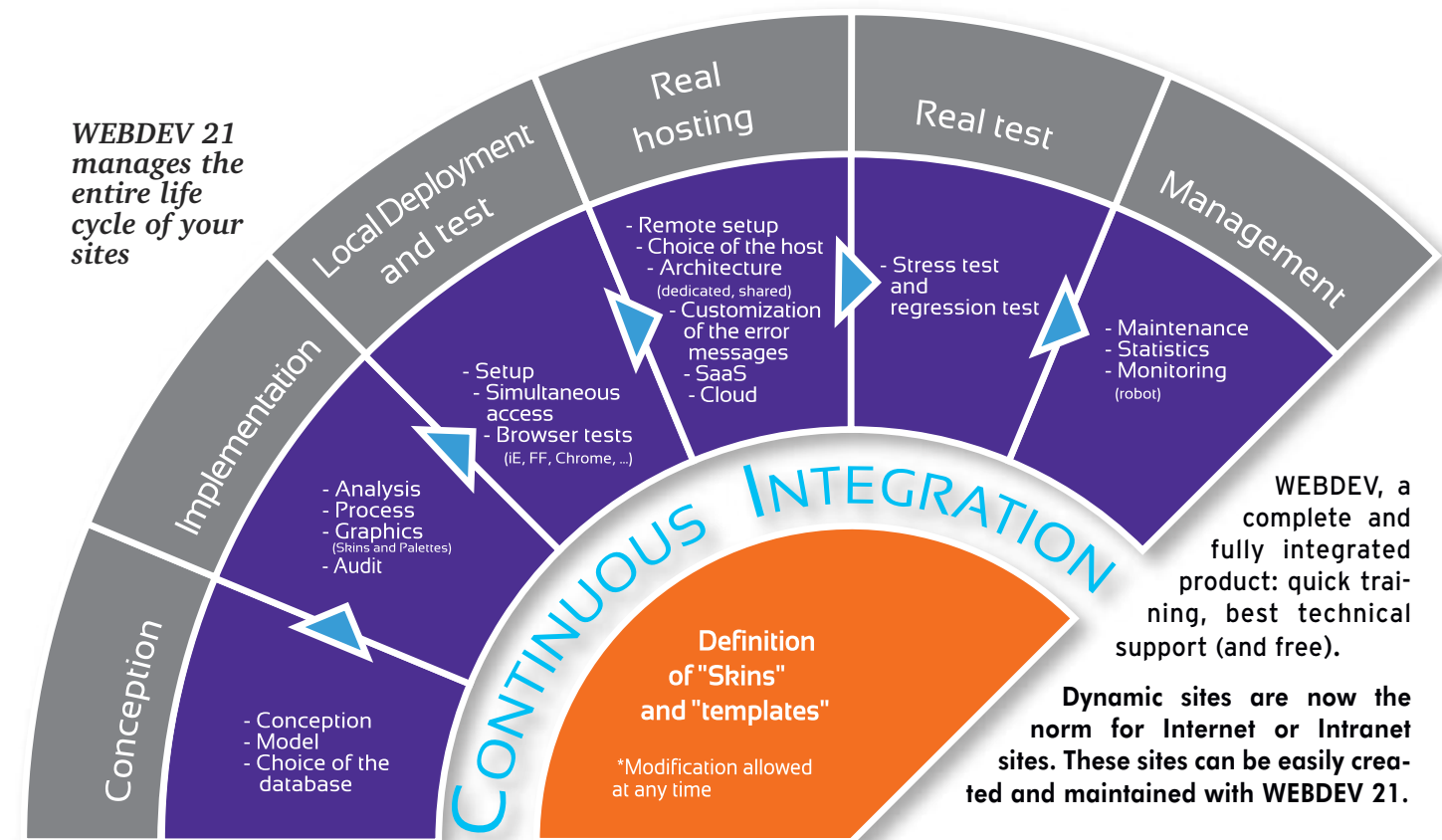
1	Who is WEBDEV 21 for?	It is for any developer or company that wants to create Internet, Intranet, Cloud and SaaS sites and applications.
2	What types of sites and applications can be created?	Any types of sites. WEBDEV is especially well suited for dynamic sites, i.e. sites that behave like "regular" applications, and manage data in real time.
3	What do I have to know?	You need to have programmed at least once in your life (or in school!). In most cases, one week is enough for self-training with the tutorial provided with the product.
4	Do I need any special Internet skills?	No. Your development teams will build robust and efficient sites. All the code (HTML, JavaScript, Server) is generated by WEBDEV 21.
5	Can I create Responsive Web Design sites with WEBDEV 21?	Yes. It's very easy.
6	What is the main benefit of WEBDEV compared to other tools?	There are several, to name a few: total integration, ease of use, development speed, 3 to 10 times faster, or database access. And WEBDEV is "Full Stack"
7	Does WEBDEV rely on standard technologies?	Yes, like HTML, HTML5, XML, CSS, JavaScript or PHP. But you don't need to know these technologies, WEBDEV automatically generates the necessary code.
8	I already have an application. Will I be able to use it with WEBDEV?	Yes. You can suck existing HTML pages. You can also mix WEBDEV pages with an existing site, while keeping your existing code.
9	I don't need to know Java, HTML, PHP or JavaScript to create sites?	No, it's not required. WEBDEV automatically generates the HTML, JavaScript, CSS and PHP code.
10	What if I want to enter HTML code directly, or use existing JavaScript code?	WEBDEV is open. You can enter (or copy) HTML, PHP or JavaScript code directly in the editor, and even an ASP script.
11	I've read that WEBDEV is compatible with WINDEV ; do I need to own WINDEV?	WEBDEV is a totally independent platform. No other tool is required to develop with WEBDEV.
12	What if I already own WINDEV?	In this case, for one thing, training will be faster, the other thing is you'll be able to transform your WINDEV applications into Web applications...
13	Is the page editor WYSIWYG?	Yes, to the pixel!
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, ... You can also access Big Data information.
15	Are Ajax, XML, CSS, W3C, JSON, JQuery supported?	Yes.
16	Can I develop large and complex sites with WEBDEV?	Yes, this is where its true value lies: Internet, Intranet and SaaS sites.
17	What Technical Support is available?	It's very simple: WEBDEV Technical Support is free (15 free custom inquiries by e-mail)
18	Who uses WEBDEV?	All kinds of professional entities: consulting companies, IS department, lab engineers, government offices, administrations, individual consultants, etc.
19	Can I generate "pure PHP" sites with WEBDEV 21?	Yes, this is a standard feature.
20	So WEBDEV is "the" tool for creating dynamic sites?	Yes.

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



WEBDEV 21 SUPPORTS ALL THE STEPS FOR CREATING A SITE

WEBDEV: "FULL STACK" DEVELOPMENT TOOL



ALL THE DEVELOPMENT STEPS ARE SUPPORTED BY WEBDEV 21

- Modeling
- Conception
- Analysis and program documentation
- Link with existing static sites
- Databases
- Programming (5GL, Ajax, Webservice, .NET, J2EE, HTML, HTML5, JavaScript...)
- Ability to re-use existing code
- Reports (PDF, bar codes, ...)
- Secure payment
- Creation and use of components
- Documentation
- Tests during development
- Link to the Back Office
- Hosting
- SaaS, Cloud management
- Working with Web designers
- Setup at the hosting company
- Regression tests
- Performance tests
- Continuous integration
- Maintenance and evolutions
- Traffic statistics
- Assisted development



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

REUSABLE AND CUSTOMIZABLE SITES ARE PROVIDED

WEBDEV 21 comes with a large number of already developed sites. Both the source code and the pages are provided: you can use these sites directly, modify them, customize them, resell them...

AN EDUCATIONAL BENEFIT

You can also study the analysis and 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.



- **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 inventory**

Location and assignment of equipment via a 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 20)

- **Travel agency management**

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

- News, Forum, Blog, Social media site...

... 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.

Because the provided sites continue to evolve all the time, their look and feel may change.

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.



Thousands of
others sites to
discover at
www.windev.com

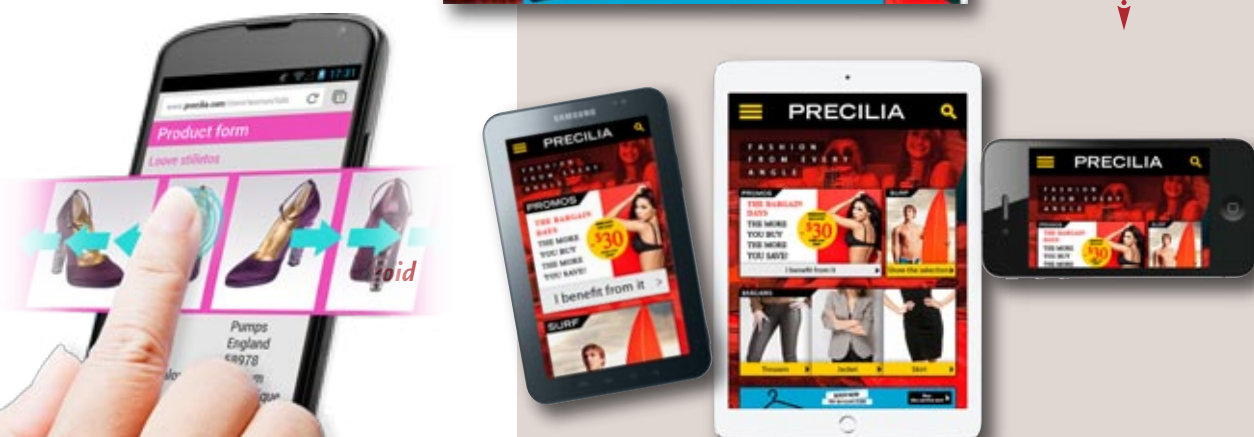
YOUR SITES ARE COMPATIBLE WITH ALL BROWSERS

SITES CREATED WITH WEBDEV ARE COMPATIBLE WITH ALL BROWSERS

All the browsers offer specific features, that may even differ according to the versions. WEBDEV generates generic code, which is recognized by almost all the standard Web browsers on the market. Let's see how the same site is displayed under different browsers and systems.



THE SAME WEBDEV SITE DISPLAYED ON ALL THE BROWSERS

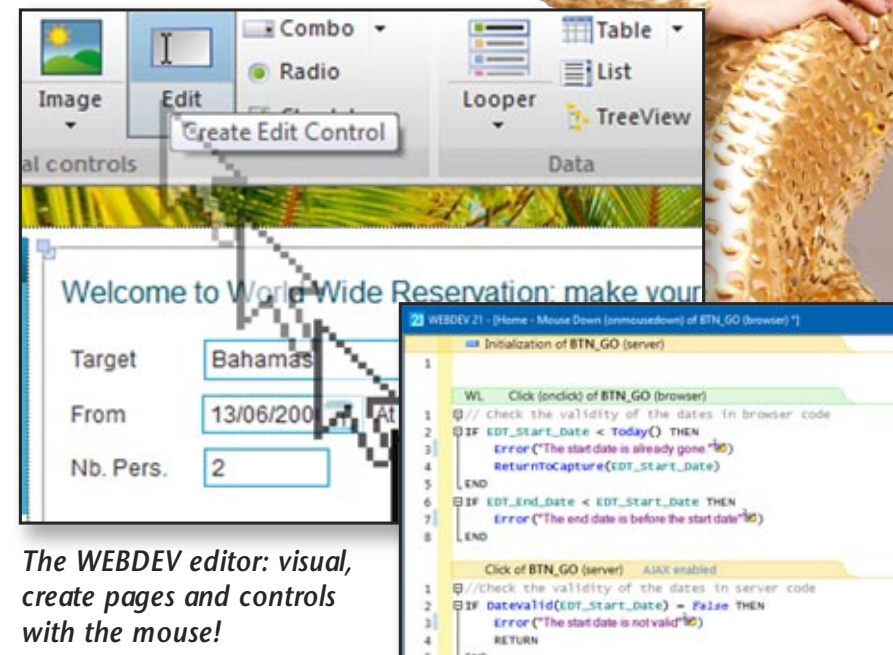


PAGE CREATION: A REVOLUTIONARY CONCEPT

Create your site "just with the mouse", WEBDEV 21 automatically generates the HTML code, the JavaScript code and the Server code needed for the site. And upon request, WEBDEV 21 even generates the site in PHP.

CLICK INSTEAD OF CODE

WEBDEV 21 is a complete integrated environment. The entire development is done in a single environment and a single language: WLanguage, a very **POWERFUL** and **EASY** to learn 5GL.



The WEBDEV editor: visual, create pages and controls with the mouse!

The WEBDEV WLanguage: simplify and reduce the code!

Page and control creation as well as configuration is done in WYSIWYG mode, with the mouse. No need to know HTML to create sophisticated pages.

WEBDEV 21 frees you from cumbersome and complex Internet development. Furthermore, the processes are separated from the pages, unlike in traditional programming languages. The pages are easily created by positioning the controls with the mouse (see the box page 10). Control areas can be created for moving and shifting a block.

HTML, CSS AND JAVASCRIPT

No need to know HTML, CSS or JavaScript to build beautiful and powerful dynamic sites. WEBDEV 21 generates all the necessary code for you. But WEBDEV 21 is **OPEN**, you can always directly enter (or paste) low level code if you need to: HTML, CSS, Javascript, JQuery, Bootstrap, Angular JS, ASP scripts, PHP scripts...

With WEBDEV 21, your teams develop **10 TIMES FASTER** any type of site or application, Internet, Intranet, Extranet and Saas.

HTML code you needed to enter

JavaScript code you needed to enter

A POWERFUL VISUAL ENVIRONMENT

WEBDEV

The most intuitive method

WEBDEV 21 offers the most powerful, the most user-friendly, and the most integrated work environment available on the market! Your teams will easily create astonishing sites. No previous knowledge of Internet programming is required.

The WEBDEV page editor enables you to easily and quickly build incredible pages.

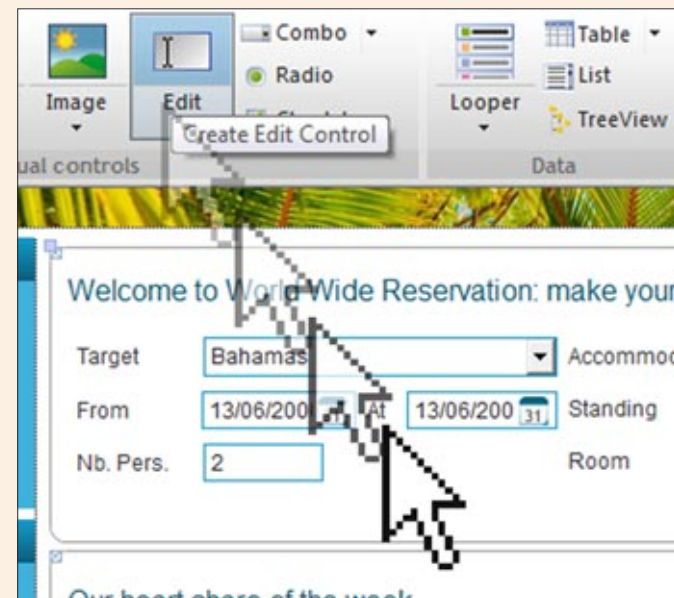
Note that WEBDEV is open: if you want, you can also include or interact with other Web technologies (Angular JS. Bootstrap...)



A revolutionary method!

Page creation is easy: drag the controls to create from the ribbon, position them directly using the mouse!

The custom characteristics of the control are defined visually via the "7-tab" (see page 13)



CONTROLS IN PAGES REVOLUTIONARY WYSIWYG!

The different controls (edit, static, image, ...) are created and positioned visually, interactively in the editor. What you see in the editor corresponds to what the Web user will see in his browser.

Pages (with the controls, their detailed settings from the 7-tab, and their code) are stored as reusable elements.

This technique is used to simplify the programming by managing the pages as advanced objects.

The page editor lets you visually create and modify controls, independently from the source code.

You can also subscribe to the possible

modifications of an object shared among several developers (inheritance)

With WEBDEV 21, you can use custom code to modify the properties of a control: target, color, display, ...

For example, depending on the profile of the Web user, you can hide or display specific controls, ... Everything is dynamic!

This approach to managing pages and controls will save you a lot of time when maintaining your sites and will make them more robust.

A simple "GO" lets you instantly test your site.

PRECISE POSITIONING

You choose the type of positioning: streaming or at the pixel level.

WEBDEV uses powerful mouse positioning algorithms to position objects at the pixel level.

WEBDEV can also use CSS style sheets. The style sheets are easily created from the environment.



If needed positioning tables are available.

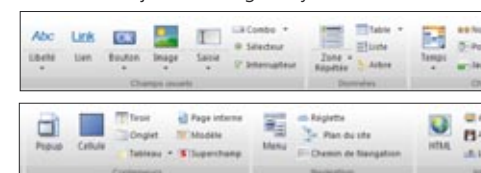
ANCHORING

The anchors define how the content of a page will behave when the page is enlarged by the user or goes from portrait to landscape orientation.

Managing anchors is very easy in WEBDEV 21.

ALL THE CONTROLS FOR INTERNET

The WEBDEV editor allows you to easily create and handle all the objects that will be required to quickly build outstanding interfaces (see pages 24 to 30). The main objects managed by the UI



editor are:

- Text, HTML static, Text area
- Edit and rich edit control
- Formatted display control
- Radio button, check box
- List box, combo box, treewiew
- Text button, graphic button
- Web camera
- Static, dynamic, generated image
- Click area, Map area
- Table, Looper control
- HTML control
- Pager control
- Control template,
- IFrame, Internal page
- SitemapPath, site map,
- Chart, calendar
- Google Map, Rating, Social Media
- Tabs, etc.

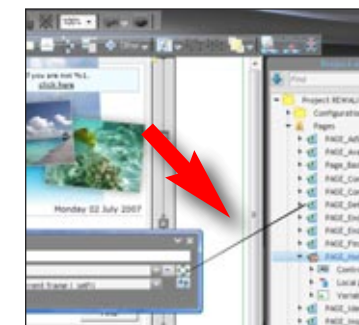
The HTML 5 input masks are supported.

LOOPER CONTROL

WEBDEV allows you to create multi-column loopers, automatically filled via a file link of by programming (see page 24).

DEFINING A LINK

To define a link from a graphic button or from a link control, all you have to do is point the page to display via the mini-modifier.



This link can be redefined in your program if necessary.

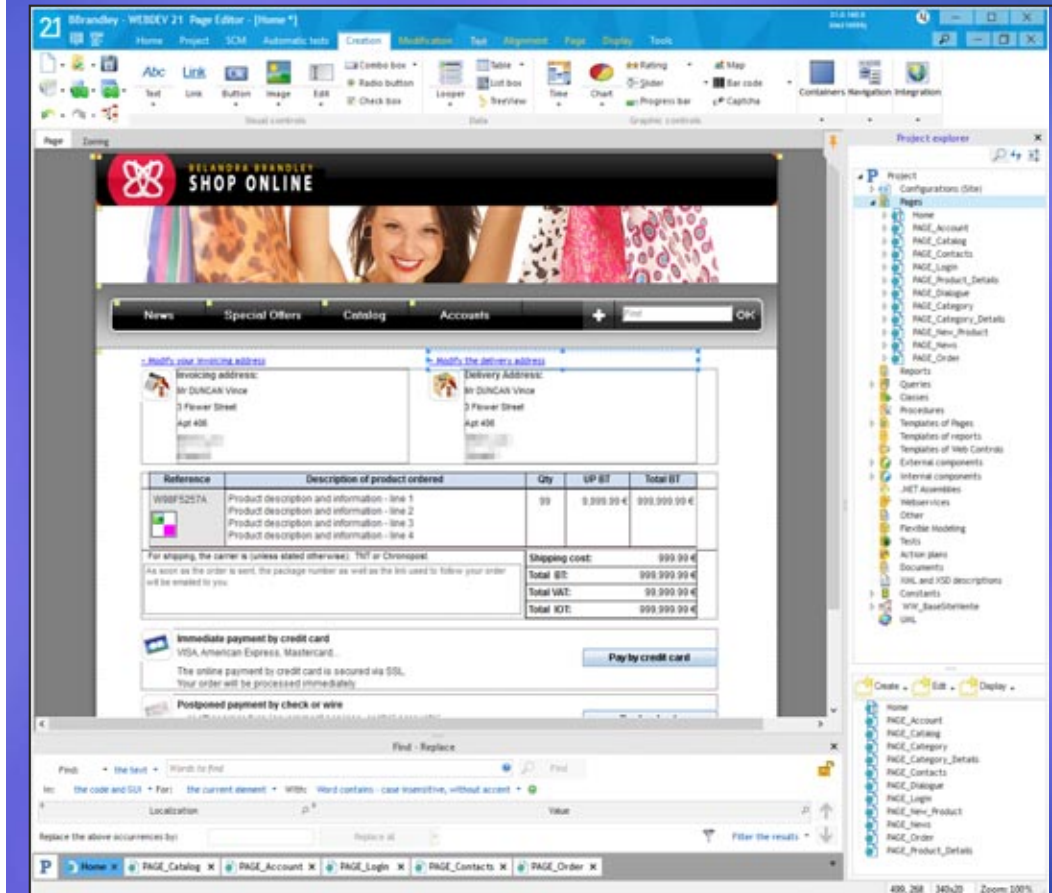
INTERACTIVE BUSINESS CHARTS

A chart designer is supplied with WEBDEV; it enables you to create pie charts, bar charts, financial charts in 2D or 3D,... in 2D or 3D. The charts are interactive or static, with or without crosshair.

MULTI-CLICK PREVENTION BUTTON

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

EASILY CREATE YOUR PAGES



EASY GOOD-LOOKING PAGES

The pages are created easily, visually, and you have several powerful controls at your disposal. A WEBDEV "edit control" with all its integrated features, that is dropped in a page by Drag & Drop corresponds to more than 50 JavaScript code lines! You can easily imagine the overall number of code lines you're saving.

SITE MAP

The site map is built by analyzing the existing pages according to the fixed and coded links.

A "Sitemap" control is automatically created in order to be included in the generated site.

TEMPLATES FOR ALL USES

WEBDEV 21 comes with a large number of templates (preset pages: Material Design, ...) that let you easily create sites for any target.



Discover in the following pages some of the main features offered by the integrated editor of WEBDEV 21.



INTEGRATED AND INTUITIVE WEB DESIGN ENVIRONMENT

The ease-of-use of the WEBDEV WYSIWYG work environment is conducive to better productivity.

Your teams will easily develop the sites you need, and satisfy your clients and users.

WEBDEV 21 is easy to get started with: usually one week is all a developer needs.

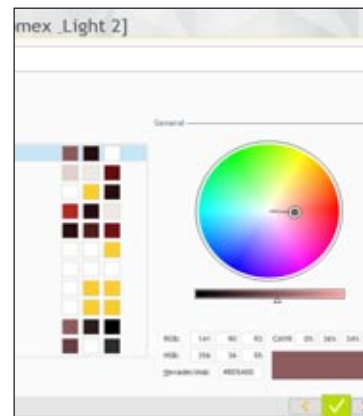
Everything is in English: it's easier.

Everything is integrated using the same operating mode, everything is visual, everything is included: your teams will develop faster!

Technical support⁵ is also included, which provides added comfort and noticeable savings as well as reduced development time.

Note that the projects can be saved in the Cloud, which makes team work easier.

WEBDEV 21 is compatible with WINDEV 21.



Chromatic wheel in the environment

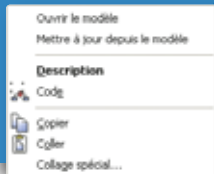
THE INTEGRATED ENVIRONMENT IS VERY INTUITIVE

Movable ribbon & tool-bar, visible or hidden, and configurable

A context sensitive menu (right click) is available to configure the icon bars.

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

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



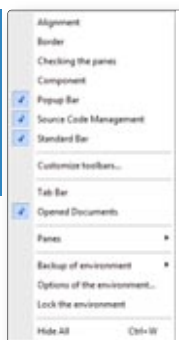
Note: the Ctrl W key combination lets you clear your workspace by hiding the panes.

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

The editors' interface is very intuitive and very efficient.

Status bar showing the page's name, its size ...

Optional display



Pane: it provides a global view of the project; a double click (or a Drag/Drop) performed on an element opens it immediately

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

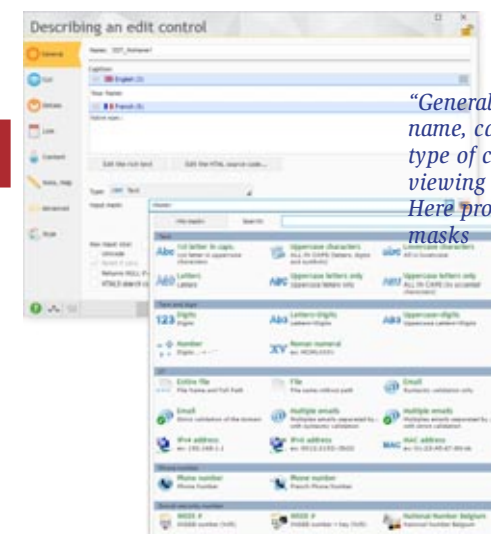
The 7-tab methodology used for defining powerful controls is very intuitive: no need to know Internet programming, everything is in plain English.

The characteristics of each control are defined through an exclusive interactive dialog, which is very simple yet very powerful: the "7-tab" window.

Each tab allows you to define the characteristics of the control. These characteristics can be modified by programming if necessary.

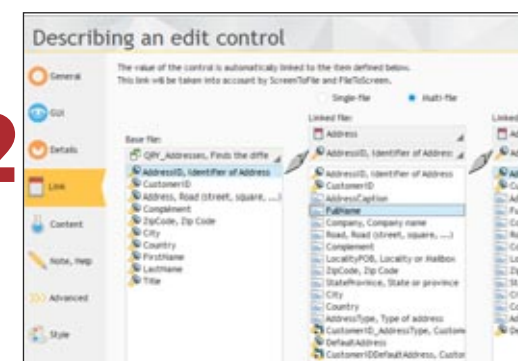
The content of each tab differs according to the object's type; let's see the details of the 7 tabs for an "Edit" control.

1



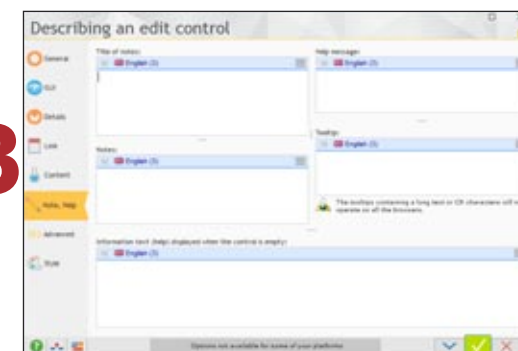
"General" tab: name, caption, type of control, viewing style... Here proposed masks

2



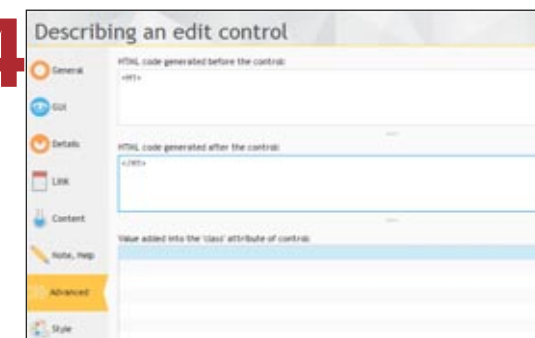
"Link" tab: to link data with pages, ...

3



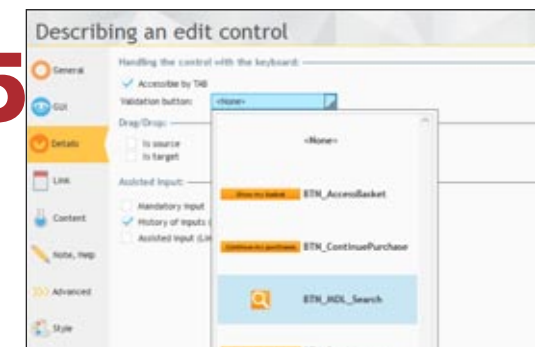
"Help" tab: tooltip, help messages...

4



"Advanced" tab: to enter or copy HTML code

5



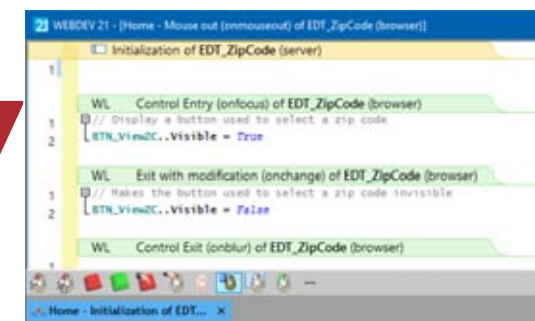
"Details" tab: define the input characteristics

6



"Style" tab: define the control's settings: font size, characters forced in uppercase...

7



"Code" tab: enter the WLanguage, Javascript or PHP code in the event directly (entry in the control, click on the control, ...)

The "7-tab" technology allow for efficient page creation.

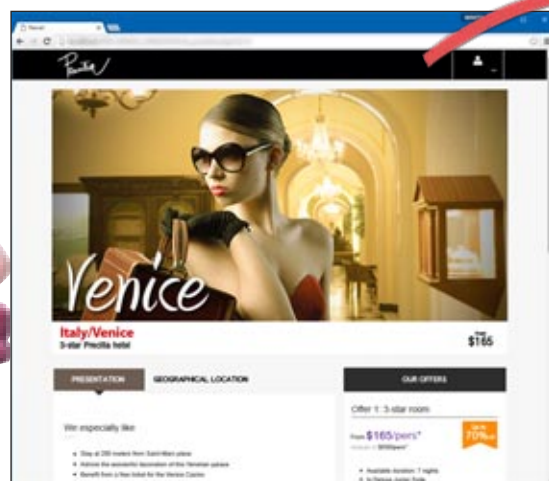
21

WEBDEV

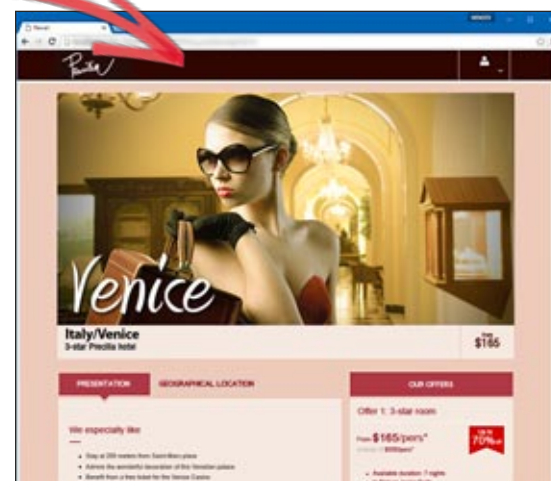
The 7 tabs simplify the page creations: all you have to do is click



TEMPLATES: EASY!



Changing skin on a site. A site during spring...



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

Starting a new site with WEBDEV 21 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

Page templates are key elements for building Web sites.

A page template contains the layout "common" to several pages.

The page template defines the page architecture:

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

(see the zoning concept, page 16).

The common elements are positioned in this page template.

A page template can also contain images, controls, code lines, procedures, ...

When creating the site, each page created can inherit from a page 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 "overload" a property of the page template if necessary.

PRESET PAGE TEMPLATES

WEBDEV 21 offers a large number of predefined page templates.

These templates allow you to save a large amount of time when creating a web site.

These predefined templates are available on several skins.

SKIN, TO DEFINE THE LOOK OF PAGES

A skin defines a set of styles, a color palette, illustrations, fonts, ...

Changing skin allows you to change the look of the site or page without changing the structure or layout of the pages

A large number of skin templates are provided with WEBDEV 21.

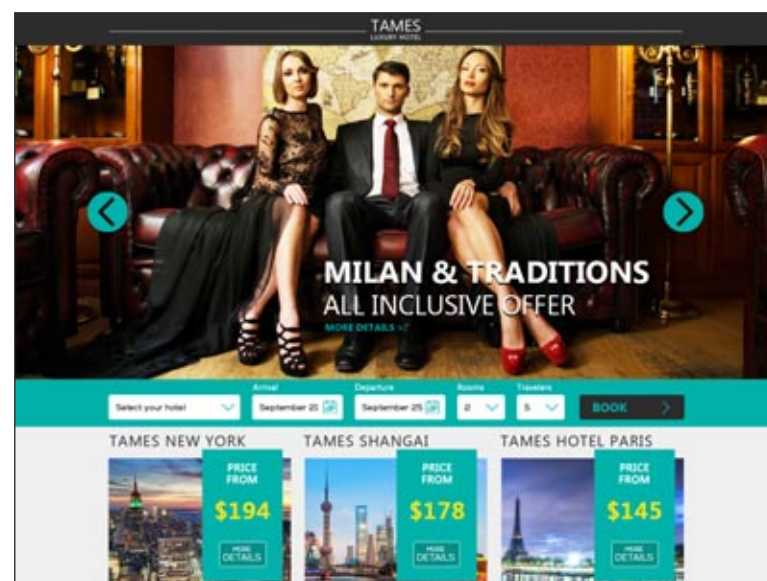
You can change the skin of a site or given page at any time.

THE COLOR PALETTE, TO HARMONIZE COLORS

A color palette is a set of harmonious colors (complementary colors for example) used in the styles of pages.

A color palette defines for example a text color for a title as well as the corresponding background color, or the color of a button, etc.

A large number of ready-to-use color palettes are provided.



EASY RESPONSIVE WEB DESIGN!

WHAT IS RESPONSIVE WEB DESIGN?

Responsive Web Design is a development method for Web sites.

The basis for this method is to allow the same Web page to automatically adapt, during navigation, to the size and resolution of the screen where it is displayed.

The main advantage is to be able to target a Web page for smartphones, tablets or desktops all in one.

The adaptation is done in real time in the browser. This adaptation also lets you optimize the portrait and landscape modes.



A WEBDEV 21 responsive site on a tablet



The same site displayed on a smartphone

BENEFITS OF RESPONSIVE SITES: "MOBILE FRIENDLY AND BETTER REFERENCING"

In its ranking of sites during a search, Google now favors mobile friendly sites, that is the sites whose format is adapted to mobile devices.

Thanks to WEBDEV 21 Responsive Web Design, your sites are automatically mobile friendly, therefore they get better rankings from Google.



CREATING RESPONSIVE PAGES WITH WEBDEV 21: VISUAL!

Responsive pages are created visually in the editor.

In edit mode, responsive pages are automatically displayed with a positioning grid.

This grid is made of a set of columns of identical size.

The page's 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, directly in the editor, you can see the result in different page widths.

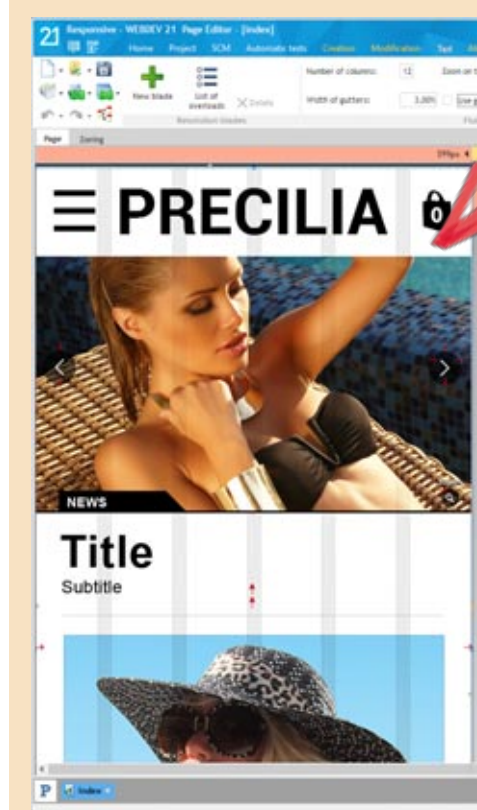
To see the behavior, scan the code or visit www.windev.com/21732

RESOLUTION SLICES

A responsive page also uses the concept of "slices".

A slice is defined by a minimal browser width and a maximum browser width and enables the content of the page to adapt to different devices.

In a slice, you can adapt the font size, the position and size of the controls can be modified, etc.



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)
- The advertising band is not visible because there is less room
- A different image (or an image cropped differently) is used

ZONING: EASY LAYOUT!



EDIT ZONE

WEBDEV 21 lets you define edit areas in a page, we call it "zoning". Areas allow you to define the page's architecture: header, footer, aside ... All you have to do is split 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 (see opposite). Once these edit areas defined, it is easier to edit the page.

ANCHORS

You can define the anchor for each area and controls that are part of the zone. For example, making the browser window larger can stretch an area of the page to give more room to a text control, while pushing out the adjacent areas.

ZONING AT RUN TIME

You can also define the behavior of the zones and their content during the navigation (run time). When the user modifies the browser's size, or if the content of an area changes, the page can reorganize its layout harmoniously. This is all managed automatically by WEBDEV 21! The search engines recognize the semantics of areas and they improve the referencing of the page.

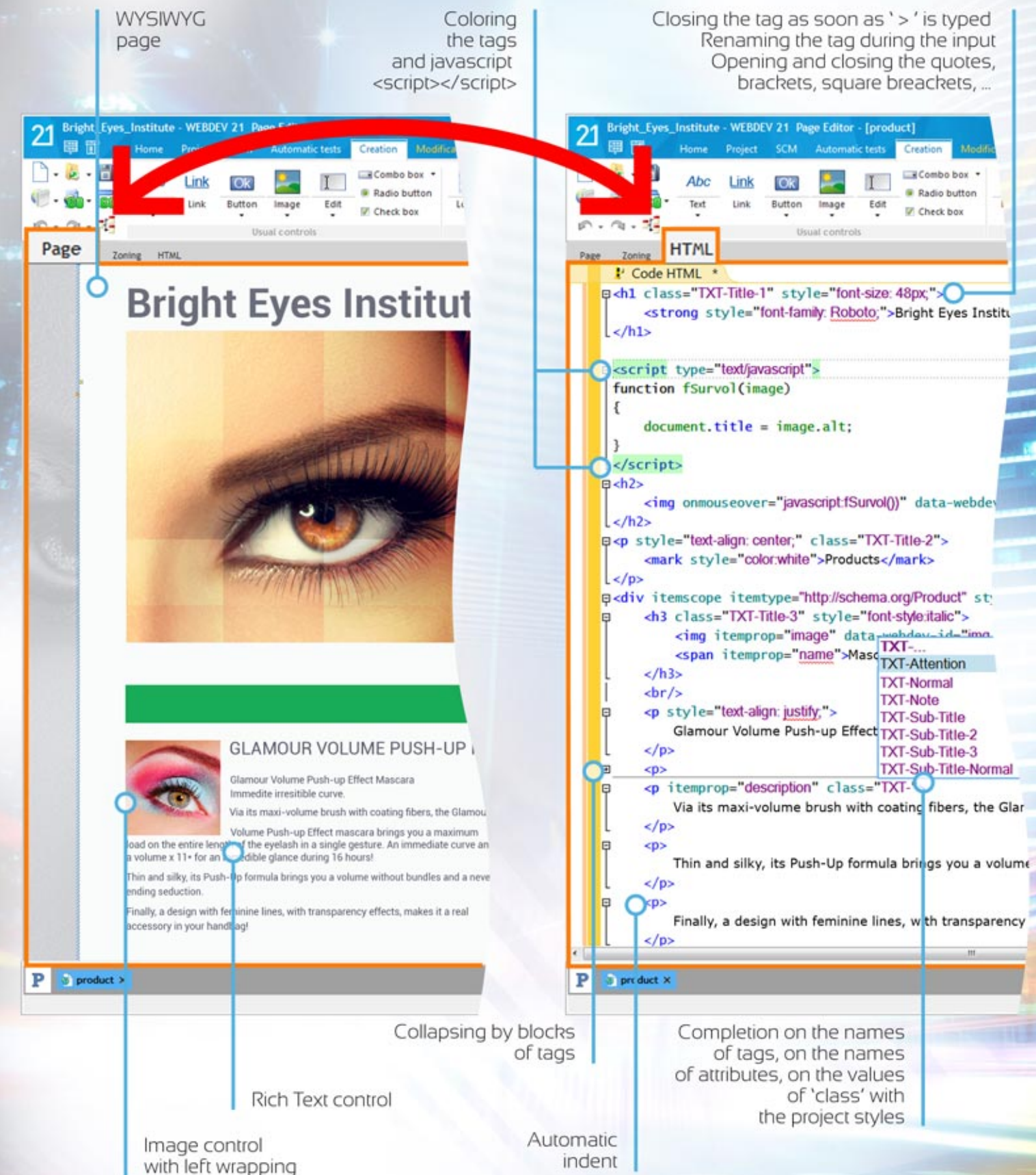
WORKING WITH A ZONE

If the area is moved, its controls will automatically be moved with the area. This edit 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 moves towards the bottom areas that are located below it: 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.

THE INTEGRATED HTML EDITOR

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



HTML5

HTML5 AND W3C

In WEBDEV 21, you don't have to write HTML code, WEBDEV automatically generates it for you!

The HTML code generated by WEBDEV 21 respects the HTML5 standard and follows the W3C recommendations. The respect of the HTML 5 standard ensures page compatibility on all the commercial browsers that support the standard.

HTML5: POWERFUL

HTML 5 represents an important evolution of the Internet standard. Complex Internet pages are getting standardized and new features are introduced.

The HTML5 standard lets you take advantage of all the recent browser enhancements and offer advanced features.



COMPATIBILITY WITH OLDER BROWSERS: TRANSITIONAL HTML4

To ensure compatibility with older browser versions (used on Intranet for instance),

WEBDEV also allows you to support sites in Transitional HTML4 standard.

ADVANCED HTML5

HTML5 INPUT MASKS

The HTML 5 standard offers masks for edit controls.

With this type of mask, the site leaves input management and checks up to the browser. It is not the page (the site) that performs the checks, but the browser itself.

The supported masks are: Email, URL, Date, Time, DateTime, Month, Week, Number, Interval, Search, Phone number, Color, ...

In the WEBDEV 21 editor, you have the ability to define a native mask or an HTML5. mask.

GPS LOCALIZATION DIRECTLY IN BROWSER MODE

WEBDEV 21 offers a set of browser functions that allow you to interact with the GPS features of the device, if the device offers them: location, movement, ...



Here a map displayed via an "image" control: the route was drawn using the drawing functions in "browser" mode (without going back to the server)

DRAWING IN BROWSER MODE

WEBDEV 21 offers drawing functions based on the HTML 5 standard.

The well-known family of WLanguage drawing functions is also available in browser code.

This is very useful for adding notes to a map or in the field of augmented reality.

VIDEO WITHOUT PLAYER

A site built with WEBDEV 21 and used by a browser supporting the HTML 5 standard doesn't require any plug-in (Windows Media Player, Quick Time or Flash) to play videos.

This allows you to interact with the video via WLanguage and to customize the display.

AUTOMATIC AUTO-COMPLETE

Recent HTML 5 browsers automatically offer to auto-complete forms in pages. When the user starts entering information in a form (a delivery address for instance), all the controls in the page are filled instantly.

This feature is dangerous for confidential data.

In WEBDEV 21, you can disable this feature control by control via the new option called "Disable autocomplete". This security is also important for shared computers.

USING OFFLINE SITES

WEBDEV 21 lets you specify that a site or a set of pages can work in offline mode (without Internet connection).

In this case, all the resources (pages, images, .js files, .css files, ...) used by the site or the pages are automatically put in the cache on the user's machine by the browser. Therefore, the site can be used without having to reconnect to the Internet.

LOCAL STORAGE

WEBDEV 21 lets a site store some information on the user's computer.

This information is stored in a context specific to the browser.

ACCESS IN LOCAL MODE TO A DATABASE (SQLITE)

WEBDEV 21 allows a site to create and access a database created by the browser on the computer of the Web user in browser code.

This feature allows you, for example, to enter data in offline mode, and then to automatically send it to the server as soon as the connection is established.

CSS3

CREATING STYLES: CSS WITHOUT KNOWING CSS

To create a style with WEBDEV 21, the developer or the designer don't need to know CSS3: WEBDEV 21 generates the style created visually using the "7-tab" technology.

WEBDEV styles are stored as style sheets in CSS3 standard.

The styles can be modified anytime in the editor, the modifications are of course applied to all the pages and controls that use the modified style.

CSS3 POSITIONING

CSS3 is also used by WEBDEV 21 to position elements (to the pixel or in streams) in the pages while respecting the "positioning" / "HTML content" split.



ANIMATIONS AND EFFECTS ON CONTROLS

The WEBDEV 21 environment offers a large number of effects and animations based on CSS3 technology:

fade in, zoom on hover, rotation, 3D twirl, etc.

These effects are offered on all the controls and can be configured (duration, acceleration curve, ...)

You don't need to know CSS3.

21

WEBDEV

The easiest and most intuitive method



ADVANCED CSS3

MODIFICATION OF THE WEBDEV STYLES DIRECTLY IN CSS

The WEBDEV 21 styles are stored as CSS3 standard style sheets.

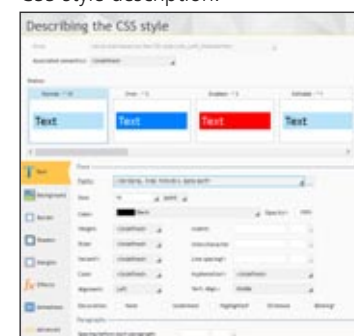
The generated CSS3 style can be modified if needed directly in the CSS file. This openness is offered in order to allow CSS3 specialists to reuse their skills in this field.

A CSS3 style created by WEBDEV 21 and modified outside of WEBDEV is still recognized by the editor.

The modified style can be applied the same way as a WEBDEV style on the controls or pages.

CSS STYLE EDITOR

The WEBDEV environment lets you edit CSS styles graphically via an editor for CSS style description.



The CSS3 style editor

IMPORTING EXISTING CSS STYLES

Existing CSS3 styles can be imported in WEBDEV 21, from CSS3. style sheets. The import feature allows you to select the styles to import, and the ones to disregard.

In the WEBDEV 21 environment, the imported styles are offered as well as the styles created in WEBDEV.

INCLUDING AN EXTERNAL ANIMATION IN A CONTROL

The WEBDEV environment offers to automatically add animation effects to the controls: blinking, fade in, zoom, rotation, 3D flip,...

There are other special effects, available on the market as CSS animations. For example: pendulum, flotation, explosion... To apply this type of animation to a control, import the CSS style sheet containing the description of the animation, and specify in the control style the name of the animation to use, its duration and its repetition.

ASSOCIATE A JS OR JQUERY SCRIPT TO YOUR CONTROLS



A "CSS class" can be referenced in an external JavaScript or a JQuery script to apply modifications to the control to which it is attributed.

This allows you to dynamically modify control properties and behavior.

For example: to be able to move a control with the mouse, change its style, make it move in reaction to some events, make it interact with other controls...



WHAT IS A DYNAMIC SITE?

REMINDER: STATIC SITE

A **STATIC SITE** presents fixed pages, with preset links to other pages. Roughly it's a set of pages on the Internet that can be consulted. Usually the site offered information about the company, the group or the association: activity, address, product information, sometime prices, a contact page... The limits of static sites soon became evident: each time a piece of data needed to be modified, it had to be done manually, and the corresponding page had to be reloaded.

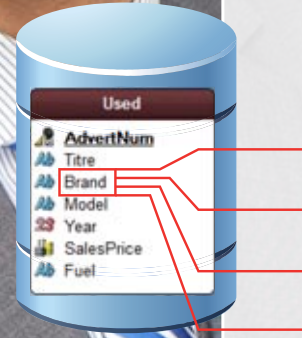
In order for product information to remain up-to-date, a static site had to be modified often.

WHAT IS A DYNAMIC SITE?

A **DYNAMIC SITE** creates the pages a Web surfer sees on the fly, based on the surfer's requests and actions and the data present in the database at the time a page is requested.

Let's use the example of a catalog that contains 30,000 items: a static site could use 30,000 different static HTML pages!

A dynamic site will require a single page, intended to receive the data (the product references, its photo, ...). The server will assemble all the necessary elements, on the fly.



Make	Models	Price	Year
BMW	BMW X3 (X3 3.0dA Luxury) 4x4 - SUV - Diesel	22 500 €	2004
AUDI	Audi S5 (S5 COUPE 4.2 V8) Coupé - Petrol	59 900 €	2008
Alpha Roméo	Brera (2.4 JTDM) Convertible - Diesel	18 900 €	2006
Porsche	Porsche Boxter 3.2i S Convertible - Petrol	23 400 €	2000

ADDING A DYNAMIC SECTION TO AN EXISTING STATIC SITE

Today most companies that have a static site want to take advantage of dynamic features.

WITH WEBDEV 21, REUSE WHAT YOU ALREADY HAVE

To re-use an **EXISTING** program, you can choose to:

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

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

MIXING STATIC AND DYNAMIC PAGES

MIXING static and dynamic is the fastest solution. Often the company already has a static site.

The **STATIC SITE** is kept, and the dynamic pages are **ADDED**, or used to replace some of the static pages.

It is also easy to transparently link two sites, a static one and a dynamic one.

IMPORTING STATIC PAGES

WEBDEV 21 proposes a strong static page and template import feature (see page 46).

The existing pages are **IMPORTED** into the environment and they are changed into WEBDEV 21 pages.

ALWAYS UP TO DATE

The dynamic site's data **ARE ALWAYS UP TO DATE** since they come directly from the enterprise's database.

You display the real inventory, you indicate to the Web user the real shipping date of his order, you manage schedules, ...

SITES THAT ARE ACTUAL APPLICATIONS

The other interesting aspect of dynamic sites created with WEBDEV 21 is that they behave like **REGULAR APPLICATIONS**. All the know-how of traditional computing is available to you.

EASE OF USE

Thanks to its powerful complete development environment and its rich set of features, it is very **EASY** for any developer, even without any Internet specific skills, to create with WEBDEV 21 highly reliable and sophisticated Internet sites that are fast and easily modifiable.

WEB, INTRANET/EXTRANET APPLICATIONS: WEBDEV IS KING!

WEBDEV 21 IS IDEAL FOR CREATING AN INTRANET OR EXTRANET

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, suppliers...

It can be used within a company, or externally. The access is performed via identification and password, which is automatically managed by WEBDEV (see page 23).

AUTOMATIC COMPLETE SECURITY

The pages of an Intranet site developed in WEBDEV can only be accessed via a single session. For each user, a session is opened and automatically maintained on the server.

The site's security is automatically ensured via the notion of session.

The page's address cannot be for instance reused in a cut&paste.

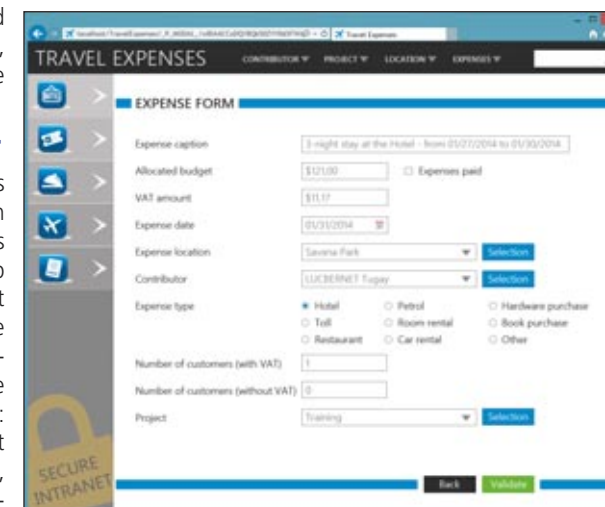
The dynamic operation (each page is built dynamically on the server right before being displayed) protects

requests and their results, which can be encrypted.

NO LIMIT

The richness of features in WEBDEV lets you develop sites that behave like real applications, you are not limited: management of expenses, supplier catalog with discounted prices, taking orders, diffusing confidential information, subscription to a paying service, management of bank accounts, portal...

WEBDEV is the ideal tool for creating Intranet and Extranet sites, and this is why thousands of large companies have created their Intranet with



Secure travel expense management site of a company

WEBDEV.

INTERNET: WEBDEV IS KING (TOO)!

WEBDEV 21 IS IDEAL FOR CREATING AN INTERNET SITE

An Internet site is a site accessible simultaneously by a large number of users worldwide.

An Internet site can be hosted within a company, at a service provider or in the cloud.

A site must be Mobile Friendly, that is work as well on a desktop as on a smartphone or tablet.

For the site owner, an Internet site must offer maximum visibility (SEO, natural search engine referencing).

WEBDEV 21 offers all these benefits.

AWP TECHNOLOGY

WEBDEV 21 offers AWP technology: Active WebDev Page.

Thanks to this AWP technology, WEBDEV 21 lets you create independent dynamic Web pages, the AWP

pages. Each AWP page of the site runs autonomously and without execution context on the server.

This allows for a low resource consumption (CPU, RAM), and therefore a large number of concurrent accesses for the same amount of resources.

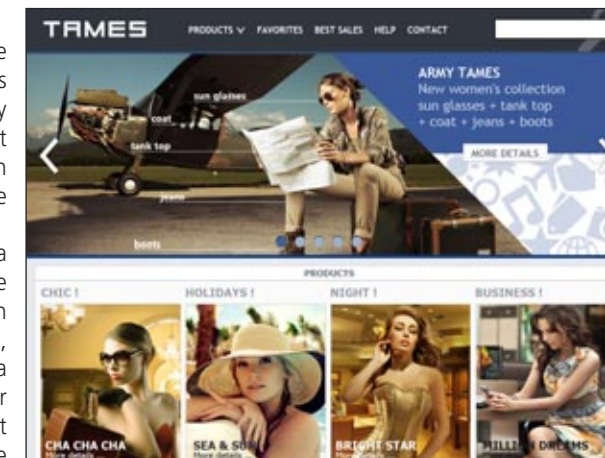
Each AWP page is individually referencable by its address (URL).

Each page of the site can be referenced by search engines.

A page's address can be copied/pasted

to be reused.

When the site must keep information between page navigation, it can use a context.





SSL SECURITY

SECURITY

As you know security and confidentiality are of the utmost importance on the Internet. By default, when using an Internet site, data traveling between the user's computer and the Web server are 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 SSL CONNECTION

The most efficient way to protect the user's information today is to use a secure SSL (Secure Socket Layer) type connection. This SSL connection insures the encryption of the data that travels between the user's computer and the Web server that is hosting 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 by SSL, you must buy an SSL certificate from a known certification authority (for example, Norton VeriSign, Thawte, GeoTrust, etc., ...). Once you have an SSL certificate, simply install it on the server that is hosting 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 "http://". The web user can also check the presence of a padlock in the browser's status bar, proof of the secure transaction, as well as the identity of the site visited. The bar can even be colored green to stress security!



SECURITY: EASY WITH WEBDEV 21

The secure mode is supported by the sites created with WEBDEV 21. Via `SSLActive()`, you can easily combine a non-secure information section (product catalog) with a secure section (customer account, payment). The same site can switch between the non-secure mode and the SSL secure mode. "Client" certificates are also available.

SECURE PAYMENT

SECURE PAYMENT

Online payment by credit card is now common place.. Two main methods can be used to receive the payment 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 can be heavy and it includes risks regarding the storage of sensitive data. The most common method consists in switching to a specialized payment page provided by a financial institution (bank,...). Typically, the user fills a basket or a cart and after validating the order, he or she is redirected to a third-party payment site that takes care of the banking transaction. In this implementation, there is no payment form to manage, no credit card number to store. Only the payment's approval needs to be managed.

FINANCIAL INSTITUTIONS

You can directly choose a bank as an operator that will offer you an online payment service (Atos, Cybermut, Cyberplus, PPlus, ...), with which you will interface. You can also use a multi-bank operator such as PayBox or PayPal. This method is used to easily choose and change the bank account that will be credited. Implementing this solution is very easy with WEBDEV 21, just use the "PayBox" or "PayPal" component that is provided with the product.



SEO: NATURAL SITE REFERENCING

REFERENCE YOUR SITES

This wizard analyzes the composition of the site pages and indicates the possible improvements for maximizing the positioning of pages in the search engines (Google, Yahoo, ...). 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. Your sites will get more exposure with search engines.

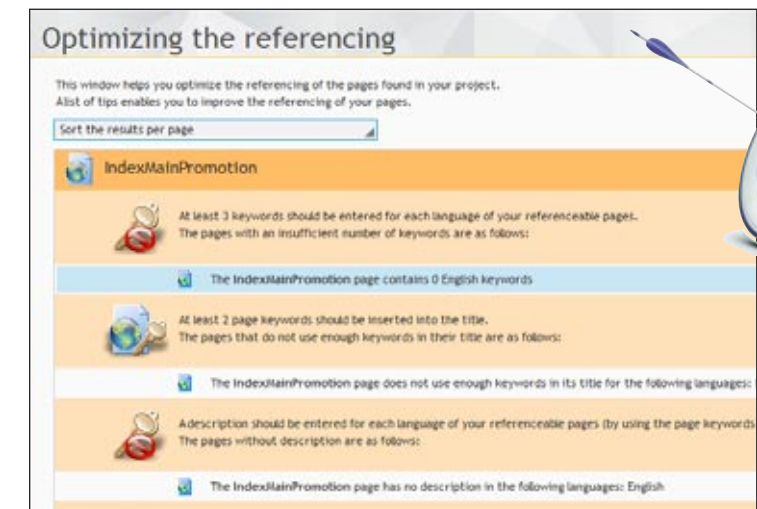
REFERENCE EACH DYNAMIC PAGE (URL REWRITING)

Via the "AWP" technology, WEBDEV 21 allows you to reference 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 be better referenced by the search engines. A page can be renamed.

For example, the address of the page can include the object name (bike, scooter, oak dresser, etc.), which will allow the page to be referenced better.

TRAFFIC STATISTICS

A statistics module is also provided with WEBDEV so you can find out which Web sites your Web users are coming from (see page 54).

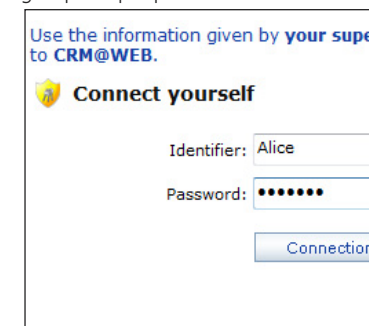


You're already familiar with version 20? There is a 92-page technical document dedicated to the 921 new features of version 21. Printed version available by simple request; PDF version available on www.windev.com.

ENSURED SECURITY OF YOUR SITES: PASSWORD PROTECTED ACCESS

CONTROL ACCESS TO A SITE'S PAGES

Accessing sites or some pages in a secure way can be a requirement: It comes with WEBDEV 21! The "user groupware" features allow you to define passwords for people or groups of people.



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

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 supervisor of the delivered site will be able to set up the user rights at any time. 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.

SAAS

WEBDEV 21 offers advance features for managing SaaS applications (see page 49).

Automatically make your sites secure, without coding anything!





continues page 26

POWERFUL CONTROLS FOR YOUR PAGES

WEBDEV 21 offers all the types of controls needed for building Internet and Intranet pages. Let's take a closer look at some of them.

Note that these controls work with Ajax.

RICH TEXT AREA



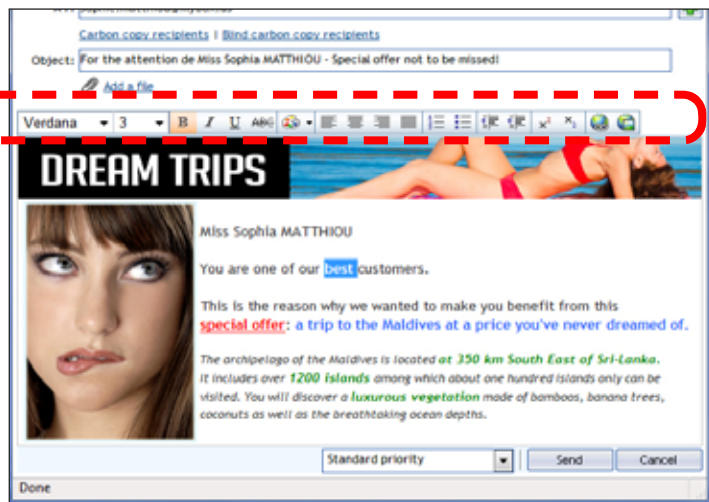
The "Rich Text Area" (RTA) control lets you edit its content. This very powerful control is presented in details on page 30.

RICH HTML EDIT CONTROL

This type of control lets you create and lay out texts with rich attributes.

A toolbar is automatically displayed in front of the control to define the rich attributes.

The data is saved in HTML standard.



EDIT CONTROL (WITH MASK)

The WEBDEV 21 edit controls allow you, as the other controls do, to define a large number of parameters, visually and intuitively through the "7-tab" interface or by coding. 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.

Booking period:

from: to:

When the cursor enters the control, the mask is displayed: here typing "/" is optional

Booking period:

from: to:

Among the input masks provided: duration, first letter in uppercase character, file name and path, email address, zip code...

CUSTOMIZE THE CONTROL EDGE

A control can have an edge.

A common use for this edge is to highlight the control that has focus.

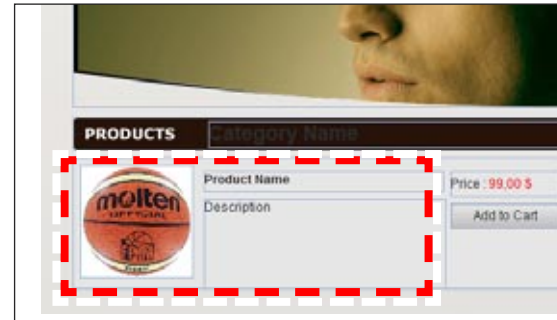
WEBDEV

It is easy to customize the look of the edge based on the actions on the control: take focus, rollover,...

REPEAT REGIONS ARE A POWERFUL CONCEPT

A repeat region (looper control) is a set of controls that are repeated horizontally and/or vertically a set or unset number of times.

The loopers are filled either by programming, or via a direct link to data files, or from queries.



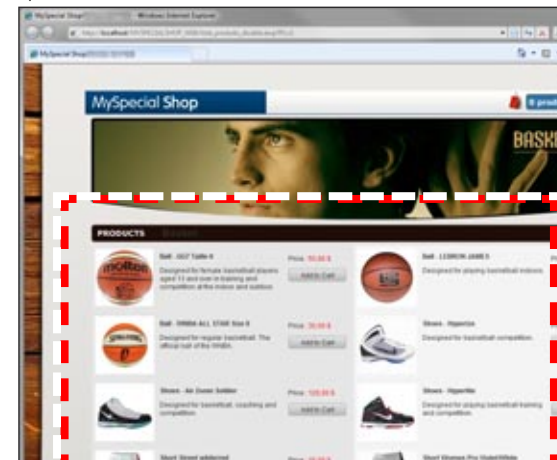
Looper control being defined in the editor

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:

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



Looper control in runtime

The looper can dynamically adapt the number of elements to display according to the width of the page.



A looper can also be just linear.

PAGER CONTROL

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



Automatic pager example

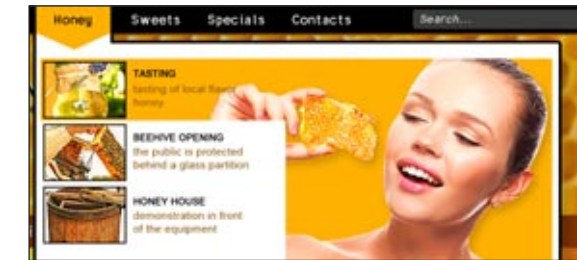
DROP-DOWN & POPUP MENUS

WEBDEV lets you create pull-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.



TABLES

SERVER, BROWSER AND AJAX TABLES

Tables are generated by WEBDEV 21.

A "regular" table is a server table, which performs queries on the server to get filled.

The Ajax mode is supported with server tables, which prevents needing to redisplay the entire page every time a table's element is modified.

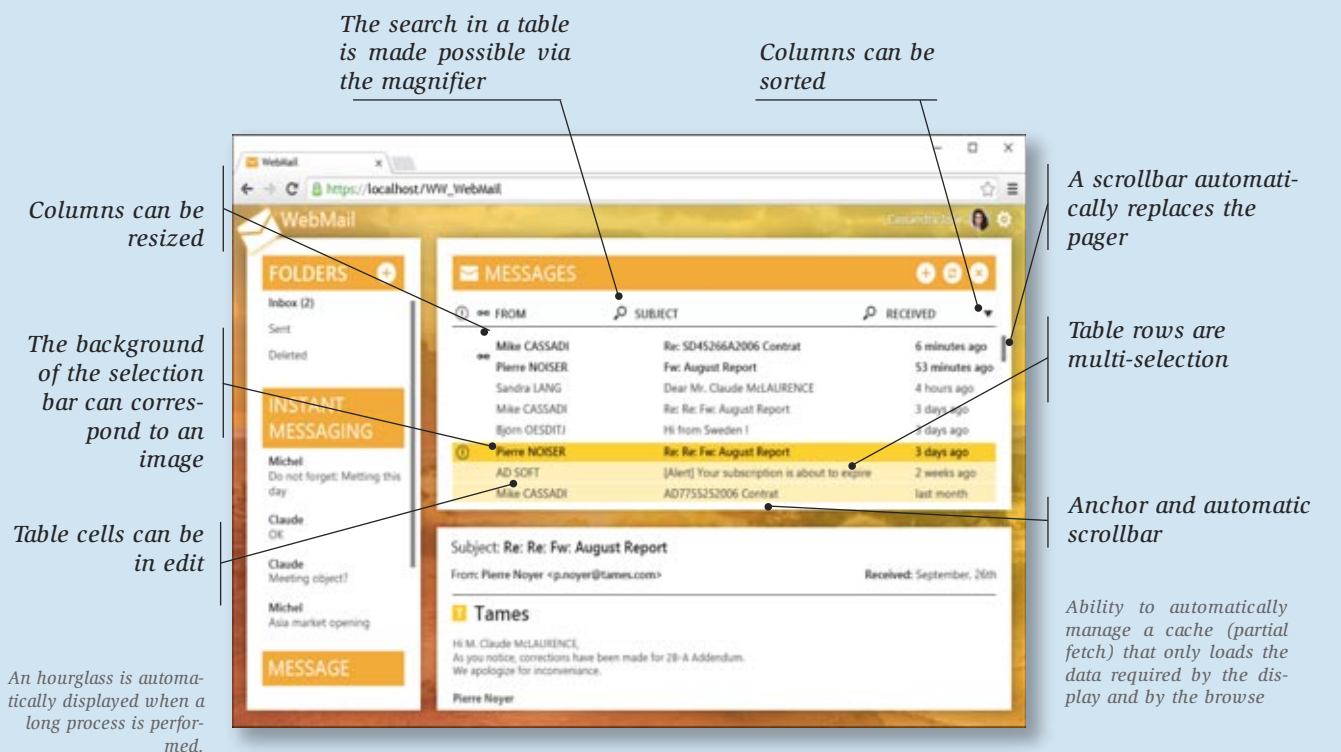
A table can also be in "Browser" mode, that is not run any server code.

The "Browser Table" control is a Table control that is fully

autonomous on the browser.

The Table control offers automatic features:

- filter,
- search,
- move column,
- resize column,
- column header, column title-header,
- container column,
- breaks...





POWERFUL CONTROLS FOR YOUR PAGES

continued from page 25

TABS

The tabs can be easily managed.



Example of a page with tabs.

HIDESHOW CONTROL

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



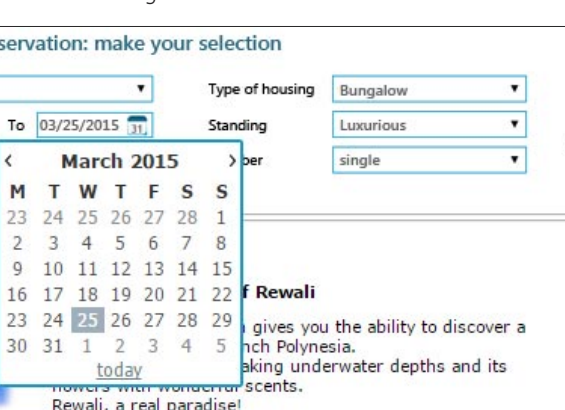
On the left, an expanded image. On the right another example, with an expended text

CALENDAR CONTROL AND DATE EDIT CONTROL WITH POPUP CALENDAR

The calendar control is used to create a control included in a page or to open a "popup" calendar to enter the date (often used in Web sites).

A large number of custom options and presentation options are provided: frame the current day, cross out dates in the past, show a date range, highlight holidays, ...

The calendar control is handled in Ajax mode to prevent from refreshing the entire page when displaying the calendar or when choosing a date.



The calendar control is very useful

THUMBNAIL CONTROL (STATIC OR DYNAMIC)

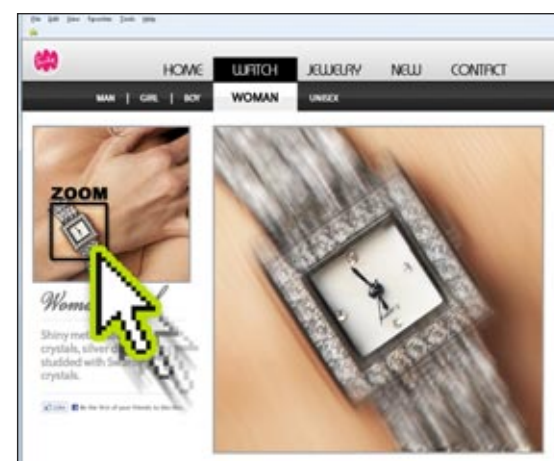
A Web site often manages images or photos that are also used as thumbnails, for selection purposes for instance. WEBDEV 21 automatically manages the dynamic generation of these thumbnails: they are created based on the initial image, or set by the web designer.

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 pointed by the cursor is enlarged, which shows the details of this section.

The size of the zoomed popup can be configured as well as the zoom ratio (from 1 to 100).

This effect can be applied to image or thumbnail controls. There's nothing to program to benefit from this effect, simply click the "Automatic zoom" choice in the "7-tab" control description.



When the cursor passes over an image section, this section is automatically zoomed in and displayed

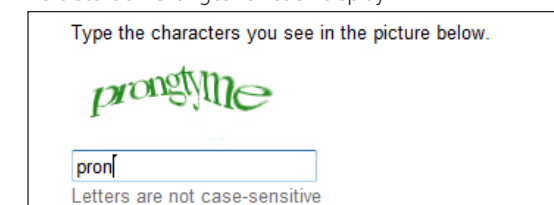
CAPTCHA CODE

"Captcha", which are security codes the web user must type, are automatically managed.

The captcha control automatically calculates and displays the distorted image corresponding to a text.

This text is automatically generated by the control or defined by the application.

The distortion changes for each display.



INTERACTIVE CHART CONTROL

The WEBDEV 21 chart control offers a large number of chart types in 2D and 3D modes, static and interactive modes: lines, bar, semi-circular, pie, ...

A menu allows the user to dynamically modify some parameters: chart type, legend display, etc. A crosshair helps you

read the data precisely. Animation effects are available.



IMAGES, CLICKABLE IMAGES

The image control lets you display images in standard Web formats: Jpeg, Gif, Tiff, PNG, SVG...

The images can be clicked to start a process. The "auto scroll" mode lets you automatically display images found in a directory.

EFFECT OF AUTOMATIC IMAGE MOVEMENT

This effect makes your page more lively!

The "automatic movement" effect simulates the small movement of a camera on an image: without having to program anything, the displayed image comes to life and slightly moves, slowly and smoothly in its section.

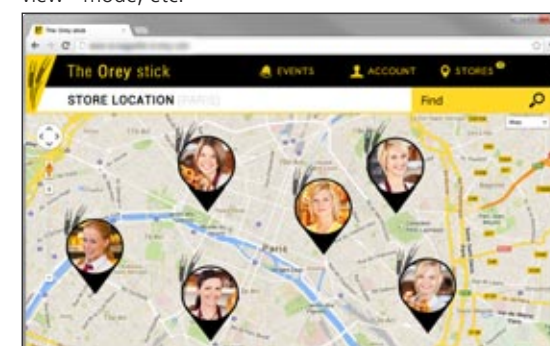
3 effects are combined: swipe in random directions, light zoom, fade-in to sequence these effects.

This effect is ideal to automatically highlight product pictures: real estate, luxury goods, ...



"GOOGLE MAP" CONTROL

You can include a Google Maps control in a site. The Map control of WEBDEV 21 is interactive: the Web user can zoom, move, use different views (map, satellite), switch to "street view" mode, etc.



CLICK AREA (MAP AREA)

The click areas are used to perform hypertext processes: depending 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 linked.

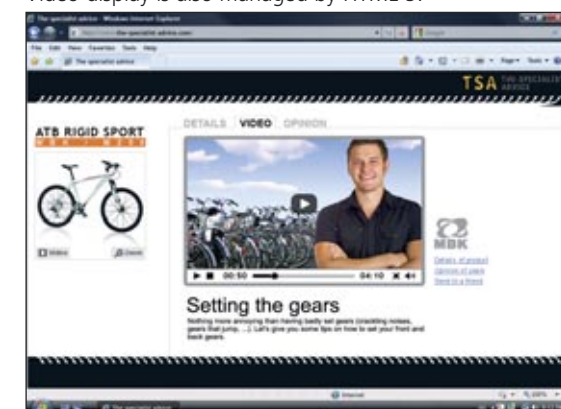


necessary, you can get the click coordinates, at the pixel level. This can be useful for precision maps, such as geographical maps for example, or in the case of medical applications.

"VIDEO" CONTROL

The "Video" control is used to play videos of different formats: Flash (Flv), QuickTime (Mov), Microsoft (Wmv), Webm, Mpg, Ogv...

The features for read, pause, fast forward, ... are supported. Video display is also managed by HTML 5.



CSS3 EFFECTS ON CONTROLS

WEBDEV 21 allows you to easily define CSS3 effects on the image controls: acceleration, clipping, fading, automatic zoom, fade in, hover zoom, photo effect, panoramic movement, blinking, shift, sweep, inclination, rotation, ...



Opacity fade in

Peeling corners are also supported.

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POWERFUL CONTROLS FOR YOUR PAGES

continued from page 27

SLIDER & RANGE SLIDER CONTROLS

Slider and Range Slider controls are also offered.



RATING CONTROL

This control allows the user to enter a rating, or a site to display a rating.

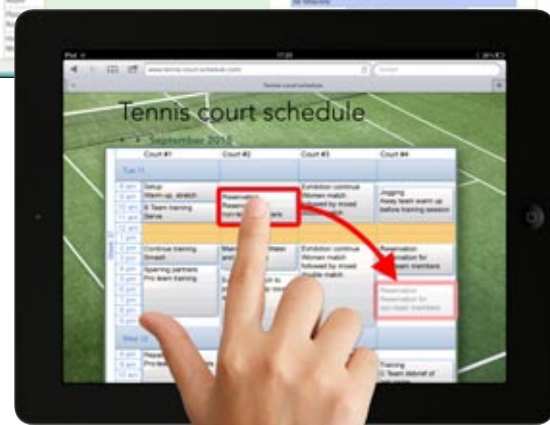
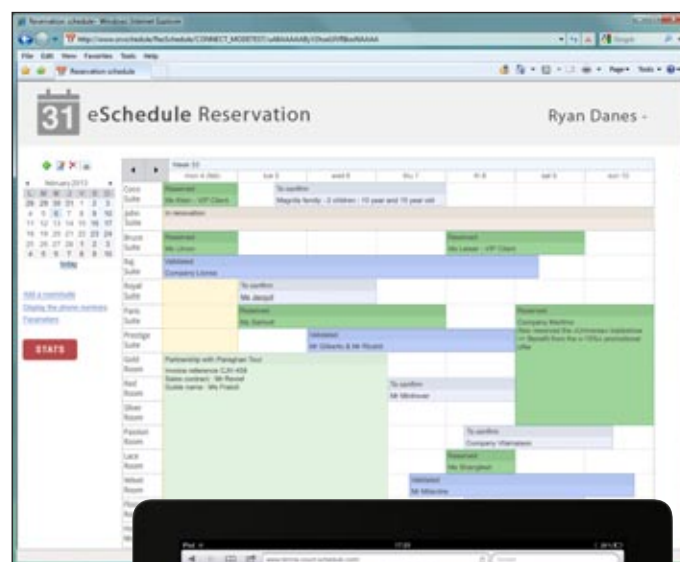
The visual symbol used by default is a star but it can be modified (smiley, hand, heart, ...). The rating can be a decimal number.



SCHEDULER & ORGANIZER CONTROLS

The scheduler control is used to manage the schedule for multiple resources. This is an Ajax control.

The way this control works is very user friendly; it can be handled just with the mouse for creating, resizing, moving



and deleting tasks and this, regardless of the browser.

It automatically links with data (data binding).

This control saves weeks of programming.

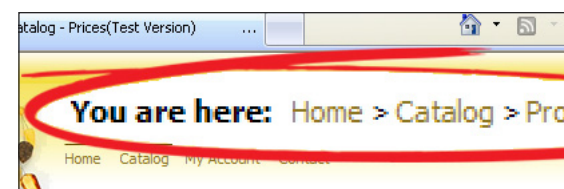
The scheduler control is adapted for touch devices (tablets, smartphones). The operating modes for creating, moving, deleting appointments are compatible with the "multi-touch" environment, and can be performed with one finger. An "Organizer" control is also available.

SITEMAPPATH (NAVIGATION PATH)

A "SiteMapPath" is a menu built while the user navigates inside a site.

It makes it easy to go back to the previous page. Generating this line is automatic.

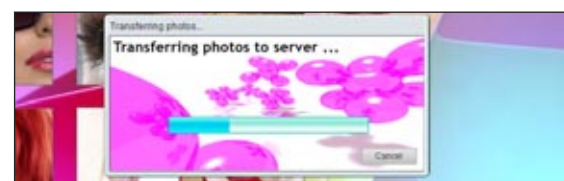
A site map is also automatically generated.



Easy navigation

THE UPLOAD FUNCTION

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



The size of uploaded files is not limited.

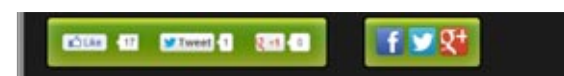
The upload can be performed in the background or can be scheduled.

AUTOMATIC DDW

The DDW (Dim Disabled Window/Page) feature is managed automatically on pages. The inactive page is grayed out as soon as a dialog box page comes up.

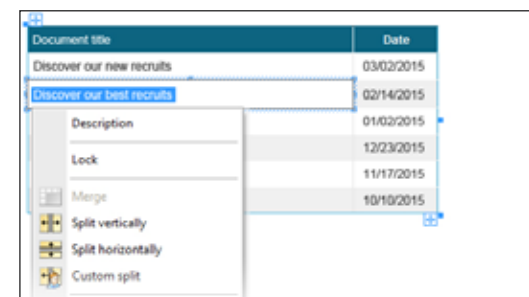
SOCIAL NETWORK CONTROL

The "Social Network" control is a toolbar made of icons that link to the main social networks on the Web: Facebook, Twitter, Google+, LinkedIn.



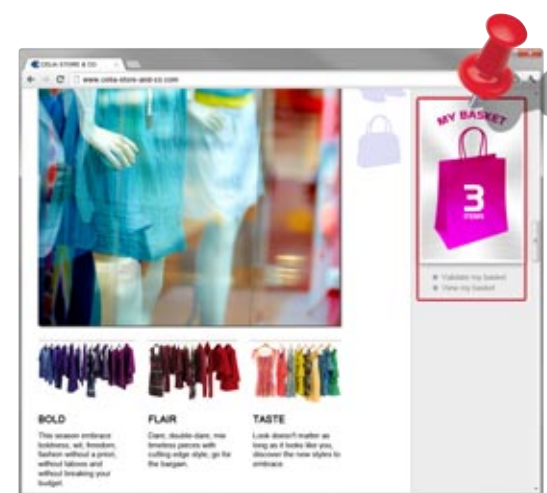
HTML TABLE

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



FIXED AREA ON THE SCREEN

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



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

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

"DASHBOARD" CONTROLS

WEBDEV 21 lets you easily create dashboards. A dashboard control is made of widgets.

The end user can customize and adapt the dashboard.



IMAGE BUTTON CONTROL

As their name suggests, image buttons are based on an image.

A button can be defined by 5 different images maximum, each corresponding to one state of the button: idle, rollover, click, focus, grayed.



Examples of graphic buttons provided with WEBDEV 21

The images for the various states can be located in an image sheet, automatically managed, with a smooth display. The button can be animated.

CSS3 BUTTON CONTROL

This CSS3 button is completely defined based on a CSS style. It doesn't require any image, but the CSS style itself can contain (or not) one or more images.

A CSS button can offer up to 5 states as well, which are elements of the CSS styles (pseudo-classes).

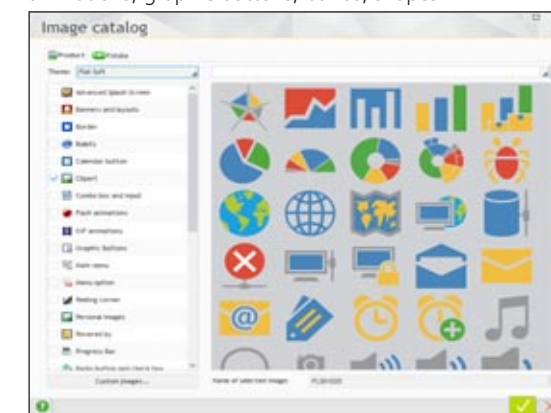
The CSS3 button is automatically adapted according to the browser.

COMPLETE CLIPART WITH OVER 10,000 IMAGES AND BUTTONS

WEBDEV 21 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.



CONTROLS ADAPTED FOR MOBILE USE

When sites created with WEBDEV 21 are run on a mobile (tablet or smartphone), the behavior of the controls adapts for touch screens.

ALL THE WEB CONTROLS

WEBDEV 21 also offers Treeview, Webcam, Applet, Iframe and more controls. You got it all.

(also see the very powerful layout control, "Rich Text Area" or RTA, hereafter)

continues page 30

THE RTA CONTROL: RICH TEXT AREA

●●● continued from page 29

“RICH TEXT AREA” (RTA) CONTROL

WEBDEV 21 offers an extremely powerful type of control: it is the “Rich Text Area” control (abbreviated to RTA).

The Rich Text Area control is fundamental for creating static and dynamic web pages: entering rich text becomes child's play.

The text and its rich attributes are entered like in a word processor: insert images with legends, insert links, add attributes to text ...

Everything is WYSIWYG.

In the editor, when entering text, the control expands automatically when needed.

Like with all the controls, the HTML code is automatically

For example:

Athletics

will be stored as

`<strong> Athletics </strong>>`

The `<strong>` tag, which is recognized and interpreted by the browser, indicates that it is an “important” word.

The browser will usually display the text between the tags in bold, depending on the browser preferences set by the user. The browser recognizes these tags and interprets them.

Search engines also use this type of tags for referencing pages. The use of these tags in a text increases its natural referencing.

RTA: LOGICAL PARAGRAPH FORMATTING

The RTA control is used to format the paragraphs: title, subtitle, footer, email address, note, header, bullet ...

The formatting is logical: for instance, a title will automatically be stored in its HTML format as a `<h1>` type text.

`<h1>` is an HTML tag that defines a page title.

The browser recognizes these tags and interprets them: usually the text will be displayed big and bold!

RTA: PHYSICAL FORMATTING OF A PARAGRAPH

In addition to this logical formatting, a physical formatting is also available: paragraph alignment, indentation, color, ...

RTA: INSERTING CONTROLS

Anywhere in an RTA text, you can insert a WEBDEV control (of any type): a chart, a table control, ...

The control is positioned inline, in relation to the text.

The control is “anchored” to the text.

RTA: INSERTING LINKS

There are several ways you can insert a link control in an RTA:

- Transforms a text selection into link
- Create a link control inside the text
- Copy an existing link control.

The link control found in a RTA offers the same capabilities as a regular link control.

The control found in the RTA can be edited using the “7-tab” technology.

RTA: INSERTING IMAGES

The image is positioned in the text, inline.

Dress-up parameters are available: left, right, paragraph, in the text,...

RTA: ACCESS TO THE HTML CODE, SAVE THE RAW HTML MODIFICATIONS

You can access the HTML code of the RTA, and the HTML code generated by WEBDEV in the RTA is voluntarily clear and readable, instead of being compressed.

A developer who masters HTML can modify the HTML code generated for the RTA control.

What has been modified directly in the HTML code will also be viewed in the editor.

MENU FOR EXPORTING TO WORD, EXCEL, XML, OPEN OFFICE



21

WEBDEV

The easiest and most intuitive method

AUTOMATICALLY EXPORT TO XML, WORD, EXCEL AND OPEN OFFICE

With tables and loopers, an automatic export menu to XML, Word, Excel and Open Office is offered to the Web user.

The data found in the table or in the loopers will be automatically exported to the selected tool and format.

When exporting to XML, the XSL style sheet needed by the browser is also generated.

In Intranet use, users can easily build their simulations under Excel!

NOTHING TO CODE

No programming is required to benefit from this feature.

You have the ability to disable this feature if necessary.

TOTAL OPENNESS

If you want to program automatic export for your sites, programming

January	February	March
128 247	15 379	3 791
325 879	3 791	7 913
578 124	501 004	358 913
98 369	84 028	132 028

commands are available in the WEBDEV 5GL.

The **HExportXML**, **TableToXML**, **XMLFirst** commands allow you to customize all the processes.



64 LANGUAGES IN YOUR SITES

A Web site has a worldwide audience: any web user in the world can take a look at it!

Therefore, developing multilingual sites is often required on the Internet.

There are of course countries that use several official languages: Belgium, Switzerland, Luxembourg, Canada...

WEBDEV includes an innovative and powerful solution for supporting foreign languages.

64 LANGUAGES PER SITE

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



Example of a text entered in different languages

WEBDEV takes care of everything, all you need is to enter the labels in the different languages selected (Western and non-Western character sets: chinese, russian, ...).

To change the application's language, simply use the **Nation**. WLanguage function in the project initialization process

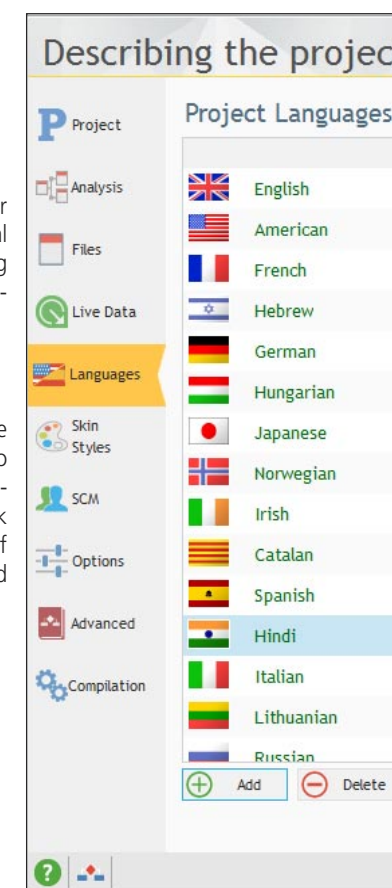
Note that even the text of image buttons will be translated!

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

The WDMMSG tool, available separately, allows you to extract all the “texts” in a project and to check them back in after translation. Useful if you want your site translated by a translation agency!



Visualization of a single “Rich Text Area” control of WEBDEV 21



generated by WEBDEV.

RTA: FORMATTING THE TEXT ITSELF

The RTA control lets you, of course, specify the characteristics of each piece of text, to the character level: font, font size, bold, color, strikethrough, underlined, superscript, subscript, ...

The text formatting is “logical” in the HTML meaning. For example, a “bold” attribute will automatically be translated by “Strong” in the HTML code, which makes it much easier for search engine referencing (Google...)

The necessary tags are inserted before and after the text in its HTML format.

5TH GENERATION PROGRAMMING: POWER AND EASE-OF-USE

The integrated WEBDEV 5GL language - WLanguage - allows you to describe all the necessary processes. Your teams won't have to sweat over HTML or JavaScript code. WLanguage makes programming Internet and Intranet sites easy.

INTERNET PROGRAMMING HAS NEVER BEEN THIS EASY

The WEBDEV 5th generation language (WLanguage, already used by tens of thousands of programmers worldwide) brings an extra level of confidence which makes site development a lot faster.

HOW TO PROGRAM WITH WLANGUAGE?

There are two types of Internet code:

- code that is executed on the host server (entered in the yellow band – see opposite)
- code that is executed on the user's browser (entered in the green band – see above).



RAD

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

AUTOMATIC HTML AND JAVASCRIPT GENERATION

Browsers only understand HTML and JavaScript code. Optimized HTML and JavaScript code is automatically generated from the WLanguage code targeted for the browser. The code is reliable, very concise and easier to maintain.

AUTOMATIC PHP CODE GENERATION

The created pages and the entered code are automatically converted to PHP code. Without knowing PHP, you easily create dynamic PHP sites! (see page 47).

KNOWLEDGE OF JAVASCRIPT AND HTML: NOT NEEDED

You don't need to know JavaScript, HTML or PHP to develop with WEBDEV. However, if for any reason you wish to write or reuse JavaScript, HTML or PHP code, WEBDEV allows it.

AUTOMATIC AJAX

For a process to be in "Ajax" mode, all you have to do is click a button (see page 36)

YOU WON'T GET STUCK

The WEBDEV 5 GL is extremely powerful. You'll never be stuck. Furthermore, you can enter HTML, JavaScript or PHP code, CSS3 animations, ASP or JSP code ...

WLANGUAGE: POWERFUL, INTUITIVE

Easy to remember English commands makes coding intuitive, and maintenance easy. WLanguage commands (HReadFirst, HReadNext, SSLActive, HFound, and so on) are easy enough to understand And easy to maintain. WLanguage allows for faster programming and better code quality. A WLanguage command often corresponds to dozens (if not hundreds) of lines of JavaScript code: your teams will develop faster.

EXAMPLE: SENDING AN EMAIL

Sending emails is easy. The command is simply called eMailSendMessage. You can add attachments. The email is 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.

POWERFUL STRING MANAGEMENT

WLanguage proposes a very powerful management of strings! Programming is much faster:

- dynamic size automatically managed
- concatenation via the "+" operator
- automatic conversion from numeric to text, and conversely
- advanced search functions
- multiple tests (CASE, SWITCH, ...).

PROFILER: OPTIMIZE THE SPEED OF YOUR CODE

WEBDEV 21 comes with a profiler, which measures the speed of each instruction in your code.

JQUERY



WEBDEV 21 lets you call entry points into the jQuery library. This function is used in browser code, therefore it can be used in all the sites, including static sites.

BOOTSTRAP

WEBDEV 21 lets you include Bootstrap features.

ANGULAR JS

WEBDEV 21 lets you interface with pages created using Angular JS.

JSON

WLanguage now interprets JSON natively (serialize and deserialize).

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.

WLanguage brings a structured 5GL to Internet development. The productivity tools are a real asset.



THE EDITOR HELPS YOU

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

A REVOLUTIONARY PROGRAMMING CONCEPT

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

THE WEBDEV DEVELOPMENT METHOD

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

code entered is WLanguage code that will be executed in the browser. The pink band indicates that the code entered is PHP code. The blue band indicates that the code entered is JavaScript code. It is visual and intuitive!

ALL EVENTS ARE SUPPORTED

The less common events are offered through icons displayed at the bottom left of the screen. 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, ...

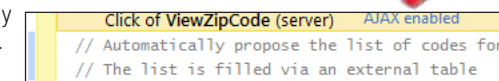
reverse analysis of the code. Conversely, a UML diagram generates the classes' code.

SOURCE CODE MANAGER

WEBDEV 21 comes with a versioning tool, the shared Source Code Manager (SCM, see page 44).

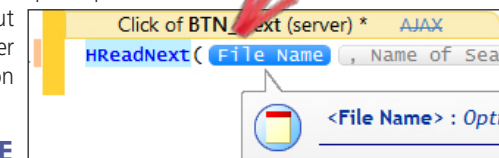
AJAX

Regarding AJAX, simply click the "AJAX" button on the line to use this technology (see page 36).



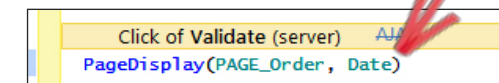
AUTOMATIC COMPLETION

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

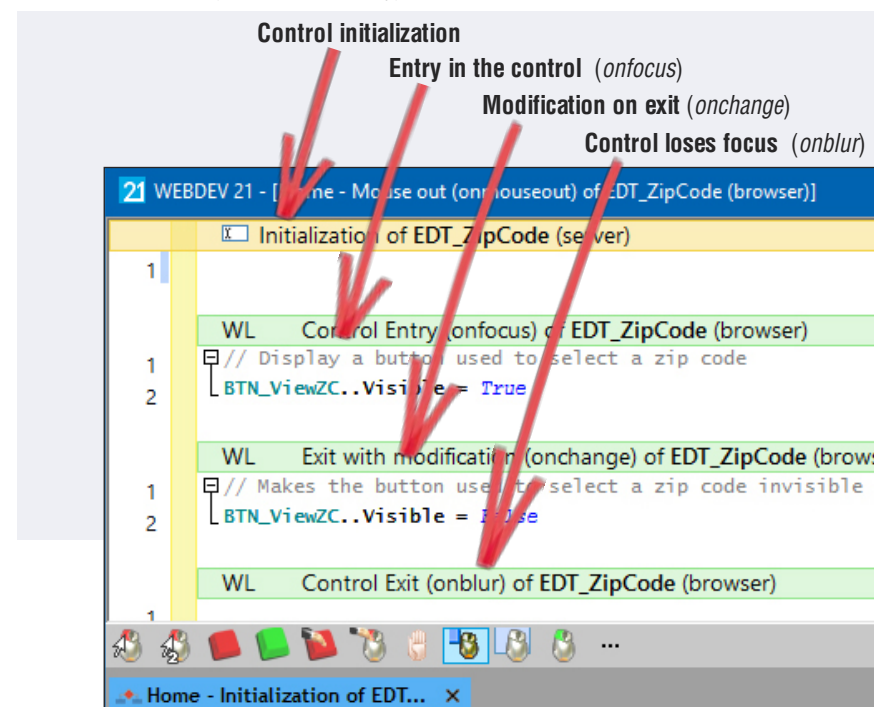


REAL-TIME ERROR CHECKING

If a syntax error occurs, it is detected in the code editor, even before the project is compiled! The errors are flagged by underlying the function whose syntax is invalid in red.



The code editor is part of the overall user-friendliness of WEBDEV 21.



the default events are: control initialization, data entry in the control, control loss of focus, do (action) for each modification. You just enter the corresponding code in the section you need. The code that will be run in the browser can be entered in WLanguage or in JavaScript, it's your choice.

SERVER CODE AND BROWSER CODE

All you have to do is enter your code under the corresponding banner. The yellow band indicates that the code entered is WLanguage code that will be executed on the server. The green band indicates that the



SYNTACTIC COLORING

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 21 supports UML and automatically creates the class diagram by

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

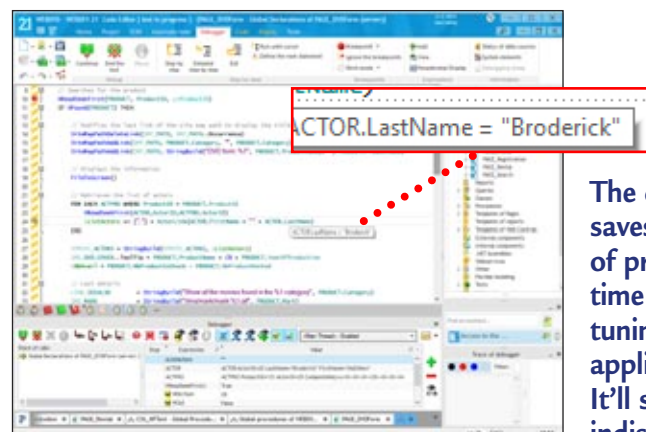
- contain functions
- display the value of the variable under the tooltip
- decimal or hexadecimal result
- real-time call stack
- trace of code run
- 32 or 64 bits
- ...

REMOTE DEBUGGING

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

PHP AND AWP DEBUGGER

The debugger works in "AWP" mode (the mode of semiautomatic contexts). In PHP, you can debug the initial application.



The debugger saves you a lot of precious time when fine tuning your application. It'll soon be indispensable!

QUALITY OF YOUR SITES: UNIT TESTS

The automated test phase is only one of the phases that ensure the high quality of your software, but it is an important one. In addition to regression tests, WEBDEV 21 proposes the creation of unit tests, integration tests and stress tests.

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.

APPLICATION VALIDATION RATE

The testing center displays the list of existing tests, the version of the site on which each of these tests has been run and the result of the test. This information is also displayed in summary mode in the project

Dashboard.

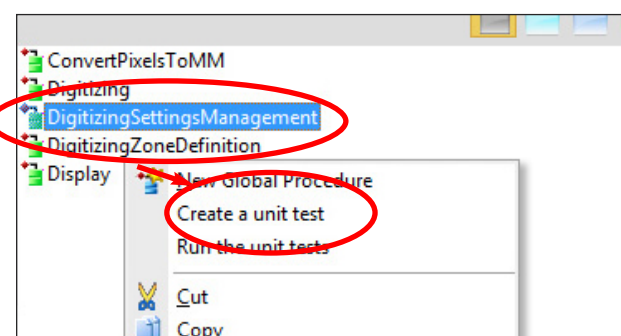
THE TEST SCENARIO EDITOR

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

TEST VERIFICATION DURING CURRENT OPERATIONS

Each modified element that has not been validated by tests is flagged. The Test Center also flags all the errors that have not been corrected as well as regressions. A history of the validation rate is automatically stored, which allows the site's quality to be tracked over its life cycle.

This verification is also performed when you check in elements in the source code manager (see p 44).



COMPONENTS: CODE REUSABILITY

The concept of component drastically simplifies the development: It is used as a black box, very easily and securely.

A component can contain source code, pages, images, classes, an analysis, and even data tables.

SECURE DEVELOPMENT THANKS TO COMPONENTS

A component is a "black box", a building block; the developer using it only knows the entry points and the nature of the information that may be returned.

The ability to create elaborate components as easily as traditional applications will simplify your development.

SECURE YOUR COMPONENTS

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

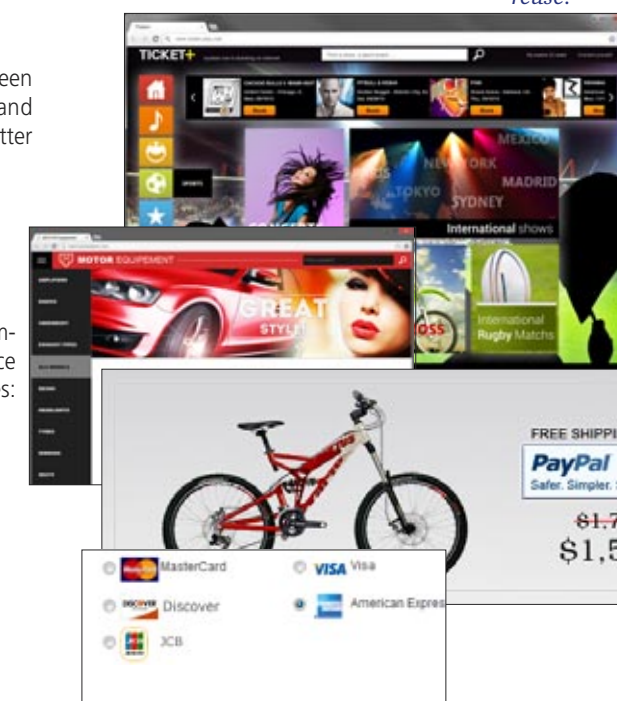
MULTI-TARGET COMPONENTS

Components are compatible between WINDEV, WINDEV Mobile and WEBDEV. This allows for even better code reuse.

LARGE NUMBER OF READY-TO-USE COMPONENTS PROVIDED

WEBDEV 21 comes with several components (as well as their source code), that can be used in your sites:

- request for documentation
- basket (for ecommerce)
- secure payment...



OOP



Developing a dynamic site (linked to data, and including processes) requires a programming phase. WEBDEV 21 is open to all development methods.

PROCEDURAL PROGRAMMING OR OOP

Programming with WEBDEV 21 is done in WLanguage, the famous 5GL, known for its power 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

WEBDEV allows for object oriented programming if you want it. The classes and the syntax of WLanguage allow for modern and efficient object-oriented programming.

The base method classes 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 following OOP notions are supported:

- Classes
- Abstract classes
- 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 directly in WLanguage. The code editor offers assisted input on the names of the document elements, syntactic coloring, ...





IMPLEMENT AJAX IN 1 CLICK



Web 2.0 technology allows Web applications to use UIs that are close in behavior to traditional Windows applications' UIs

An important element of Web 2.0 is "AJAX", which allows the browser to only refresh the part of a page that has been modified

WITHOUT AJAX...

In traditional Web development, when the application wants to modify a single element in a displayed page (a price, or a list of vehicles for instance), the server needs to resend the entire page to the user's computer.

This taxes the server, takes up bandwidth, creates a "refresh" effect in the user's browser, and display can be slow when the browser must reinterpret and redisplay the entire page...

WITH AJAX...

With the AJAX technology, essential to WEB 2.0, it is now possible to send to the user's machine only the modified data, without refreshing the entire page.

There're plenty of benefits: the server is less taxed, the amount of information circulating is smaller, display is instant for the user without any bad repaint effect.

USING AJAX IN A WEBDEV SITE: 1 CLICK!

There is nothing to program.

You automatically benefit from AJAX. You continue to program in 5GL (WLanguage). WEBDEV takes care of everything!

An "AJAX" choice appears in the code editor's toolbar. To enable AJAX on the process, all you have to do is click... the "AJAX" button.

The label changes and becomes "AJAX enabled".



SECURITY

Because of its architecture, AJAX can start server procedures and processes from a browser call. To secure your sites, the WEBDEV processes are protected from illegal calls (attempt to hijack a session, ...).

WEBDEV AJAX TECHNOLOGY FOR CONTROLS

After an Ajax page request, all the affected controls are updated automatically based on their value on the server. There's nothing to code.

DYNAMIC SERVING: ONE URL, 2 DISTINCT PAGES

ONE URL, 2 PAGES

Dynamic serving is a technique where the same address (URL) leads to 2 different pages: a page for PC and a page for mobile.

Depending on the device (PC or mobile) that accesses the page, the right page will be displayed.

This is an alternate solution (even complementary) to the responsive web design to make a traditional site more mobile friendly.

With this method, no need to modify the existing pages: just add new ones for mobile.

EXCELLENT GOOGLE NATURAL REFERENCING

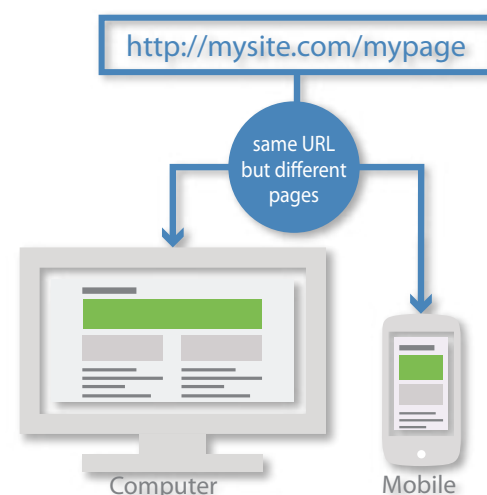
This technique provides for great referencing by Google.

To associate the PC pages (on large screen) and the mobile pages, simply use a window from the project editor.

At run time, depending on the hardware, the WEBDEV 21 application server decides on the page to use.

By programming it is possible to turn off the automatic routing. This way it

is possible to offer the user with a mobile to stay on the desktop site.



WEB SERVICES: EASY ARCHITECTURE SOA

RELY ON WEBDEV'S EASE-OF-USE TO CREATE WEB SERVICES

WEBDEV 21 lets you easily use, create, deploy and host Web services.

EASY CONSUMPTION OF WEB SERVICES

It is very easy to import and use a Web service with WEBDEV.

Based on the WSDL (Web Services Description Language) description of the service, WEBDEV automatically generates WLanguage types and functions corresponding to the programming interface of the Web service.

This way the elements from the web service appear in the project as regular project elements.



EASY CONSUMPTION OF SOAP WEB SERVICES

Advance use of Web services using SOAP (Simple Object Access Protocol) is possible thanks to a set of SOAP functions.

These functions allow you to handle the stream of XML data exchanged with the Web service (headers, authentication, meta information, ...)

EASY CONSUMPTION OF REST WEB SERVICES

You can also query a REST type Web service thanks to the `RESTSend()` WLanguage function.

EASY CREATION OF WEB SERVICES

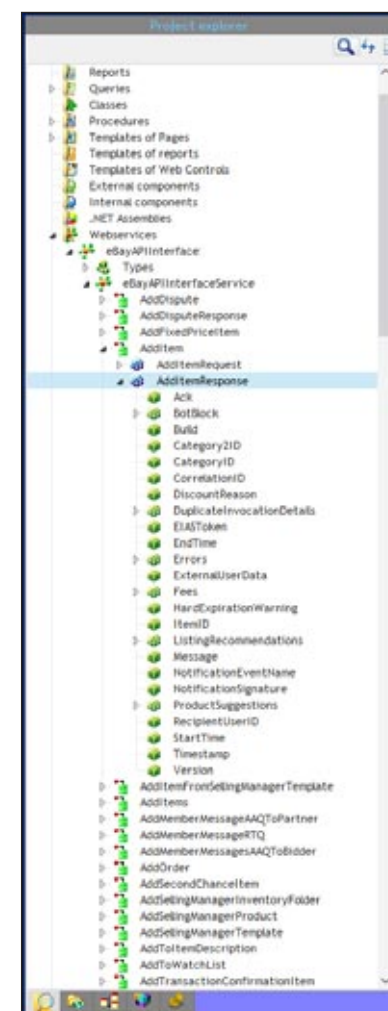
Web services are easily created: simply define the set of procedures that make up the Web service interface.

The WSDL file description is automatically generated.

EVERYTHING IS MANAGED

The management of Web services is very powerful in WEBDEV; here's a list of supported features:

- Array type results (SoapArray)
- Databinding Web services
- Inclusion of Web services
- Attributes in wsdl
- Multiple responses
- Multiple headers
- Message signature
- WS-Addressing
- Circular references in schemas
- SPNEGO authentications



Consuming Web services: the Webservices elements appear in the project, like elements belonging to the site, to make development easier

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WEBDEV

Web services at your service



MODELING A DATABASE: EASY (UML,...)

When you create a dynamic site from scratch, you need to define the tables that will be used. It's easy with WINDEV 21.

And if you have existing databases, WEBDEV can use them directly.

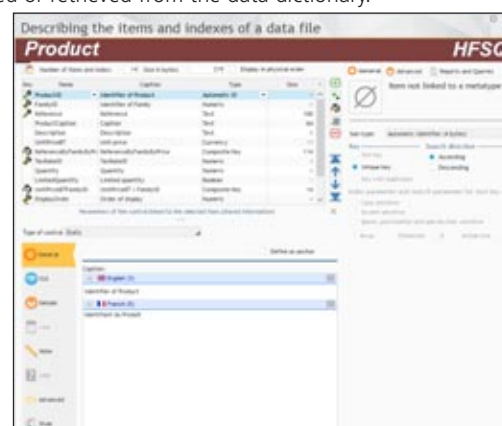
WEBDEV uses a visual representation to describe how the data is organized. The UML method is included in the environment. Note that WEBDEV supports all the analysis methods.

DEFINING A NEW STRUCTURE

Say you need to define new tables, let's take a look at a simple but representative example of the creation of a new file structure: the definition of the "Products" and "Orders" tables.

1. Let's create the PRODUCTS table: all you have to do is specify its name and some general information.

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



3. Then, we create the ORDERS table.

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 21 asks simple questions in natural language to automatically define the type of link between the 2 tables.



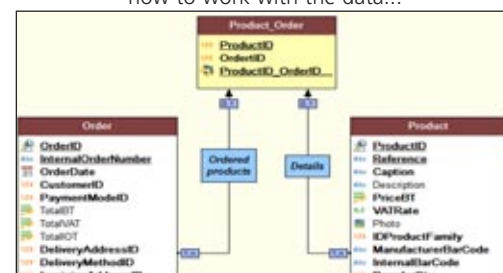
The questions are very basic. For example, here: Based on the answers to these simple questions WEBDEV sets the right cardinality attributes and determines whether a relationship table is needed!

Each "product" belongs to at least one "order": yes or no?
Each "product" can belong to several "orders": yes or no?
Etc.

5. WEBDEV then requests the rules to apply for deletions or modifications (referential integrity)

Forbid the deletion of 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.

Now, all there is to do, is print the documentation (optional), generate the pages and the code with the RAD tool, or start a new development... It's that simple.

programming documentation of the site. The documentation is built by reverse analysis of the site and therefore always up to date. A documentation can have several hundred pages, be published in PDF, HTML format, or in a word processor...

THE TECHNICAL DOCUMENTATION IN ONE CLICK

WEBDEV 21 allows you to edit at any time the full analysis and



ALL DATABASES: MYSQL, ORACLE, AS/400, SQL SERVER, INFORMIX...

A dynamic site uses data. WEBDEV 21 can access any database on the market. WEBDEV is an open product that lets you reuse or include existing sites or pieces of site.

ALL DATABASES ARE SUPPORTED (NON- EXHAUSTIVE LIST)

WEBDEV can read and write in any database.

Some of the databases supported (please see table opposite).

- HFSQL*	- IBM DB2**	- Bull DPS
- MySQL*	- IBM	- Access
- Oracle**	- AS/400**	- xBase*
- Informix**	- Sybase**	- ASCII*
- SQLServer**	- Netware SQL	- Excel*
- PostgreSQL*	- Ingres	- Etc.
- MariaDB*	- Progress** - XML*	
- SQLite*		

*: standard native connector
**: optional native connector

BIG DATA

WEBDEV can natively access data stored in Big Data format.

ALL DATABASES VIA ODBC OR OLE DB

WEBDEV 21 supports all the databases that have 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.

In most cases, 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 commands or use the SQL commands of WEBDEV, WLanguage (HReadNext, and so on). This again shows WEBDEV 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 21 enables you to create a new site and its data, or create a site linked to existing data, regardless of the database.

ACCESS IN NATIVE MODE

WEBDEV can natively access MySQL, Oracle, SQL Server, PostgreSQL, SQLite, AS/400, DB2, Informix, Sybase directly (modules available separately).

Installing these native accesses is extremely simple (a small size file).

BLOB and Long Raw controls are supported.

Access performances are impressive.

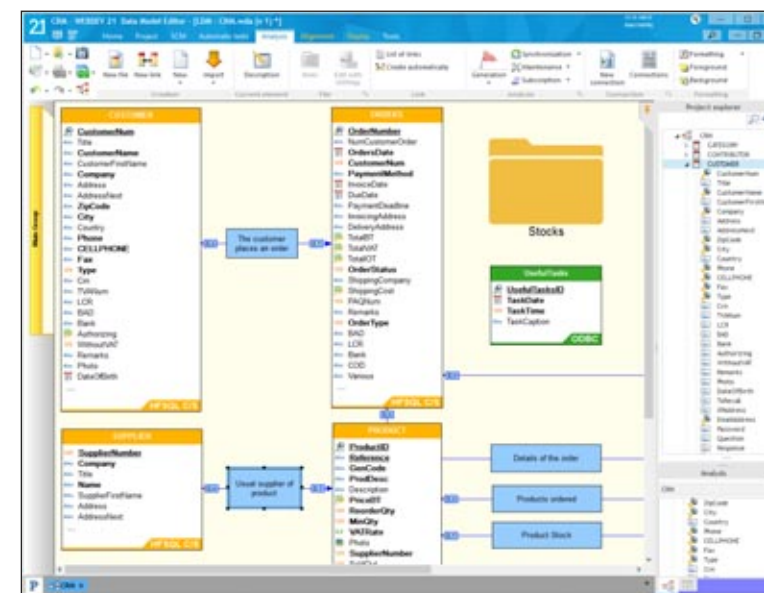
NATIVE SUPPORT FOR "AS/400" AND "ISERIES" DATABASES

WEBDEV accesses AS/400 databases directly (module available separately), without any ODBC,

OLDB drivers and no ActiveX. WEBDEV knows how to import and export DDS, run CL commands, manage a dataqueue, ...

It is totally included in the environment, and the speed is impressive.

Ask for the brochure!



Description of a data structure in WEBDEV



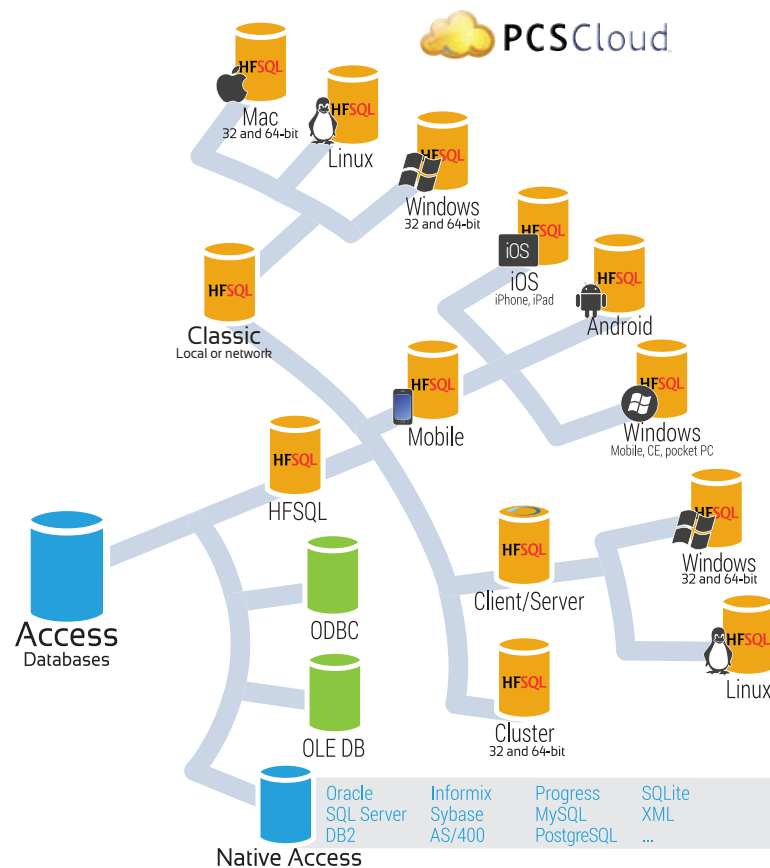
HFSQL : FREE WINDOWS AND LINUX CLIENT/SERVER SQL DATABASE

WEBDEV 21 supports all the databases on the market. WEBDEV comes with an SQL database, HFSQL, which is very powerful, very fast and very reliable. Distribution of the HFSQL engine is free.

WEBDEV SUPPORTS ALL MAJOR DATABASES
WEBDEV works with all the databases on the market (see page 39).

A PROVEN DATABASE COMES WITH THE PRODUCT: HFSQL
HFSQL is the new name for HyperFileSQL.
HFSQL comes with WEBDEV 21. It is a robust and reliable database, already used on millions of sites worldwide.

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

SHARING DATA WITH BACK OFFICE
Site data can easily be shared with back office applications, to process orders, send packing list, create invoices for instance. 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 is often useful. HFSQL allows for the replication of databases and the replication of servers, unidirectional and bi-directional, scheduled or continuous. Replication can be automated, or fully customized.

EXTREMELY FAST
The total command integration and the (automatic) index setup allow for incredible access speed. This provides better response times for your site, be it an Internet or Intranet site.

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

CONFIDENTIALITY: 128-BIT ENCRYPTION
On the Internet, the data will be found on a server: it must be protected against illegal access; it's easy with HFSQL. The data and index encryption is available for better security.

ADVANCED FEATURES
HFSQL offers advanced features: cluster, integrity, log, transactions, triggers, automatic concurrent access management, Unicode, hot maintenance (without disconnecting users)...

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.



SQL AND WLANGUAGE
The data can be accessed via SQL commands or via the powerful functions of WLanguage. You have the ability to mix SQL commands and WLanguage commands in the same program.

THE CODE CAN BE GENERATED!
Programming is very easy, quick and reliable. The code can be generated automatically when creating pages through WEB RAD!

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. The index supports rich text (RTF, HTML), ignoring their tags during the indexing process. Results are offered according to a relevance order ("ranking").

HOT BACKUP
You can trigger a database backup while the database is being used. There can be read, write and query database accesses happening. Data

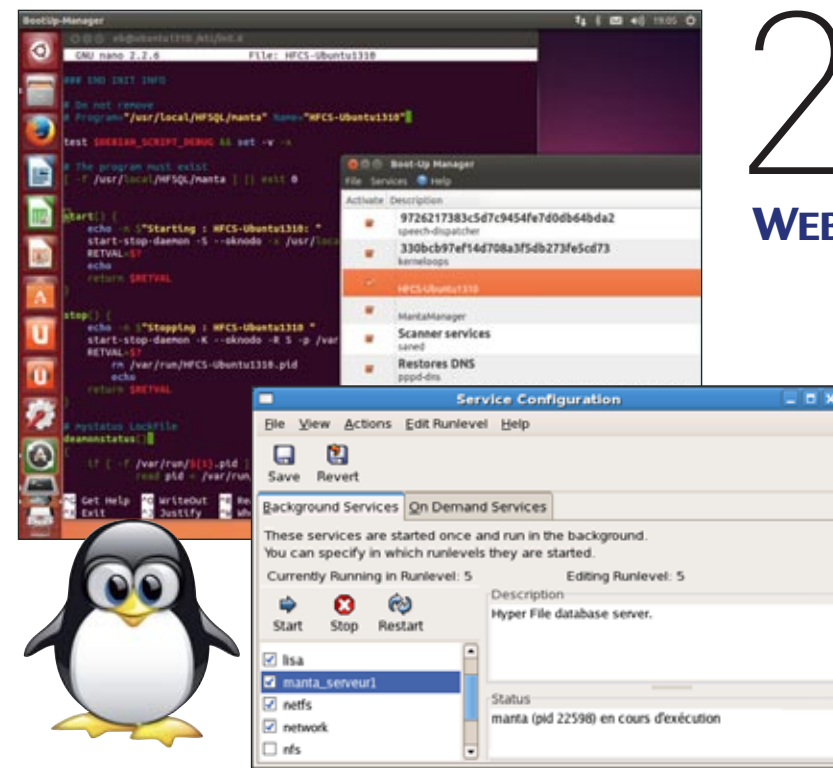
integrity of the saved data is insured. The backup can be triggered by programming (at a certain time for instance) or through an action of the DBA. You can also perform incremental backups.

EASY INSTALLATION AND CONFIGURATION
HFSQL installs instantly, without requiring any operations. Similarly, database administration is performed automatically. Changes to the database structures are automatically managed (SDD technology).



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).



HFSQL DEPLOYMENT: FREE
Using HFSQL can save you hundreds of thousands of dollars (and even more when deploying Intranet sites). A non-negligible benefit.

FEATURES
128-bit encryption
Referential integrity
Logs
Replication
Transactions
Triggers
Unicode
Import Export
Cluster
Compress/Decompress memos on the fly
TECHNOLOGIES
Automatic maintenance (DDS)
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

The editor enables you to automatically create simple or complex queries on tables. This simplifies programming even more: pages tables, loopers, combo boxes, reports... can be based on queries.

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.

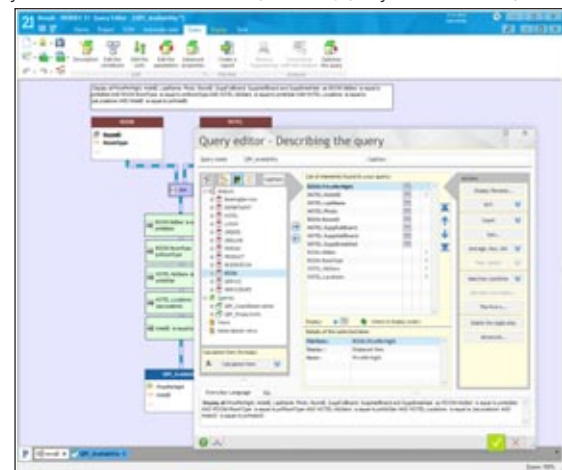
You can, of course, modify the SQL code generated by the query editor.

The queries are run on HFSQL (Classic, Mobile and Client/Server version) and on all the other databases.

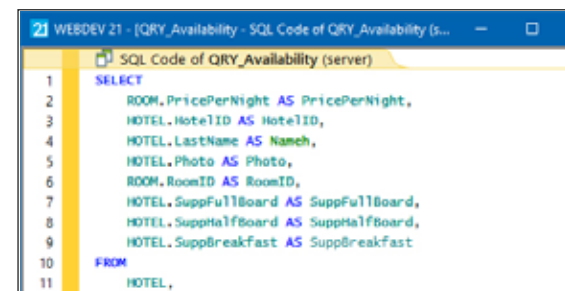
You can use WLanguage code with queries (hRead* commands).

VISUAL QUERIES

The query is also generated in natural language as you make your choices in the editor (or in SQL, if you choose so).



The query editor



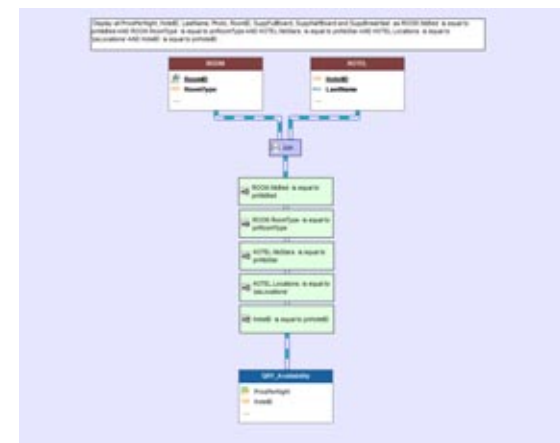
1 The SQL code automatically generated



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



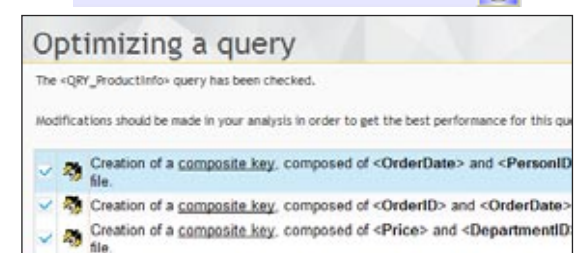
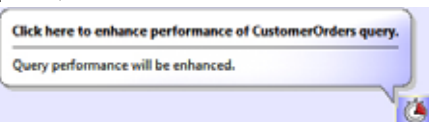
Once validated, the query is displayed graphically in the development environment, which makes it easier to understand when you need to make changes.



3 Once the query is defined, it is represented graphically.

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 keys are missing, the environment will flag them automatically through ADD (Aided Application Development).



QUERIES BASED ON QUERIES...

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

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.

REPORT EDITOR: GENERATE PDF IN REAL TIME (INVOICES, ...)



21

A report editor solves the problem of Internet reporting.

And it makes creating prints easier.

It has a double use:

- on one hand, for the Intranet applications
- on the other hand, for dynamically generating reports that will be sent to the Web user (PDF invoice for example).

PDF INCLUDED

Reports can be created in PDF format (without any additional charges, or any additional module needed).

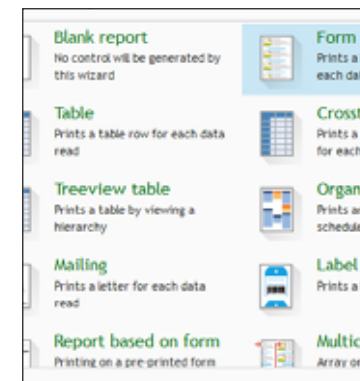


A PDF report is generated with WEBDEV 21

PDF/A AND SIGNATURE

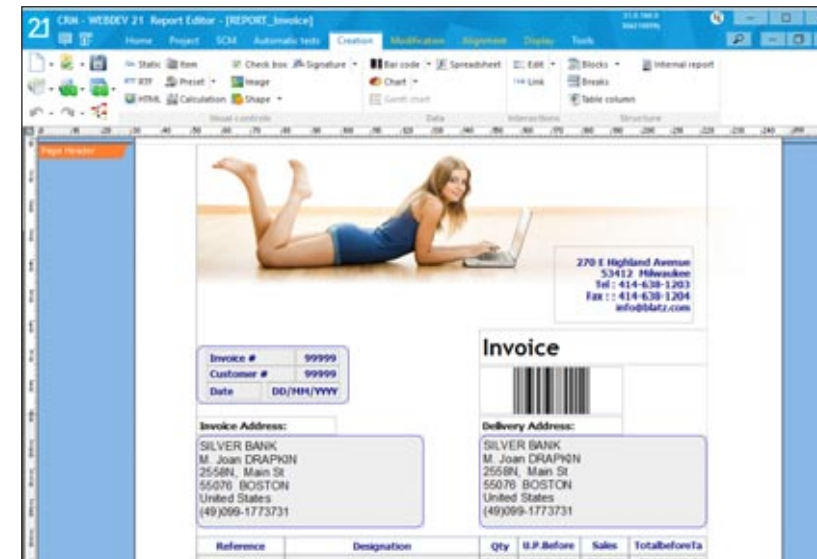
You can create signed PDF/A (standard ISO archive), and signed PDF (RGS).

CREATING A REPORT: EASY



Choosing the type of report to create

A wizard automatically offers to help create high quality reports; it asks ques-



A report being created in the environment

tions 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 as: HTML, RTF, PDF...

ANY DATA SOURCE

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

SUPPORT FOR PDF BACKGROUND PAGES

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

INCLUDE IMAGES: AUTOMATIC

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

You can also easily print drawings originating from your program.

SOURCE CODE WHEREVER YOU WANT

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

AUTOMATIC BAR CODES



WEBDEV 21 automatically prints bar



codes (horizontally or vertically). The supported formats are: QR Code, UPCA, UPCE, EAN13, EAN8, CODE128, CODE39, CODE93, CODE11, interval 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 21, sophisticated reports are made easy!

WEBDEV

A WYSIWYG report editor, precise to the pixel



TEAMWORK VERSIONING TOOL (SCM)



CONNECTED AND REMOTE

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

If you are connected (with DSL for instance), the modifications that you perform will be immediately available to the other developers.

SINGLE DEVELOPER

Even if you develop by yourself the versioning tool presents some benefits: 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.

THE SOURCE DATABASE

With SCM (Source Code Manager), the project elements are grouped in a database. Before being used an element is checked out, once it has been modified it is checked back in. Therefore team members use up-to-date elements. SCM stores all the project's elements: 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 an application, and automates the backup of the development team's source code.

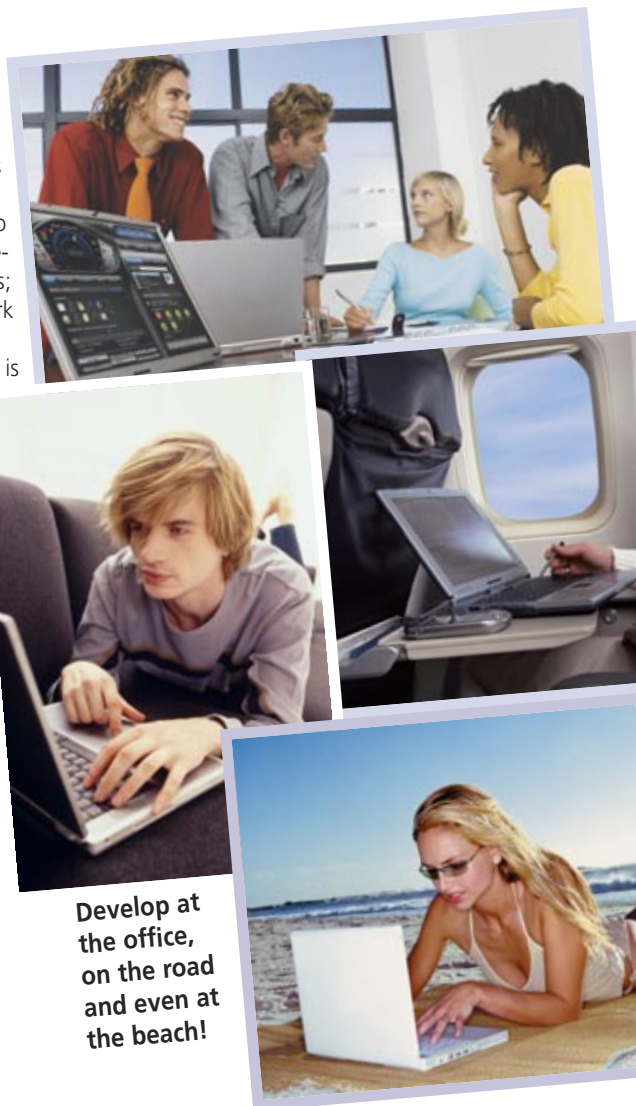
The versioning tool brings comfort, flexibility, security and speed. Sized to accommodate teams of 1 to 100 developers, SCM facilitates and standardizes exchanges between developers without imposing constraints.

POWERFUL FEATURES

- SCM is entirely integrated in the environment; for example, the SCM proposes to check out an element during a modification.
- The database supports several projects; if several projects use the same element, this one can be shared.
- A history of all the elements (pages,

code, queries, ...) since their creation, is stored in the repository (a complete or partial purge is always possible).

- The project is also found on all the development computers; therefore you can work on an offline machine.
- Branch management is covered.
- "Diff" (differences) between 2 elements is available: source, page, ...
- You have the ability to see the list of modifications performed between 2 versions by yourself and/or by other developers or Web masters...



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

DRIVE YOUR PROJECTS: DASHBOARDS & CONTROL CENTERS

21

WEBDEV

Drive your projects



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.

MANAGING THE LIFE CYCLE

A Control Center is an application that monitors an aspect of the life cycle of a site.

A Control Center allows you to have a global view of the corresponding area, either during the development phase, or at a deployed site, or also for maintenance or application evolution.

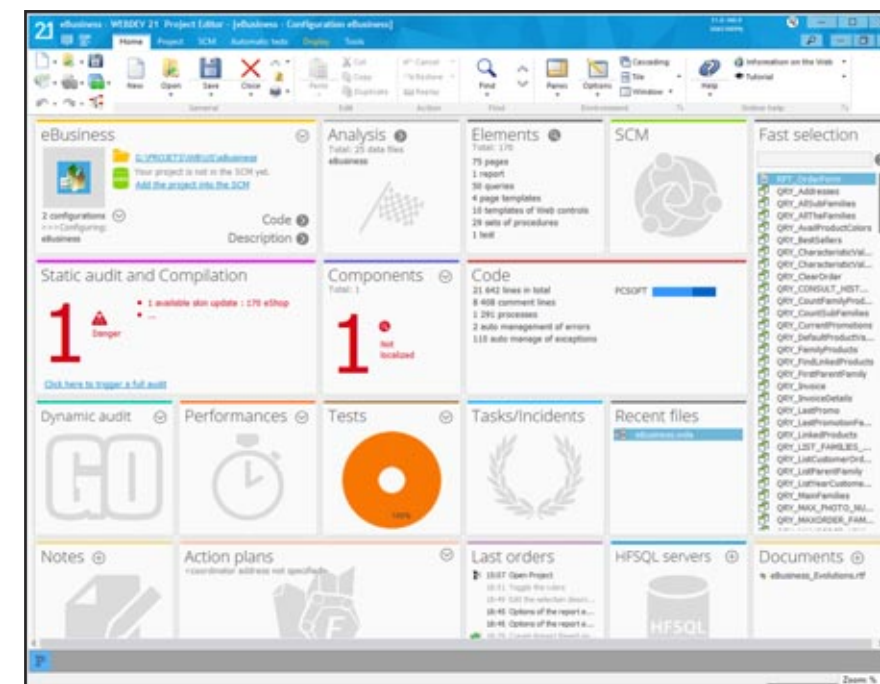
The Control Centers used the most for Web development are:

- Project Monitoring Center
- Hosting Control Center.

The Control Centers are fully integrated in the environment; the information is shared.

ALM: PROJECT MONITORING CENTER

The 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.



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

MANAGEMENT OF REQUIREMENTS AND TASKS

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...

QUALITY CONTROL

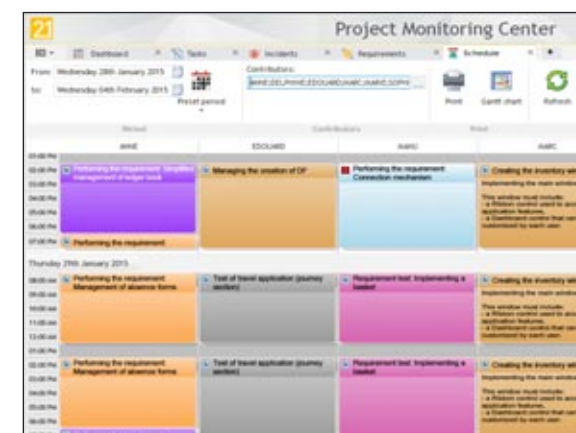
Quality control lets you monitor development incidents.

HOSTING CONTROL CENTER

The hosting control center lets you configure the hosting profile and maintain the hosting server.

The management of accounts and Web servers is also performed via this center (see page 50 to 53).

Managing project is made easier.



Manage the schedule of the development team in real time



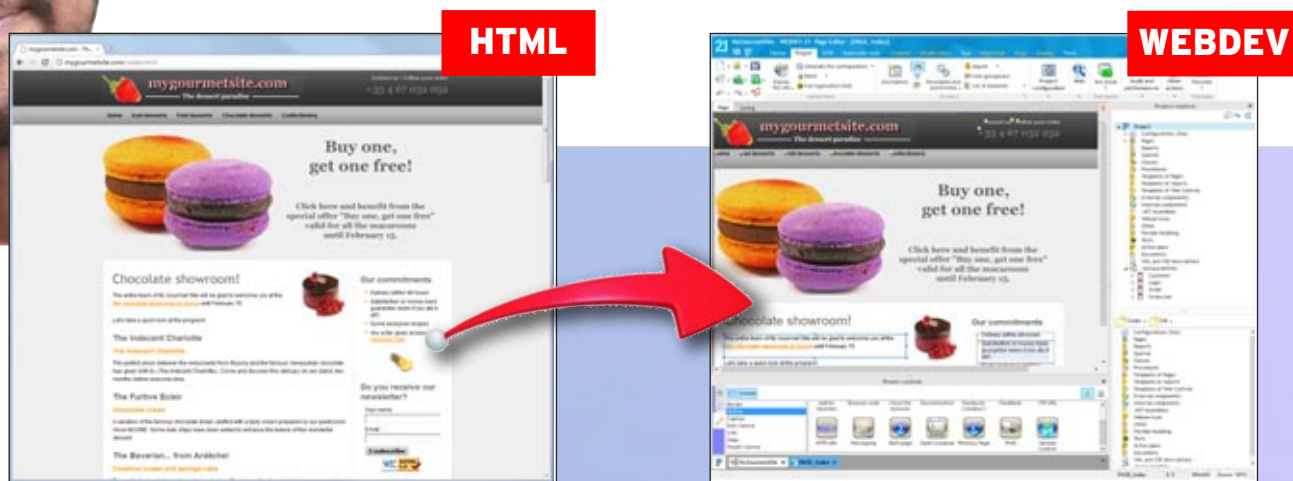
Impact analysis



IMPORTING EXISTING HTML

The existing static pages can be retrieved in WEBDEV 21. The corresponding controls are created.

Importing pages is also useful for creating a style book compatible with an existing site, and preserving the site's look and feel.



The initial static page...

The same page imported in the WEBDEV editor

IMPORTING EXISTING HTML CODE

WEBDEV has an interesting feature: sucking 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.

IMPORTING/EXPORTING WINDEV APPLICATIONS WEBISING APPLICATIONS

Importing, exporting and sharing WINDEV applications and windows save you a lot of time when going from a Windows application to an Internet application and vice versa.



Here: a window in WINDEV...

... and the result of its import into WEBDEV 21. The source code is also imported!

IMPORTING AND SHARING A WINDEV APPLICATION

Windows created with WINDEV are directly changed into pages. The projects are common. The controls, the code, the

reports are retrieved. Going from Windows to Internet (and from Internet to Windows) has never been easier! You can also share classes, procedures, reports, queries between WINDEV, WEBDEV and WINDEV Mobile projects.

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 for creating PHP sites. If you choose to, the pages and the code (in WLanguage) are automatically converted to PHP code (you can also enter PHP code directly).

Without knowing PHP, you easily create dynamic PHP sites!

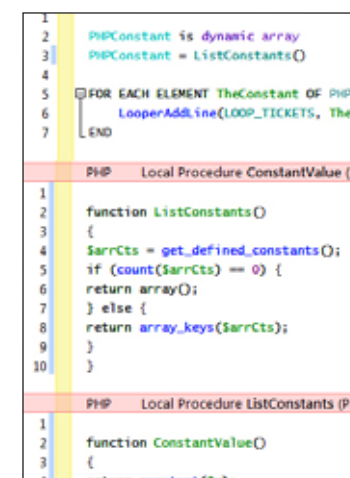
PHP RAD

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 ENTRY OF PHP CODE

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



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 21 advanced types of control are available in PHP: table with automatic scroll bars, loop controls, calendar, tab, rich edit control, HTML text, automatic ruler...

This allows you to tremendously streamline coding and brings great security to your sites through input masks that only allow the entry of data in set formats.

WEB 2.0: AJAX IN PHP

A large number of controls and operations are AJAX compatible in PHP mode: you create Web 2.0 PHP sites with WEBDEV 21! (see page 36)

ADVANCED TYPES

In addition to the standard PHP types, WEBDEV 21 allows you to use advanced types in your code.

Programming is easier and more secure this way.

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.

EASY AND AUTOMATIC MANAGEMENT OF PHP SESSIONS

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 & PHP 4 COMPATIBILITY

WEBDEV 21 generates PHP code compatible with PHP 7, PHP 5 and PHP 4.

HFSQL ACCESS

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

MYSQL, POSTGRESQL, ORACLE ACCESS

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

AS/400 (IBM I) ACCESS

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

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.

WAMP & LAMP

WAMP (Windows, Apache, MySQL, PHP) and LAMP (Linux, Apache, MySQL, PHP), acronyms often used for these technologies based on 4 components, are supported by WEBDEV 21.

EASYPHP: AUTOMATIC CONFIGURATION AND SETUP OF WEBDEV

When installing the WEBDEV 21 application server, the Apache Web servers (used notably by EasyPHP) are automatically detected and configured.

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.

With WEBDEV 21, PHP is easy!



21

WEBDEV

Open to all standards



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

WEBDEV AT THE SERVICE OF SAP

SAP R/3 is a very popular ERP tool. A site built using WEBDEV 21 can access SAP ERP data natively (through 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 functions enables you to establish a connection (with authentication) and call BAPIs and pass them parameters.

A wizard helps import automatically the structures used.

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

All the WEBDEV features are available.

QUERIES BASED ON SAP

The report generator (see p 43) 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 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, of course, via the Lotus certificate.

NATIVE OUTLOOK 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.

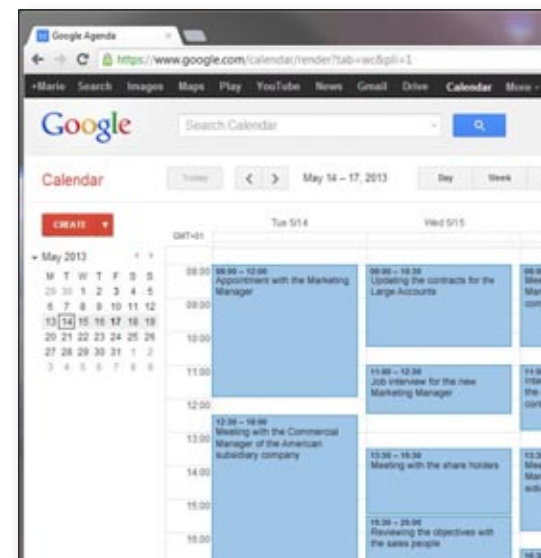
NATIVE ACCESS TO GOOGLE APPS

Aside from the ability to connect to Google application through mashup, WEBDEV 21 offers native access to

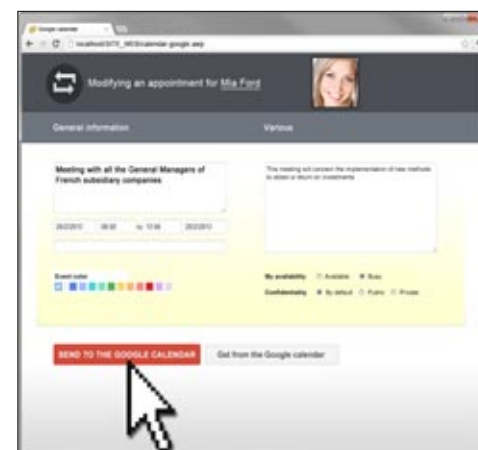
Google applications' data: Google Calendar, Google Maps, Google Contacts, Picasa...

This allows data to be retrieved and then displayed in a custom format on the site.

```
Connection is gglConnection
Connection.Email="WebDev21@gmail.com"
Connection.Password="password"
GglConnect(Connection)
Contacts is array of gglContact
Contacts=GglContactList(Connection)
TableDisplay(TABLE_Contacts)
```

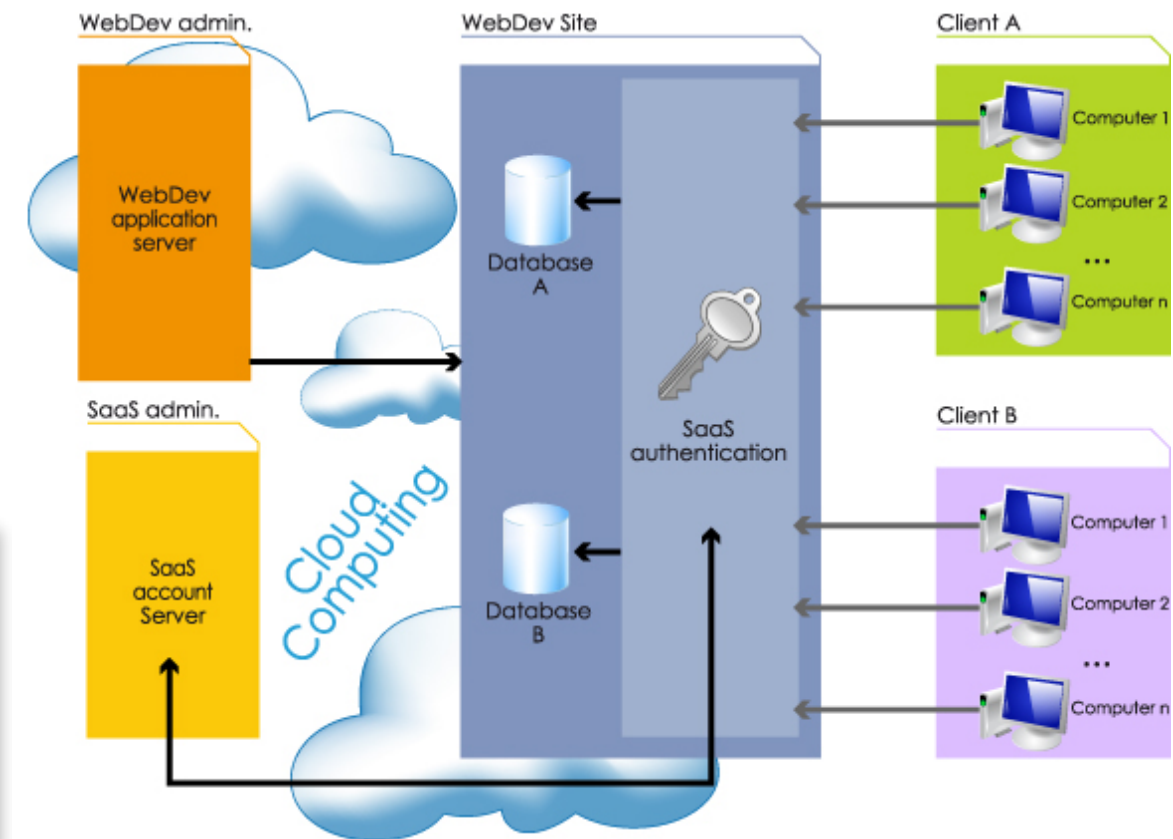


Let's see an example of code that lists the gMail contacts and that displays them in a WEBDEV table.



Example of native access to Google Calendar, to be used later directly in a WEBDEV 21 page

SAAS: THE TOOLS FOR MANAGING THE SAAS ACCESS TO YOUR SITES



SaaS (acronym for "Software as a Service") is a delivery model for software.

Customers don't pay to buy the software but to use it.

The data is stored on the servers of the application provider and not locally in the company.

EASY SAAS

Version 21 of WEBDEV provides the needed tools for easily delivering SaaS solutions: market your SaaS sites thanks to the provided tools.

The SaaS administrator lets you describe the use authorizations.

Customer account management lets you define the rules for using the site: authentication, number of authorized connections, connection time, etc.

This management is done directly from the administrator interface or via WLanguage functions.

At run time, 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.

SAAS ADMINISTRATION API

The WLanguage functions available for managing accounts are (non exhaustive list):

- account creation and deletion
- account modifications: add users, time slots, number of users, ...
- initialization of a database by cloning a reference database
- defining the connection to the database...

SAAS AUTHENTICATION API

Among the elements to manage in a SaaS site, you will find:

- Connecting and disconnecting
- 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, it's easy with WEBDEV 21!

21

WEBDEV

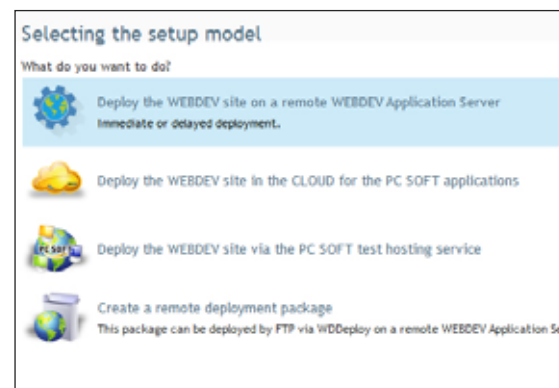
Easy SaaS



WEBDEV 21 comes with powerful deployment and installation tool.

As with all the other modules, this module comes with WEBDEV.

Sites created with WEBDEV can be installed remotely (FTP, HTTP,...) or by providing the service provider a CD, a DVD or a USB key

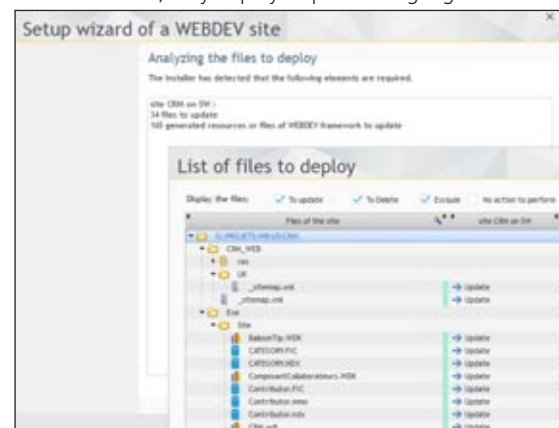


To deploy a site, all you have to do is answer some questions. The deployment can be performed in a fully secure way by using the HTTPS and FTPS protocols.

Once a Web site is installed, it usually evolves. When the site changes, only the modified files need to be updated, which limits the transfer volume.

The wizard automatically selects the appropriate operation for each file: copy, update, deletion,...

Of course, you can also manually define the files to install, exclude a folder, only deploy a specific language..



It's usually more convenient to perform site updates during low traffic time, like at night.

WEBDEV offers the scheduling of a specific date and time for an update.

The files to update are transferred to the server instantly, but their actual update will only be performed at the date and time you've specified.

Sometimes you may want to provide the content of a site via a CD, DVD or USB key.

This use case can also happen if the hosting server cannot be accessed via the FTP (or FTPS) protocol for security reasons.

WEBDEV 21 lets you create a complete "installation package" for the site to address this scenario.

Note that this installation package can be made available via download.

When the hosting company receives the CD or the USB Key, it can deploy the site on its server.

You can deploy the "WEBDEV application server" with the site itself. This allows the distribution of free demo versions.

When creating a page, you now have the ability to specify an expiration date for this page.

For example, if a page is related to a specific event (a trade-show, a promotion), this page must not be displayed anymore after a given date!

To prevent forgetting to do it, WEBDEV 21 will notify the developer when opening the project, and/or will send an email to the given address, with a configurable message. Risks of an oversight are limited this way.

A site that attracts a lot of traffic may need to be deployed onto several parallel servers.

WEBDEV 21 allows you in a single operation to deploy or update a site over multiple hosting servers.



WEBDEV 21 lets you easily 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.

A copy of each site (a site per client) will be hosted on the same server.

To do so, simply specify the name of the sites at deployment time, the parameters of each site (timeout, number of connections, etc.) are independent.

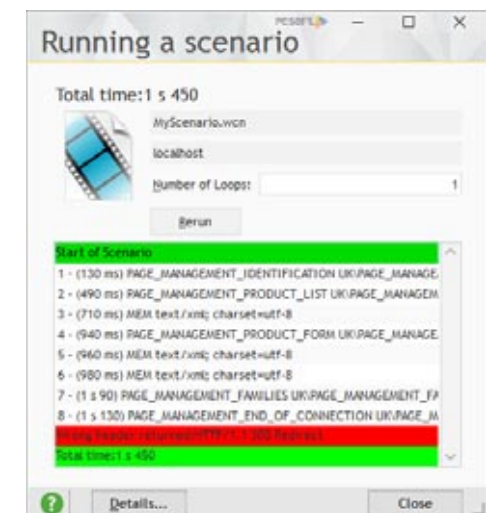
You can also support all the offered sites via a SaaS module provided in WEBDEV (see SaaS p 49).

This feature performs a backup of all the site's elements before performing a site update.

This allows you to preserve different versions of a site.

The quality of your site requires a set of appropriate tests. WEBDEV 21 comes with a test tool that will enable you to

WebSite24 comes with a test tool that will enable you to check that the parameters of your server allow the maximum number of simultaneous connections you want. The test tool also lets you execute a set of scenarios to check regressions for instance.

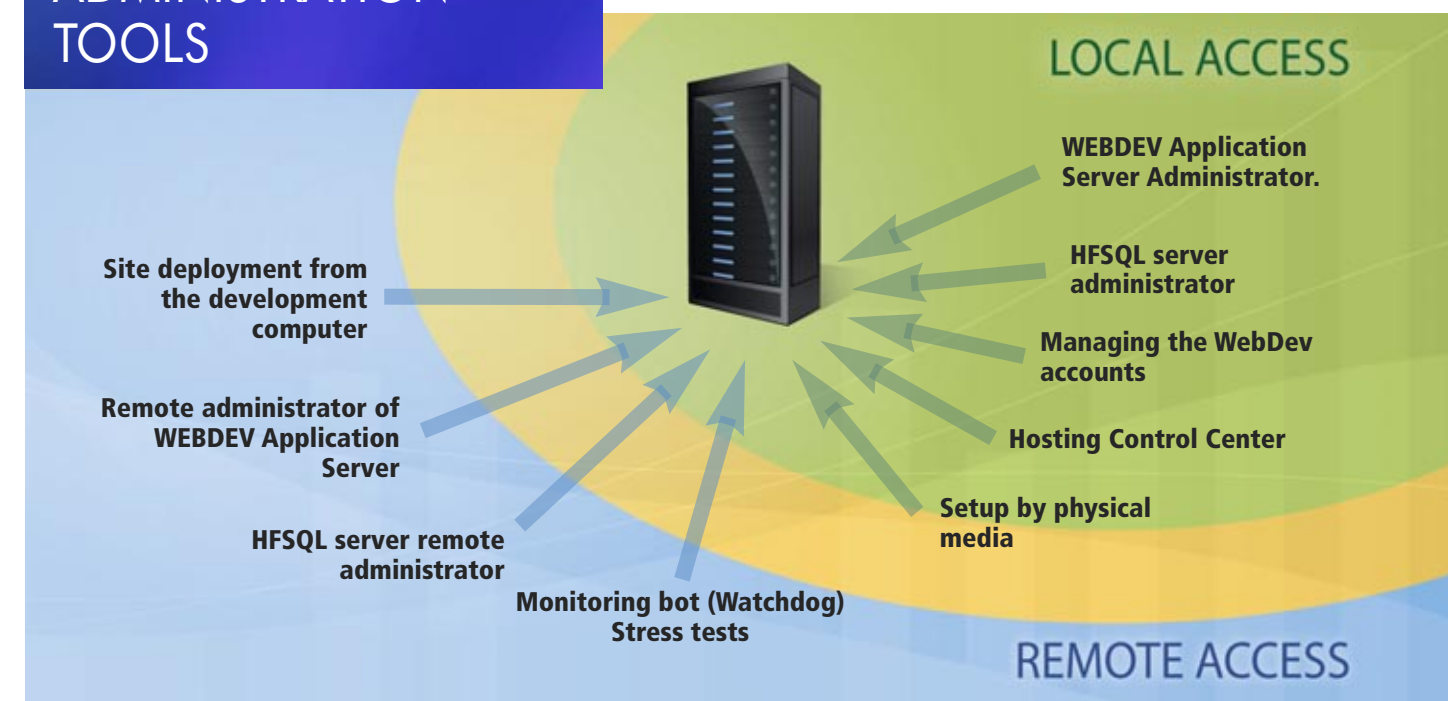


Deploying a site in the Cloud is simple.
To do so, specify the identifier of the PCSCLOUD account and

the password in the deployment wizard, select the platform where you want to deploy the site, and you're done!

Deploying and administering a site: easy with WEBDEV 21!

THE PROVIDED ADMINISTRATION TOOLS



HOSTING AT A PROVIDER'S

WEBDEV 21 lets you host your sites at a service provider's, in the cloud or internally.

FINDING AN ISP FOR A DYNAMIC WEBDEV SITE

The PC SOFT site proposes a list of hosting companies (worldwide) supporting the WEBDEV dynamic sites. You can also contact your existing hosting company.

HOST YOUR SITES (FOR FREE) AND TEST THEM 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.

INTRANET SITE

Usually the site is installed and administered on a server internal to your company. All the computers connected to the server will have access to the site.

INTERNET/EXTRANET SITE

Usually, Internet or Extranet sites are installed at a service provider's, separate from the company that created the site.

HOSTING

There are 4 types of hosting:

- Internal server
- Dedicated server
- Shared server
- Cloud platform

SITES

There are three main types of sites:

- Static site
- Intranet site
- Internet/Extranet site



EASY HOSTING OF YOUR SITE IN THE CLOUD



CLOUD

The Cloud for PC SOFT applications (www.pcsccloud.net) offers pre-configured and optimized operating platforms for your WINDEV, WEBDEV or WINDEV Mobile applications. These operating platforms give you the ability to host your WEBDEV sites or your WEBDEV or WINDEV web services. They also allow you to share your HFSQL databases from anywhere in the world, from fixed points or mobile terminals, with 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 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. Deploying a site in the PCSCloud.net cloud is easy: it only takes one click in the environment! PCSCloud also allows you to host your Web services, your HFSQL databases...

ON-PREMISES HOSTING

WEBDEV 21 lets you internally host the sites built with WEBDEV, on premises at 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. Each Web server must be configured. The configuration of the IIS or Apache Web servers is performed automatically when installing the application server.

SUPPORTED WINDOWS VERSIONS

Almost all the Windows Server versions are supported: Windows 2012, 2008, 2010,... 32 and 64 bits. "Non-Windows" server versions (Windows 10, 8, 7, Vista ...) are also supported.

SUPPORTED LINUX DISTRIBUTIONS

Linux distributions evolve often. Some evolutions are minor, others are major. Version 21 of WEBDEV supports both the older distributions and the new distributions. At the time this document was created, the following distributions have been tested: Debian 7, OpenSuse 12, Ubuntu

12, Mandriva... 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.

FOR HOSTING PROVIDERS: SILENT SETUP

Useful for hosting companies and developers that manage their own hosting, the automatic host server configuration has a "silent" mode, i.e. without any manual intervention. The setup is fully configurable, and it becomes possible to set servers in batches (create instances of the WEBDEV application server automatically).

AUTOMATIC CONFIGURATION ON APACHE (WAMP LAMP)



If you're using an Apache Web server, when installing the WEBDEV 21 application server, the Apache web servers (especially the ones used by EasyPHP) are detected and automatically configured. The Apache Web server lets you use virtual sites, which enables you to isolate the hosting. A WEBDEV account can be defined for each virtual site.



AUTOMATICALLY MOVE A SITE FROM ONE SERVER TO ANOTHER

The automatic site move feature offered by WEBDEV 21 will please server administrators. It 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.

PHP HOSTING

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.

HOSTING STATIC-ONLY SITES

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 ...)

STANDING CONNECTION RECORD:

**31,200
SIMULTANEOUS
CONNECTIONS**

**FOR A DYNAMIC
WEBDEV SITE.**

HFSQL database

21

WEBDEV

*Deploy and
administer your
sites easily.*

EASY SITE ADMINISTRATION

THE 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, and so on, ...

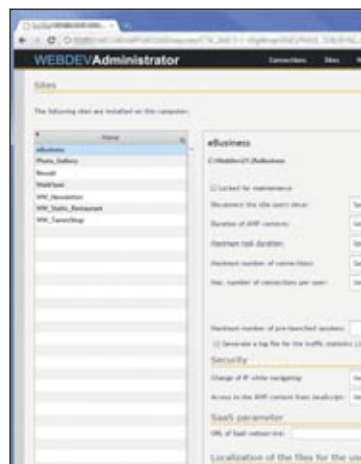
Note that the administrator can also be installed as a service, without any interface, on the server computer.

You also have the ability to specify the rights for each user.

SECURE SITE ACCESS

The administrator lets you activate security options including:

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



The remote administrator

MONITORING ROBOT

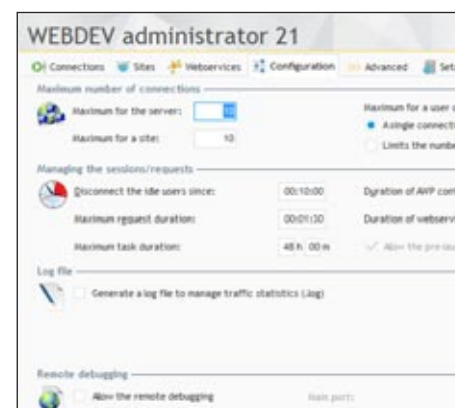
A very sophisticated monitoring engine is provided with WEBDEV 21. It can be used to monitor the availability of WEBDEV sites, HTTP servers, NMTP servers, SNMP servers, file servers, mail servers, WEBDEV application servers, HFSQL server...

Based on your choice, the server sends a warning by email message, by mes-

sage 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 (this third-party program can send a configurable SMS for instance).

You have the ability to choose a combination of these warnings.

You can also configure the frequency and repetition of the tests to perform.



The WEBDEV 21 sites can easily operate with existing applications, regardless of the tool used to create them. 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.

In business terms, the Front Office manages requests for information and order taking.

The Back Office deals with the internal company processes: order processing, inventory management, statistics, production orders, ... In short, the Back Office processes the orders.

IF YOU ARE STARTING A GLOBAL APPLICATION, THE WINDEV 21 & WEBDEV 21 PAIR IS THE IDEAL PLATFORM

To create Internet and Intranet sites that manage data (Front Office), PC SOFT offers the WEBDEV 21. 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 life cycle management for Windows: WINDEV.

And if you want to use your applica-

tions on mobile devices, just recompile them using WINDEV Mobile 21.

WINDEV lets you create in record time the most complete, high-performance applications, for local or network environment. You'll use the powerful integrated database or any 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.

You easily achieve your objectives with WEBDEV 21.

WEBDEV 21 and WINDEV 21 are compatible:

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



TRAFFIC STATISTICS FOR YOUR SITES

It is very important to have exact statistics on visits to your sites.

FINDING OUT THE TRAFFIC INFORMATION FOR A SITE

Outside Internet it is fairly easy to figure out how much activity your business generates: mail received, number of phone calls, people in the store, ...

On the Internet how do you know how many people came to your site, what pages they looked at, what applications they used, where were they coming from?

This is why you need site statistics.

A CUSTOMIZABLE TOOL IS SUPPLIED

WEBDEV is supplied with a statistical tool for the dynamic pages. This tool is

ready to use.

The statistics can be accessed via Internet.

STATISTICS

Among the information supplied:

- number of pages viewed
- number of unique visitors
- number of visitors per page
- incoming site of Web users.
- country of origin
- browser used
- and even a list of pages that encountered technical problems!



TEST MORE THAN 1000 SITES DEVELOPED IN WEBDEV

OVER 1000 ONLINE 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.

ANY FIELD, ANY LANGUAGE

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 their branches and subsidiaries, with data residing on a central database.



DON'T PASS BY THE INTERNET REVOLUTION

YOU'RE A MANAGER

You need a solution that allows your teams to **QUICKLY DEVELOP** the powerful Internet and Intranet applications your enterprise needs: WEBDEV 21 is a must have.

WEBDEV 21 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 21 you'll know how to create static, semi-dynamic and dynamic sites instantaneously.

WEBDEV 21 allows for a natural, methodical way of developing, resulting **IN YOUR PROJECTS' SUCCESS.**

YOU'RE AN INTERNET SPECIALIST

WEBDEV 21 brings you solutions to all your problems: use side by side with existing sites, imported sites, dynamic sites connected to databases in real time.

You'll be able to **REUSE** your existing Web developments without limits.

COMPATIBILITY WITH WINDEV

WINDEV is a very successful IDE. WEBDEV 21 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, and vice versa.

MANAGING THE LIFE CYCLE OF YOUR SITES

WEBDEV 21 is a **COMPLETE DEVELOPMENT PLATFORM** that integrates all the modules required for development.

This ensures your projects' success.

WEBDEV 21 is known for **BEING EASY TO LEARN.**

ORDER WEBDEV 21 TODAY!

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

WEBDEV 21 allows you to become productive quickly when developing **HIGH PERFORMANCE INTERACTIVE WEB SITES**, which are a requirement for most companies today.

Don't let your competition beat you; you too take advantage of the most powerful and easiest professional development environment for creating state-of-the-art Internet and Intranet sites.

WEBDEV 21 is a very complete and powerful tool, yet very simple to use.

The ROI is very quick: you'll quickly save money with WEBDEV 21.

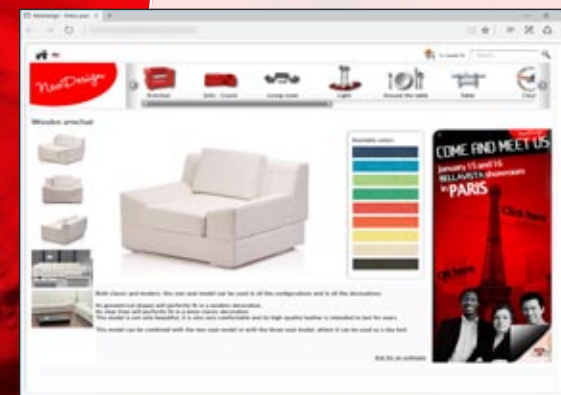
ACT NOW: ORDER YOUR COPY OF WEBDEV 21 TODAY

You too...
Develop 10 times faster

Develop any type of site

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
- Management of orders for your established customers
- General order taking
- Consultation by your customers of the progress status of their order (order received, entered, processed, shipped, ...)
- Real-time inventory
- Dynamic image creation based on parameters entered:
 - 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 an up-to-date map

- Executive dashboard in real time, with company revenues, estimated margins, stock inventory...

- Shared schedule of a geographically distributed team

- Appointment schedule for traveling sales people

- Job schedule of a maintenance team

- For a mail-order company, put all the technical documentation 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, even years later (archiving)

- Event reservation: seminar, dinner, show, etc.

- Management of a shared directory: company directory, students in a school, alumni, club members, etc.

- Ads: real-estate, cars, auctions...

- Management of equipment inventory

- Dating site

- Wiki management
- B2B portal
- Discussion forum
- RSS stream
- Package tracking
- Mailing list management
- Management of the "bonus" points linked to a reward 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 all the other sites you can think of!

WEBDEV 21: DEVELOP ANY TYPE OF SITE.



PHP
SaaS
Cloud
Linux
Wamp, Lamp
HTML5
Mobiles
...

WEBDEV®

INTEGRATED DEVELOPMENT
PLATFORM

