

## KEY BENEFITS

### Build Applications Quickly:

The OpenApp development library dramatically accelerates your database application projects. Unlike most custom solutions, OpenApp applications include a number of built-in modules that have already undergone significant testing and are operating in a number of production systems. Because these components are available for repeated use, developers build new applications in less time and with more reliability.

### Deploy Powerful Solutions:

Based on an industry-standard “n-tier” architecture, OpenApp allows you to scale your application for enterprise-level performance. The library is easily customized to incorporate your organization's unique business requirements. The library also integrates with hundreds of third-party products such as Crystal Reports and Adobe Acrobat.

### Reduce Maintenance Costs:

The OpenApp library simplifies many of the typical tasks that developers perform to maintain an application after the first production release. Due to OpenApp's use of meta-data, enhancements, such as adding a new field to a form, require very little time. The developer often makes these changes without having to write and compile VB code.

## ESSENTIAL OPENAPP COMPONENTS

One of the most significant challenges for developers today is building database applications that readily promote reusability of business processing code. Detaching the user interface from the business-processing code is imperative for it be coded only once and re-used with many different user interfaces (VB, HTML, Java, OLE, etc.)

With the OpenApp library, Terrace Consulting has designed and built many Visual Basic COM classes that understand the

database back end and can interface to virtually any front end. Additionally, our OpenApp objects are fully aware of HTML and rich-client MDI user-interface layers. OpenApp libraries work with all COM interfaces to provide rich objects for database searching and standard data manipulation (i.e., C.R.U.D.: Create, Read, Update, and Delete). The diagram below highlights OpenApp's three-tier architecture and shows how the different COM objects interact.

### User Interface Tier:

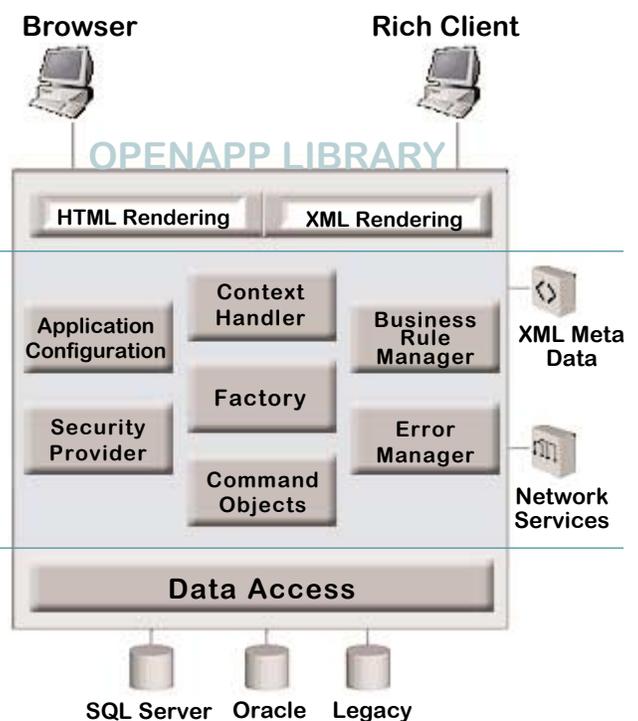
These objects are responsible for interacting with browsers and rich-client MDI applications. The User Interface tier is separated from the rest of the library so that the other components can work with any type of front end. If a new user interface (e.g., PDA) is required, a new rendering component can be added to the library.

### Business Logic Tier:

The business logic layer performs security checks, error handling, and translates C.R.U.D. commands passed from the user interface to the database. The logic to run an organization's unique business rules is also found in this tier, allowing for user interface and database independence. Developers and business analysts can easily change the meta-data (stored in XML text files) that drives this tier.

### Data Access Tier:

Using ADO, this tier provides access to virtually any database.



## ▶▶ OPENAPP HIGHLIGHTS FOR IT DEVELOPERS

**Intuitive XML Tag-Based Scripting:** Using any common text editor, developers and business analysts can quickly and easily write OpenApp's XML documents. These documents identify tables, fields, field formats, defaults, and most of the other characteristics of your system.



**Built-in Forms Handling:** Based on the XML

documents written by the developer or analyst, OpenApp automatically generates forms for querying and editing the database. OpenApp manages basic field validations, formats, and defaults without requiring programmers to code in Visual Basic (VB). However, you can still write VB code for complex business requirements.

**Built-In Database Auditing:** When users update or add records to the database, OpenApp records the user name, date, and time of the transaction for auditing purposes.

**Built-In Transaction Management Handling:** OpenApp provides data integrity by ensuring that all database transactions are committed in their entirety or rolled back in the event of an error.

**Built-In Application Level Security:** OpenApp allows developers and system administrators to identify who has access to the various tables in the system. For each table, the developer or administrator specifies who has "read," "read/write," or "no" privileges.

**Built-In Concurrency Control:** OpenApp protects against data corruption by ensuring that two or more users cannot update the same record at the same time. Using an optimistic locking scheme, OpenApp minimizes the amount of time records are locked so that your database always maintains its highest performance.

**Developer Tools to Get Started:** Using your existing database schema, OpenApp tools can generate the first iteration of the XML meta-data. After refining the XML, developers can use OpenApp again to forward-engineer the SQL stored procedures used for data manipulation.

**Support for Third-Party Products:** Because OpenApp is written in Visual Basic, you may choose from hundreds of third-party products with which to integrate. OpenApp currently interfaces with Crystal Reports and Adobe Acrobat.

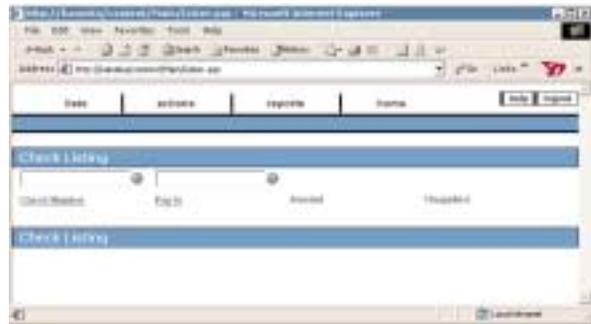
## ▶▶ OPENAPP HIGHLIGHTS FOR THE END-USER

**Straightforward Navigation:** Easy-to-use menus allow your users to quickly navigate through the application. Context-sensitive

hyperlinks, buttons, and tab controls provide speedy access to the relevant data that your users need.

**Home Page:** OpenApp includes the concept of a home page where users can maintain a custom "work area" for fast retrieval of their most important data. The home page can also be used for posting news items regarding your company or department.

**Easy-to-Use Search Engines:** OpenApp's search engine allows users to easily locate and view database records. Users can filter and sort on one or more fields at the same time. Search criteria such as wildcards and date ranges are also permitted. Once a user finds the record in which he is interested, he can modify the data using OpenApp's editable forms.



**Editable Web Forms:** OpenApp web forms support the same controls that you find in most rich client applications. The library also includes special controls for users to easily maintain complex parent-child relationships in the data.

**Business Actions:** OpenApp includes a powerful feature allowing administrators to configure "hooks" into an application's workflow. Business actions can change the status of a record, generate documentation, record notes, or create an audit of a particular event. This flexible feature allows administrators to quickly extend the functionality of your application with little, if any, Visual Basic code.

**Administration Module:** Each OpenApp application includes a module where administrators can set up users, user groups, and specify security. The module also allows administrators to add or change menu items in the system and control who has access to the menu items.



Terrace Consulting brings together the very best people, processes, and tools to build cost effective e-business solutions. We offer consulting, development, and support services for the development of Websites, e-commerce sites, e-business applications, and reporting systems. Our staff includes experts in graphic design, technology architecture, application development, and industry solutions, ensuring every engagement delivers innovative solutions on time and on budget.