TASKBUILDER STUDIO

ZUCCHETTI

TASKBUILDER STUDIO

TaskBuilder Studio is the development platform created to implement flexible and robust ERP and Business applications.

WHAT CAN I DO WITH TASKBUILDER STUDIO?

TBS allows you to:

- create stand-alone or vertical solutions integrated in Mago4
- develop ERP and Business applications working in symbiosis with Mago4, with your own Database tables, Business Objects, data-entry dialogs, menus, reports, and much more
- use Mago4 Business Objects to carry out actions already present in the standard application, such as to post an order, calculate the balance of an account, etc.
- dynamically extend or change the behavior of Mago4, without changing its source code

Developing applications

TaskBuilder Studio abolishes any rigidity with Dynamic Application concept: the ERP solution installed consists of several independent applications that work together to perform the required actions.

Applications provided by different developers and aimed at different areas of the company coexists in the same installation and are dynamically loaded at run-time. The environment and building blocks provided by TaskBuilder Framework are common to all applications, displaying a consistent set of interfaces and behaviors, even if implemented by third parties.

The final applications are not monolithic, but consist of optional modules, just as with Mago4 applications.

Business Objects

TBS has been developed using Object Oriented languages and encourages a strict OOD (Object Oriented Design) approach for application development. Each component is obtained by specialization of abstract components, integrating it with others. The abstract components of the platform incorporate numerous predefined behaviors (export in XML, access via Web Services, DBMS persistence, etc.) that become part of the specialized component.

Database Management

TBS provides a range of ORM components (Objects Relational Mapping) in order to manage database tables, directly from the application code. In this way, TBS manages MS SQL Server and Oracle, but also allows Database Engines from other producers to be added, avoiding the developer the difficult task of writing SQL statements compatible among databases.

All other aspects of interaction with the DBMS (such as transactions, isolation level, connections, data structure definition) are managed through specific software components provided by TBS.

TBS features: the best 4

TBS is based on standard programming languages (C++, C# and Javascript) and uses standard MS Visual Studio* development environments; it is not a proprietary language or platform.

TBS is an open platform. Thanks to standard languages and development environments, the developer is free to enhance the personalization by integrating other components.

TBS platform is specifically oriented to the development of ERP and Business solutions and applications.

TBS is the platform Mago4 is bult on, but it is not designed just only to customize ERPs: thus it empowers developers to have the same potential as the Microarea* development team.

* For Developer Edition only

TBS architecture: 4 key points

Components - TBS provides an extensive set of software components oriented to ERP solutions: controls, templates, DBMS management, Business Object abstraction,, menus, reports, setup, and much more.

Applications - they are built using the platform elements. Mago4 itself consists of various applications, including the ERP, core of the system, but everything is designed to allow the easy addition of third-party applications.

Tools - TBS fully integrates with TaskBuilder Framework, the integration framework of all application components, which contains all the general tools - such as DMS, Security, Auditing. The tools help you to interact with the application to browse and search data, manage access rights to functions and data, track activities, etc.

Web Services - the orchestration of the components takes place using Web Services, i.e. the communication interface used by all objects, components and applications implemented using TBS. Web Services support is therefore not restricted to specific objects with a limited interface. The result? All functions and applications are accessible via Web Services transparently, allowing other development tools and languages to use the BO developed on the platform.

Dynamic collaboration between objects

Thanks to the Dynamic Component Collaboration model, TaskBuilder Studio allows you to extend ERP applications, such as Mago4, without changing the source code.

The possibility to build new Business Objects by programming those already available is crucial, in order to implement customized or vertical applications. Often, however, the behavior of standard functions needs to be modified to meet customer or market needs. TBS users have the source code of Mago4 available as a reference.

The typical approach of modifying the original source code for customization purposes, is not the model to follow, even if it is possible: this scheme in fact limits, or impedes, the possibility to easily update the product, and prevents the installation of new versions - other than at the cost of a significant refactoring.

The Dynamic Component Collaboration model meets both customization as well as updating needs, dynamically changing the behavior of standard Business Objects without changing the source code.

In implementing these dynamic extensions, BO are linked at run-time to their extensions and notify to the latter all the significant events of their operational life cycle. The extensions can add actions (such as calculations, messages, additional controls) and enhance the interface by adding buttons and windows, manage data on their database tables and much more.

Several Mago4 functions are implemented with the same Dynamic Component Collaboration model - Sales Force management, Manufacturing functionalities, etc. -, that therefore goes far beyond mere customization.

What does TBS offer me?

Reporting Studio
International Studio
Help Studio
Setup Studio
Easy Studio
Wizard Studio
TaskBuilder Library
WebLook

For a summary of the different functionalities available in TBS Personal Edition TBS and Developer Edition, please refer to the final table.

Reporting Studio

Sophisticated reporting system used by all the application developed with TBS.

Highlights:

- *Intuitive graphical interface*
- *Sophisticated Script Language for instructions and expressions*
- *Development via visual interface or by a programming language*
- *Inquiry Engine and Layout Designer in a single tool*
- *Event processor for full control of the data flow and layout*
- *Definition of parameters used for extraction conditions, filtering and sorting*
- *Layout defined by an extremely precise WYSIWYG designer*
- *Print engine that ensures consistent output on any printer*
- *Inquiry Engine with SQL-like syntax, independent of the database used*
- *Images in any format, even as a background for layout composition*
- *Possibility of calling native Mago4 and other application functions*
- *Drill-down support*
- *Cascade reports*
- *Links to Mago4 documents and other applications developed by TBS*
- *Data export to Excel, Word, HTML, text*
- *Sending reports via email as an attachment in PDF format*
- *Support for Google Maps and Skype links.*

International Studio

Localization features are the basis of the platform design: International Studio is the localization tool par excellence for all applications implemented with TBS.

You can translate the applications created by TBS in all languages, thanks to full support of the UNICODE standard that manages every character set, including those of the Far East. In the application development phase, all text elements (templates, messages, etc.) are in a base language - usually English -; the application can then be transposed into any language, thanks to a specific translation support tool, with the possibility of using glossaries, repeating translations already applied elsewhere, having a preview of templates to check the visual appearance, and so on.

Translated items are stored in XML databases ("dictionaries"), dynamically loaded when using the program. The application can therefore be viewed in different languages by different users of the same organization. The interface language can be set at the level of installation, company or individual user.

Help Studio

This tool allows you to build specific web portals related to the documentation of products implemented with TBS. Thanks to Help Studio you can create a Wiki-site skeleton which can be downloaded on the developer's (or user's) server, complete with automatic update mechanisms. Contents administration takes place as in a normal Wiki management.

Setup Studio

It generates installation packages for solutions developed by TBS Personal Edition which can be downloaded via the Internet. Thanks to the Setup Studio component, you obtain a package which can be used for distribution, like any Windows product. Packets are read at Run-Time and are dynamically installed (JIT) on the application.

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Easy Studio

Intuitively manage graphical and functional customization of an existing document or create a template from scratch.

Easy Studio can create all the types of objects managed by applications created by TBS Developer Edition (for example Mago4): from text fields to checkboxes, from combo-boxes to grids.

Easy Studio was created to meet the multiple needs of customization of Mago4 and of the applications written with TBS: it is a tool to create your customizations in a simple and fast way, making them as upgrade-safe as possible and immediately portable, without writing a single line of code.

The areas of use are endless: from simple cosmetic/functional changes to the creation of veritable applications that live inside the main one.

Thanks to the intuitive graphic designer, Easy Studio simplifies the work of newbies, but also provides more demanding and experienced developers with the tools to create specific vertical market applications.

Thanks to Easy Studio you can:

- *Add items to existing management documents via drag&drop*
- *Create new data entry templates*
- *Build batch procedures*
- *Operate on objects in existing templates*
- *Change the layout of standard/custom templates*
- *Add actions and controls to both new and existing objects*
- *Browse and use the Object-Model of the host application*
- *Write event management code in C#*
- *Benefit of the Intellisense technology*
- *Use the interactive Debug, having also the reflection support of .NET*
- *Work with a powerful native JSON editor*

Wizard Studio

Helps the programmer to interactively define new applications based on TBS in a guided manner. Featuring a simple and intuitive interface, Wizard Studio is easy to learn and use.

You can define and control all aspects of an application developed by TBS, navigating the logical correlation amongst the components and automatically preparing all the necessary environment for its execution. The tool is of great help especially in the initial design of a new application or extension module: Wizard Studio generates and maintains database definition SQL scripts, XML metadata, source code, etc., and prepares the necessary injection points to enter the specific business logic of the customization. Wizard Studio brings real time savings and makes developers immediately productive.

TaskBuilder Library

This is the Classes and components, described in C++, collection which any document definition is based on. The library allows advanced developers to create powerful business applications using Microsoft Visual Studio. Most of the classes are available through specific wrappers, also for C# and Framework .NET

WebLook

With WebLook you have all the technology needed to deliver business applications that can operate in native mode on the web. The primary advantage is the reuse of all the business code shared with the Desktop version developed by TBS. In this way you have a single code base that differs only in the presentation layer (DESKTOP/WEB), with obvious economic, implementation and support advantages.

TBS: technological highlights

- Web 2.0 interface
- HTML5 + CSS3 + JavaScript clients
- Back-End in C++/C#
- Resources dynamically described in JSON
- Events managed on the Client side
- Ajax + WebSocket communication protocol
- JavaScript client libraries: AngularJS, JQuery, ExtJS

TBS: key benefits

- Easy to use and install
- Similar WEB Desktop interfaces
- TBF and Host Application instanced as IIS Module
- Highly scalable
- Low processing load on the server
- Use of high-performance JavaScript libraries

System requirements:

Operating System: Microsoft Windows 10, Windows 8, Windows 7, Vista, 2012, 2008, 2003
32 bit (X86) or 64 bit (X64) CPU
RAM: follow the Operating System specifications (2 GB recommended)
500MB of available hard disk space - Recommended screen resolution: 1440x900

TBS capabilities in the various editions

Component	TBS Personal Edition	TBS Developer Edition
Reporting Studio	x	x
International Studio	x	x
Help Studio	x	x
Setup Studio	x	x
Easy Studio	x	x
Wizard Studio		x
TaskBuilder Library		x
WebLook		x

TASKBUILDER STUDIO

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