



SOFTELEGANCE

DYNAMIC SOFTWARE BUSINESS SOLUTIONS

SOFTWARE FRAMEWORKS FOR BUSINESS APPLICATIONS AND PRODUCT DEVELOPMENT

SOFTELEGANCE USA:

4771 Sweetwater Blvd.,
Sugar Land, Houston, TX 77479
www.softeleganceusa.com

SOFTELEGANCE U.K.:

124 Cromwell Road,
London, SW7 4ET
www.softelegance.co.uk

SOFTELEGANCE EUROPE:

44 Palladina Ave., 2 and 5 floors,
Kyiv, 03142
www.softelegance.com

BEST PRACTICES FOR SOFTWARE FRAMEWORKS DEVELOPMENT

SoftElegance has been developed several software frameworks for business applications to use in software products development.

After more than 20 years experience in custom software development business, the company obtained the valuable expertise for development of high-level software solutions.

All the frameworks are packaged, SoftElegance provides services for configuration changes and additional programming that may be required to include the Framework API calls into a custom applications.

EXCEL REPORTING ENGINE

The Excel Reporting Engine is a unique web-based Business Intelligence tool that combines all the power of BI features with flexibility and ease of use. Integrated with the Microsoft BI platform that includes SQL Server, Analysis Server, SharePoint Server, PowerPivot, Excel Services, etc., it provides end users with the capability to design reports and conduct sophisticated ad-hoc data analysis using familiar features of Microsoft Excel worksheets.

The extendable library of predefined general-purpose data sources has been implemented by SQL specialists in collaboration with business analysts so that any user with Excel skills can design ad-hoc reports, combine data sources, parameters, options etc., with Excel formatting, formula and charting capabilities using the visual Report Designer tool. The reports may be published to a repository, made accessible via web browser or SharePoint portal so that they can be shared across the enterprise as a KPI, dashboard, or data view.

Unlike many complicated BI tools, any company that has a need for BI analytics and ad-hoc reporting capabilities can use the Excel Reporting Engine solution without requiring extensive investment or additional training.

SoftElegance's consultants and data analysts can assist the client with the simple initial installation and configuration of data sources library or if the tool needs to be integrated with existing enterprise applications custom integration services are also available.



WORKFLOW ENGINE



The Workflow Engine framework is a back-end solution intended to empower custom .NET applications with flexible workflows, such as requests lifecycle or approval chains.

The solution is integrated with the Corporate Hierarchy for the approval lookups. An extensive set of rules are available to determine the responsible person(s) based on their roles, groups membership and other conditions. Flexible conditions allow for automated workflow transitions of any complexity. Both Web Services and .NET object API are available for Template-based email notifications and approvals by email replies in addition to the custom application callback API. The clear database structure allows for custom queries and extensions, and the web-based Workflow Designer and Workflow Execution Monitor administration tools are included.

The Workflow Engine framework is a comprehensive enterprise solution for applications that require flexible approval workflows integrated into the core system's design.

Although the framework is packaged, SoftElegance provides services for configuration changes and additional programming that may be required to include the Workflow Engine API calls into custom applications.

WEB FORMS ENGINE

The Web Forms Engine is innovative web technology with a flexible and scalable browser based form designer for creating and editing web forms and web form runtime rendering which allows basic users to quickly and easily build complex, dynamic input forms with customized behavior.

The underlying data structure of the solution is compatible with all major database vendors, and the rendering part supports all types of browsers, including mobile-based. Web traffic and redundant requests are minimized and designed to work in an offline mode. The User Interface supports many styles and has unlimited customization capabilities.

The Web Forms Engine is a unique solution for rapid development of browser-based interactive web forms with complex layout and underlying validation and calculation business logic. It can also be adapted for applications that require data caching and synchronization when access to Internet is unstable.

While the tool is available as a packaged library, SoftElegance provides consulting services to integrate it with customer's applications.



C O R P O R A T E H I E R A R C H Y

The Corporate Hierarchy framework is a highly flexible back-end solution intended for management of the employees, roles, groups and hierarchies.

The Corporate Hierarchy framework includes managing the enterprise organizational structure, managing the financial structure, managing management chains, and managing employee permissions and responsibilities (organizational as well as permissions for particular data access and operations within software applications).

The solution is optimized for high performance by providing both Web Service and .NET objects API. The clear database structure allows for custom queries and extensions. A considerable number of predefined (frequently used) data queries and modification methods are provided. This all-purpose administration tool is included and is available in desktop and web-based versions.

The solution is applicable for situations when the company has a number of custom software applications that need to share the common employee base along with a unified corporate reporting structure within the organization.

Although the framework is packaged, configuration changes are required to start using it and additional programming is required to include the Corporate Hierarchy API calls into custom applications.



SPECIFICATION METRICS

The Specification Metrics framework is designed to automate quality assurance measurement checks against a wide range of rules including: allowed ranges, value matrixes, exact matches, custom formulas, etc. Applicable rules are automatically selected for particular items based on specification versions, item attributes, order details etc.

The rules and formulas are automatically compiled into SQL expressions, ensuring high performance. The API framework allows for easy adding of the checks into SQL stored procedures and .NET code. A convenient UI allows rules entry for personnel not familiar with the SQL or .NET expressions.

The solution is frequently used in the manufacturing industry where production items are constantly measured to match the specification requirements, but it is also suitable for any enterprise that require actual values to be checked against predefined metrics.

The solution module is packaged; however, custom programming is required to adjust the solution for particular business needs.



MATERIAL HANDLING

The Material Handling solution is intended to automate items movements over a large storage area. The physical location of each inventory item is tracked in the database, as well as all movement requests and inventory reconciliation results, which can be grouped in batches and scheduled for increased efficiency.

The solution involves a complex set of technologies, such as wireless modules with GPS tracking on forklifts, handheld devices with barcode scanners for precise location tracking within facility rooms, RFID chips for automated inventory identification, which is ideal for businesses with large stores that occupy a considerable territory and require quick and smooth inventory movement operations and tracking.

The solution module is packaged, and SoftElegance provides consulting services for customizations that are required to accommodate for particular location maps and inventory databases.



DATA CHANGE NOTIFICATIONS



The Data Change Notifications is a solution for up to several thousand thick client applications to be distributed worldwide, yet still access the same database via the Internet. All data changes made by any client are quickly and efficiently available to all other clients, ensuring real-time access to the data.

The solution includes a central database, a Web Farm of the data access Web Services, the WCF callbacks from the server to the clients and a high performance service that manages client subscriptions to particular topics, all data change requests and a custom (traffic-effective) data change notifications message queue.

This solution is ideal for businesses that require a highly flexible, user-friendly application across a globally distributed network of agents or offices with real-time data availability from a centralized database.

The solution is application-specific requiring custom implementation, which is available via SoftElegance's consulting services, to adapt it for each specific business requirement.

CONCLUSION

Most of the solutions are application-specific requiring custom implementation, which is available via SoftElegance's consulting services, to adapt it for each specific business requirement.

SoftElegance's core team consists of business analysts and lead software developers with more than 20 years of experience in sophisticated business software development.

Create new SaaS solution or Single-Page Application using latest technologies, business software frameworks, private cloud infrastructure, and platforms that unlock the potential of Big Data

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Founded in 1993, SoftElegance is a custom software development company that has been providing reliable services for implementation of SaaS systems, sophisticated business solutions, engineering applications, and business processes automation software. A variety of companies, ranging from dynamic small and medium to Fortune 500, across oil and gas, drilling, engineering, and manufacturing industries, use SoftElegance's software development outsourcing services. With clients from the U.S. and the E.U., offices in London, Houston, and development centers in Eastern Europe, SoftElegance assists customers in delivering innovative software solutions on a global scale.

SoftElegance USA:

ROMAN BEKETOV

+1 (281) 787 7166

rbeketov@softeleganceusa.com

SoftElegance U.K.:

ANDY STARZHINSKY

+44 (207) 048 7339

andy.starzhinsky@softelegance.com

SoftElegance Europe:

ANNA POLOKA

+38 (050) 312 4725

apoloka@softelegance.com