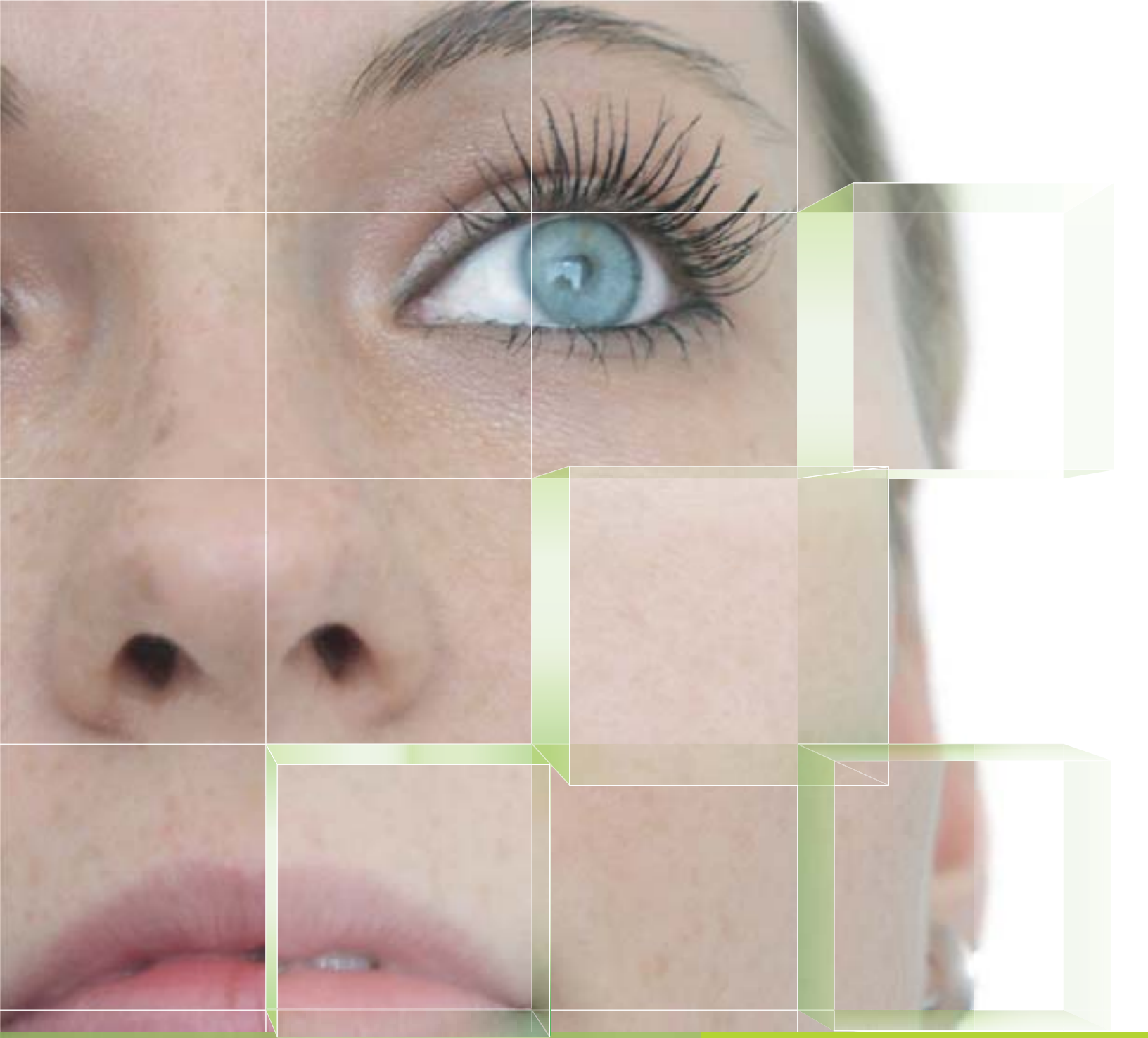


Look To The Future
Of Component Architecture

jreps

Introduction

Three distinct entities are combined to create business applications - data, business logic and presentation logic. Traditionally, these three parts were assembled into one monolithic application that made maintenance a difficult and resource extensive process.

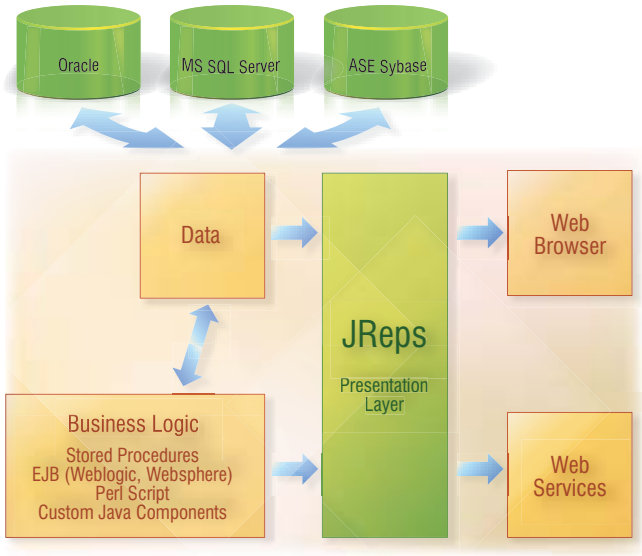
In recent years, this approach has been replaced by a modular way for developing applications. Pre-fabricated blocks of code, commonly called components are assembled or glued together during run-time to deliver the required functionality. This methodology or architecture has several advantages over traditional way of application development.

- As components communicate only through well-defined interfaces, applications can be developed and tested in parts. This significantly speeds up the development process.
- Application maintenance is also simplified as changes can easily be made in one component without impacting others.
- Code reuse is also possible.
- Component based architectures therefore simplify application development and maintenance and reduce the total cost of application ownership.

JReps

JReps is a component-based framework for developing web applications. It provides the glue for linking data, business logic and presentation logic.

JReps interfaces with databases and business logic components in a uniform manner. All industry standard databases such as Oracle™, Microsoft SQL Server™, ASE Sybase™, etc can be accessed; more importantly they can be accessed simultaneously. Business logic components such as Stored Procedures, EJB™ and custom Java™ components can also be accessed. JReps' uniform method for interfacing data and business logic greatly simplifies the programming effort required to link disparate data and logic sources. This makes JReps an ideal tool for web-enabling applications.



Benefits of Using JReps

JReps has been developed by a superb team of software engineers who have culled many years of experience in developing applications.

The product not only includes highly optimized routines but also simplifies web programming and enforces good software development practices. The end product offers significant advantages over other web application development products:

Speed

The JReps engine is highly optimized and extremely efficient. It implements a sophisticated caching mechanism. As a result, server processing occurs almost instantaneously and pages are served without any delay. Preliminary tests have shown that data access on the same server accessing the same data source using JReps is usually 30% faster than PHP and 40% faster than Microsoft ASP.

Extremely Rapid Application Prototyping

JReps was designed to minimize the programming effort. Prototypes can be created quickly using JReps. Even for large projects, a prototype can be developed in a few days.

In a recent project, we were able to develop a prototype consisting of 4 screens with 20 visual controls and 2 data sources in 14 hours. The client estimated that the same prototype using competitive products such as Cold Fusion would have taken at least 1.5 weeks. We were able to finish the entire project in 380 person hours. The project was initially budgeted for 700 person hours. This represents a 43% saving in time and an equivalent saving in dollars.

Simplified Application Maintenance

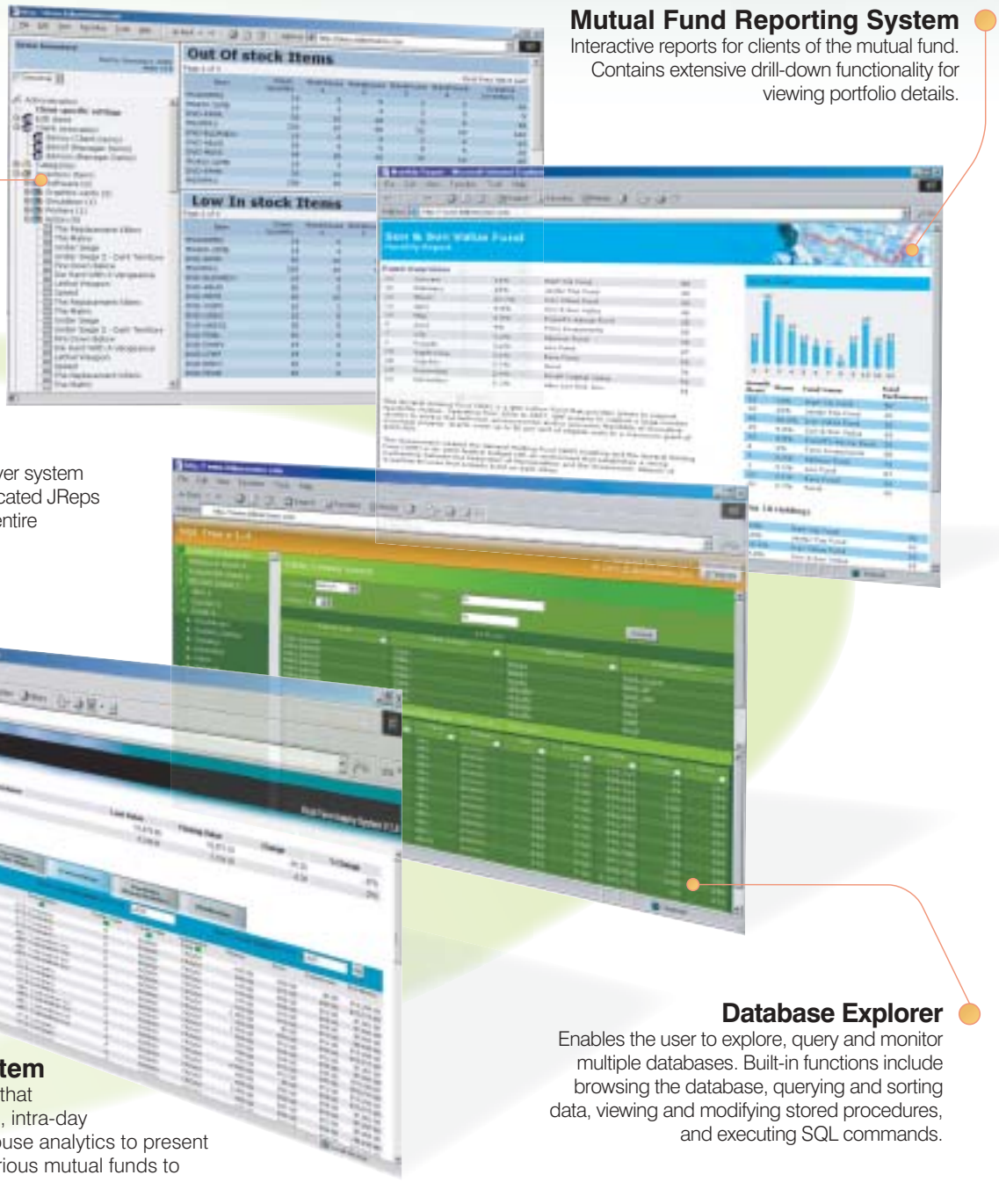
JReps follows a structured approach to application development. Applications are developed top-down. Application-wide defaults are defined at the start of the development process. These default properties are inherited by all components until they are explicitly redefined.

This methodology has several advantages. It enforces common look and feel and keeps coding to the minimum. In addition, maintenance is easy as both global and local changes can be made quickly and efficiently.

Affordable

Given the rapid pace of prototyping, development and deployment, substantial savings in both time and money can be made by using JReps.

Sample Applications Powered By JReps



Mutual Fund Reporting System

Interactive reports for clients of the mutual fund. Contains extensive drill-down functionality for viewing portfolio details.

Inventory System

Enabled a legacy client-server system on the web. Using pre-fabricated JReps components delivered the entire functionality in a few weeks.

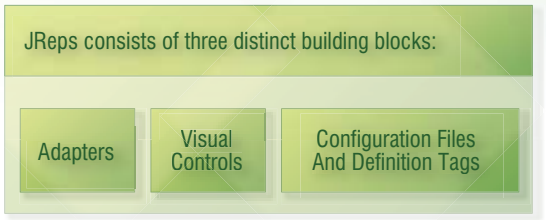
Real Time Inquiry System

Extremely fast real-time system that integrates Bloomberg data feed, intra-day trading activity and data warehouse analytics to present comparative performance of various mutual funds to portfolio managers.

Database Explorer

Enables the user to explore, query and monitor multiple databases. Built-in functions include browsing the database, querying and sorting data, viewing and modifying stored procedures, and executing SQL commands.

JReps Architecture



Adapters

are components that are used to link business logic and data stores to JReps. All data and logic stores including databases, flat files, XML documents, stored procedures, EJB (Weblogic™, Websphere™), Perl Script, etc. can be accessed using adapters.

Visual Controls

are components that are displayed to the user. A huge number of controls such as edit, tree, list, query and mail can be programmed in JReps.

Configuration Files And Definition Tags

are used to program the presentation logic. Properties of visual controls and adapters and their interrelationship are specified in configuration files.

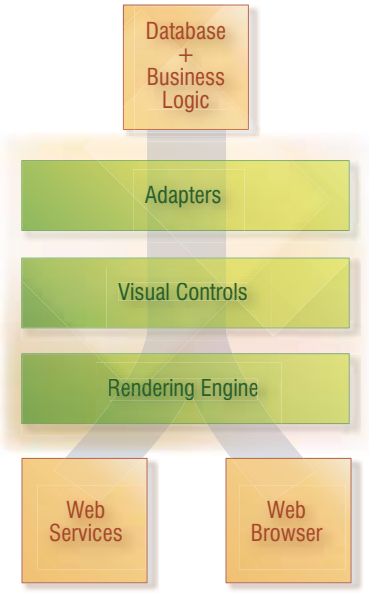
A significant part of programming in JReps involves assigning values to properties of visual controls and adapters. This is done using JReps' configuration files and definition tags. Configuration files can be programmed as text or XML files and can also be database driven. This gives the software engineer complete flexibility in designing the application.

The definition tags are used to redefine specific instances of visual controls and adapters. They are coded in HTML or XML documents.

The configuration files and definition tags are interpreted by the JReps engine, which converts them into web pages and services the requesting client.

Most visual controls and adapters are pre-fabricated. Customized visual controls and adapters can be created, if required.

The rendering engine is responsible for presenting data to various clients. It creates XML for web services and HTML for web browsers. In the next release, the engine will be able to present data to devices such as cellphones and PDAs.



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