

Version No.	2.0
Date	21 January 04

Technical Support Document

for Marketing

**Perfect Quote
(Integrated Selling Chain Management System)
for Insurance**

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Executive Summary

There is a transformation taking place in the way insurance products are created and sold. Innovation of products, proliferation of channels and product customization-to-customer choice are some of the drivers that are pushing the industry to new heights of operational efficiency. This calls for re-engineering of business processes, empowering the selling agencies and controlling the overall enquiry to delivery system.

This transformation is triggered and supported by Information Technology (IT). Business Processes are sharpened and realigned using the power of the Internet and allied web-based back-end technologies.

This transformation has brought unprecedented value to all the three constituencies of the insurance business, (a) the customer, (b) the selling partner, and (c) the insurance company itself.

Perfect Quote (PQ) is a product of CCE Software which comes under the genre of “**Integrated Selling Chain Management System (ISCM)**” for Insurance. It is a Web-Based solution automating selling and support of insurance coverage. It applies for life and non-life insurance products and services on the Internet through Business Partners (Agents), thereby improving the overall business process. The system enables agents of an insurance company to quote a proposal for protection coverage and offer the best and alternate plans to their customers, track their application, payments, analyze their sales effectiveness, etc. Customers can accept a quote by selecting a plan of their choice from quote list, apply for coverage, and pay the installments and down payments online via Internet using credit cards. PQ also automates the insurance company's handling of agent network, new agent signup, payment tracking, policy processing, sales updates, etc. and thus is focused on automating the entire selling chain Business Process.

2. Features at glance

- ✍✍ Web-Enabled online transaction.
- ✍✍ Quote processing for proposal.
- ✍✍ Portable across platforms.
- ✍✍ Reliable security built-in with SSL and JAAS (On request).
- ✍✍ User friendly screens for ease of use.
- ✍✍ Component based architecture.
- ✍✍ Parametric design for flexibility.

- ✂✂ Provides summarized sales information to the Top Management.
- ✂✂ Localizeable User Interface, available for English and German

3. Objective

The objective is to bring value with a user-friendly, flexible and comprehensive online insurance policy sales management system.

- ✂✂ **Ease of Use – PQ** provides user-friendly GUI that improves agent efficiency with minimal amount of re-training.
- ✂✂ **Comprehensive** – Completely Web-Enabled solution with sub modules addressing all sales support requirements.
- ✂✂ **Security – PQ** provides reliable security features by employing security at the following levels:
 - ✂✂ User ID and password to enable access to critical data.
 - ✂✂ Base 64 Bit encoding of data for transmission / receiving data.
 - ✂✂ Secured Socket Layers (SSL) for transmission / receiving critical data.
- ✂✂ **Access Based on Privileges – PQ** provides access to the authorized members based on the user classification as determined by the organization.
- ✂✂ **Scalability** – The system is designed to accommodate technological advancements.
- ✂✂ **Compatibility** – The system can incorporate changes that take place in the internal rules, regulations and government / statutory needs.

4. Business Process Overview

Process:

Request-for-Quote to confirm policy including sales reports and inquiry screens.

Steps:

- ✂✂ Customer requests for a proposal for Quote.
- ✂✂ Agent captures customer information.
- ✂✂ Agent provides alternate plans, and the Quotes.
- ✂✂ The customer accepts the Quote.
- ✂✂ Agent applies for coverage on behalf of Customer.
- ✂✂ Underwriter validates the suitability of the application.
- ✂✂ Policy comes into force.
- ✂✂ Various reports are generated.

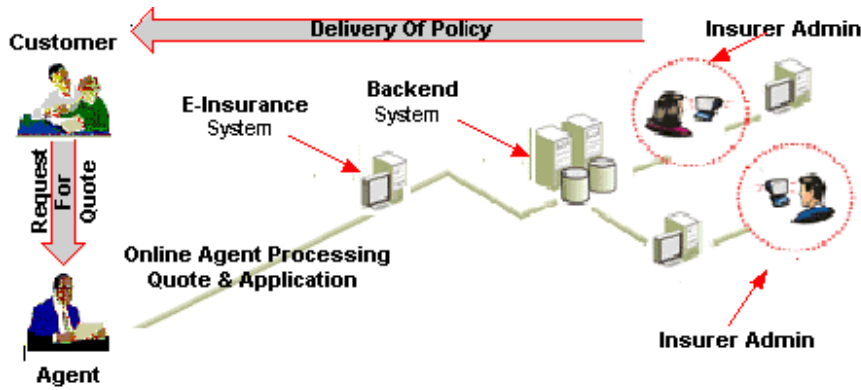


Figure 1: Conceptual Business Process

5. Overview of functionality

- ✂✂ Capture customer information.
- ✂✂ Conduct underwriter's check.
- ✂✂ Display best and alternate plans with corresponding prices.
- ✂✂ Generate proposal for Quote.
- ✂✂ Look-up Customer based on flexible search options.
- ✂✂ Fill-in and view the application.
- ✂✂ Verify application information.
- ✂✂ Generate application.
- ✂✂ Confirm the sale.
- ✂✂ Generate various reports.
- ✂✂ Provide help and training.
- ✂✂ Able to sign up new user and grant privileges.
- ✂✂ Creation of master setup for accounts and associating it to the user.
- ✂✂ Option for re-quoting the proposal.
- ✂✂ Capture cancellation of Quote.
- ✂✂ Interfaces to Legacy Systems and databases

6. Technical Solution

PQ from CCE Software (Pvt.) Ltd. is an effective state-of-the art solution. The modular system is comprehensive in nature with reliable security features.

System Hierarchy

The **“System Hierarchy”** helps to visualize how different sub systems and modules are related to form the overall system.

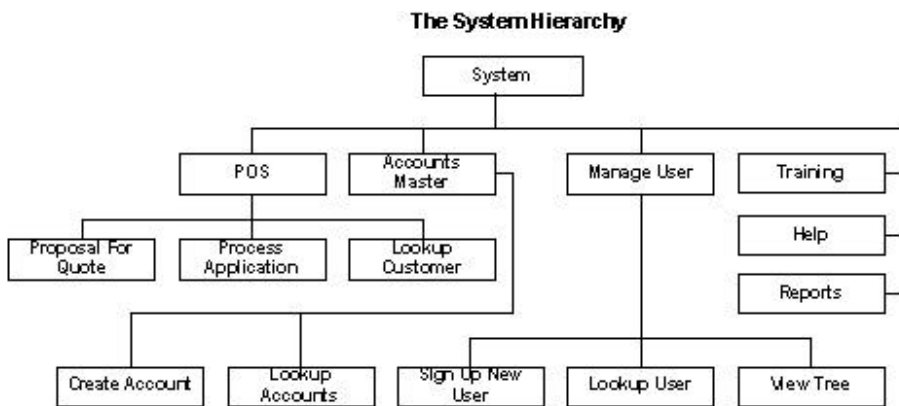


Figure 2: System Hierarchy

7. Application Modules

- ☞☞ Proposal for Quote.
- ☞☞ Process Application.
- ☞☞ Lookup Customer.
- ☞☞ Accounts Master.
- ☞☞ Manage User.
- ☞☞ Executive Dash Board.
- ☞☞ Training and Help.
- ☞☞ Reports.

☞☞ Proposal for Quote

This module captures the main business flow, where an agent processes customer data for generating a proposal for a Quote. This module accepts customer information, other details required for underwriter’s check, and processes the data for generating a proposal for Quote

(based on underwriting criteria) and displays the best and alternate plans for protection coverage.

This module also provides the following functionalities:

- ✍✍ To look up the detailed cost of the selected plans and customize it.
- ✍✍ An interface for generating pre-defined Marketing Letter.
- ✍✍ An interface for generating a proposal for Quote in pre-defined format.
- ✍✍ Navigation to Process Application module to apply coverage for the selected plan.
- ✍✍ To decline a proposal.

✍✍ **Process Application**

This module allows the agent to apply for protection coverage and pay down payment and installments by various means such as credit card or cheque. Agent can navigate to this module from Lookup Customer or from Proposal for Quote. This module converts a 'proposal for Quotes' to 'sale of policy'.

Based on the selection of plan from proposal for Quote this module further accepts the customer information such as his/her address, the Lien holder information for nomination, payment information such as down payment, installments and credit card details. The system processes the application and confirms it before the application comes to force.

This module also provides the following functions:

- ✍✍ Option to confirm the purchase of policy.
- ✍✍ Option for declining the purchase of policy.
- ✍✍ An interface for generating the application in the pre-defined format.

✍✍ **Lookup Customer.**

This module allows the User to look up a customer's previously created Quote or Application based on the search criteria such as application number, first name, last name and so on. The system processes the data and lists the search result. The user can select the Quote or Application from the results and proceed to apply for coverage.

This module also provides the following functionalities:

- ✍✍ To decline the pending Quote and application.
- ✍✍ Edit the previously created Quote
- ✍✍ Edit the previously created application if the application is in pending or decline sales status.
- ✍✍ Navigation to Process Application module to apply coverage for the selected Quote or Application.

Account Master

Create Account

This module allows corporate administrators to create new sales agent accounts and to edit existing accounts. The agent account is a logical entity that will be associated with the agent. The system accepts the information such as plans that the account can sell, the pre-formatted templates required for generating reports, entitlement for credit card transaction, etc. Only users with administrator rights can create an account and associate a user to it.

This module also provides the following functions:

- Activate an in-active account
- Copy existing account information to create new account.
- Keeping the account in out-of-business State.
- Keeping the account in suspended State.
- Keeping the account in closed state.

Lookup Accounts.

This module allows the Agent to look up previously created account based on the search criteria such as account code, account name and allow him to edit the account profile.

Manage User

This module allows corporate administrators to create new sales agents and to edit the details of existing sales agents. Sales agents having the privilege of accessing this module can also create sub sales agents under them.

Sign up new User

Sign up new user allows the logged in user to create new user in the system. The system accepts personnel information of the new user like first name, last name, user id, password, account to be associated and the list of other accounts that he can manage. This new user will be a child of logged in user and this way the chain grows.

This module also provides the following functionalities:

- Editing the child users for changing the privileges and his personnel information.
- Copy the existing user information to create a new user.

View Tree

This module allows the logged-in user to view and edit the profile of his child users (users below him / her in the organizational hierarchy). If the logged in user has rights then he

can view and edit all the users in the system. The organizational hierarchy of users will be displayed in the form of a tree.

Lookup User

This module allows the logged in user to search other users in the system based on criteria such as first name, last name, login id and so on. Logged-in user sees the users at the same level or under him. However he / she can only edit the profile of the child users (users below him / her in the organizational hierarchy).

Executive Dashboard.

This module is for the Top Management to look at the summaries and statistics of the sales. This module is to be configured according to the specific need of the Top Management. Usually the following functionalities are offered:

- Online view of sales transactions.
- View sales transaction day wise, month wise, on range of dates.
- View state wise, account wise, agent wise statistics.
- Generate sales report.

Training

This non-interactive module focuses on educating all the new users about the system. The main objective is being an effective and hands-on knowledge on actual operation of the system.

Help

This module provides a context sensitive help for all the modules of the system.

Reports:

Currently the system comes with the following standard reports.

- Proposal for Quote
- Application for applying for coverage.
- Marketing Letter.
- Sales Remittance Report.

8. System Architecture

Functional Architecture:

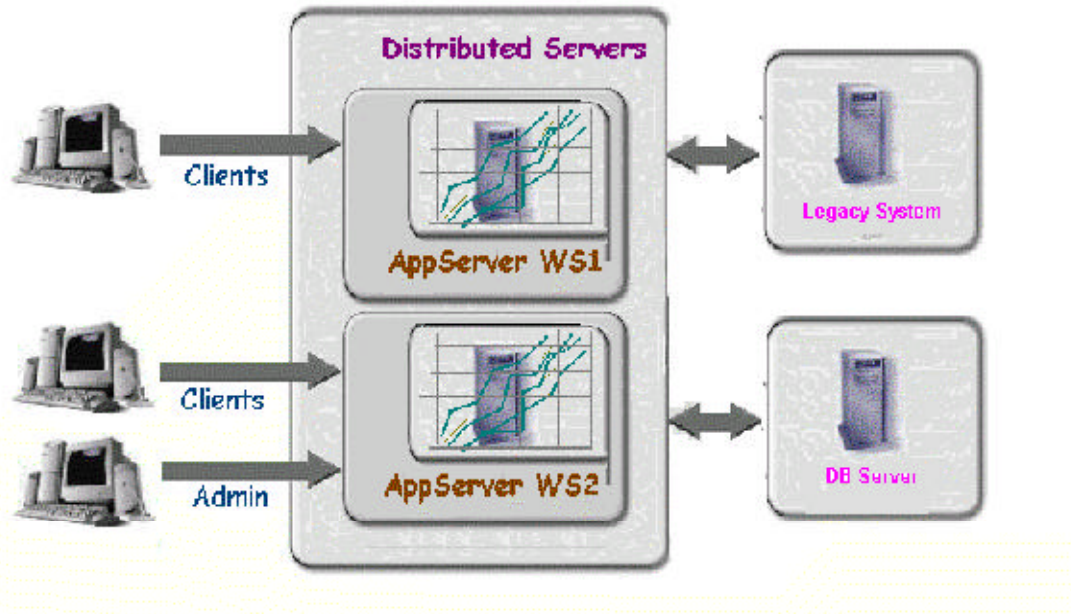


Figure 3: Functional Architecture

Technical Architecture:

Figure 4: Technical Architecture

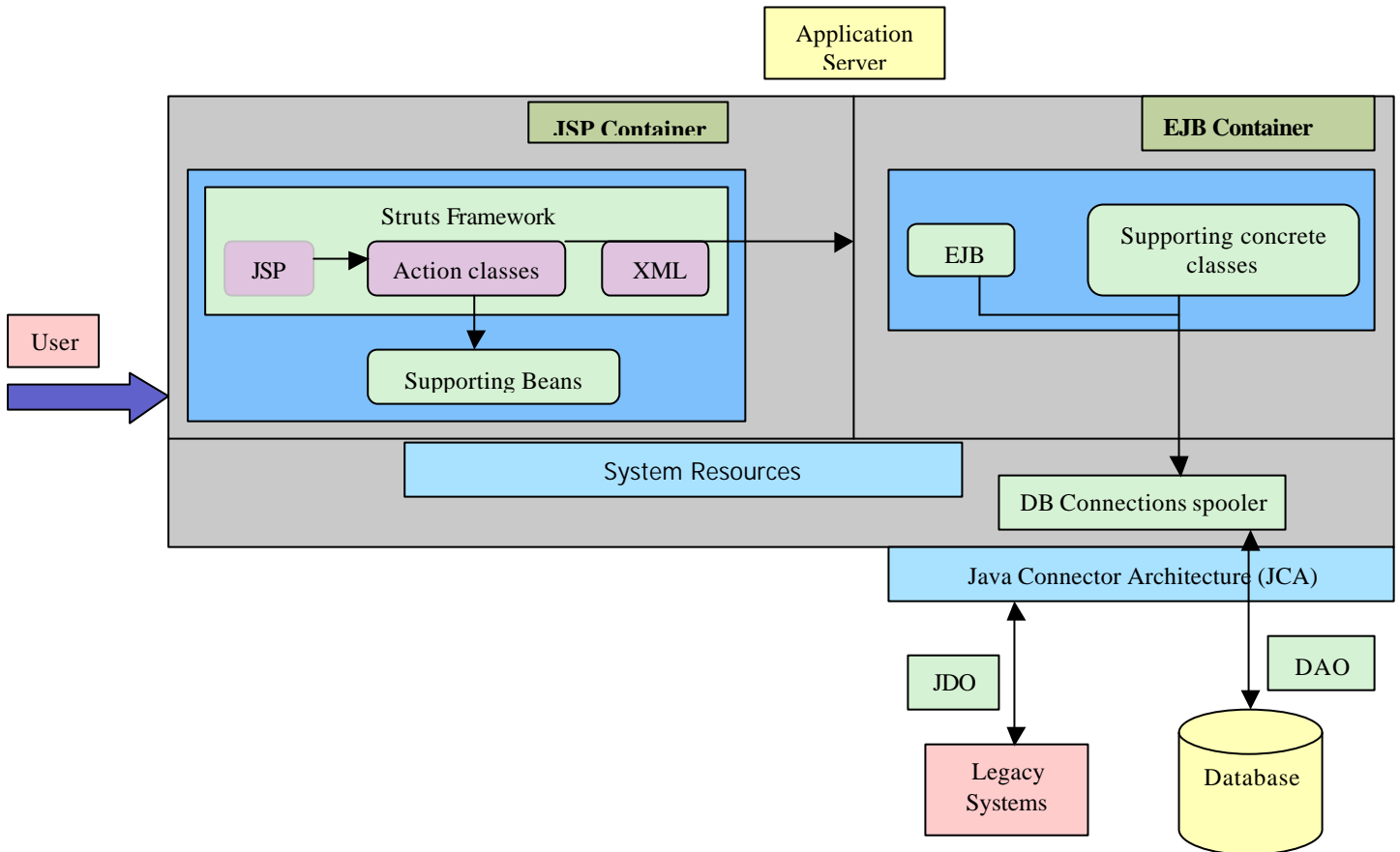


Figure 4: Technical Architecture

The system architecture is built around J2EE three-tier distributed component-based model. In such an architecture, the application logic is divided into components according to function, and the various application components that make up a J2EE application can be installed on different machines.

The system components are divided into 3 different tiers. The Presentation Tier, the Business Tier and the EIS Tier.

The Presentation Tier components are hosted in the Web-Tier of the application server, which hosts JSPs, servlets and other web resources required for presentation of

information to users. The presentation tier has been built on Struts Framework. Internationalization of the application is built-in. Security features are taken care of.

- ✍✍ The key Business logic is contained in the Business Tier of the application server, which hosts EJB's Components. This tier implements the underwriting rules, credit card validation, application processing and other functions associated with the existing back-end system.
- ✍✍ J2EE application components access the company's enterprise information system for data base connectivity and to access the legacy system for customers, products and policies data.
- ✍✍ Core J2EE patterns are used extensively to improve the performance and to add the features of extendibility and adaptability of the application framework to other domains. Maintenance is reduced to the best possible minimum.

The PQ architecture offers the following advantages.

- ✍✍ Scalability. It is expected that sites built with this framework will attract a growing visitor volume. The clustering capabilities of the application server will make it possible to scale the site gracefully as the volume increases.
- ✍✍ Standards Compliance. The application server provides a native language implementation of the JavaSoft J2EE architecture. This makes it possible to integrate re-usable software components into the site architecture whenever appropriate.
- ✍✍ Industry Standard Platform. J2EE application servers continue to support new middleware technologies as new standards are defined.

✍✍ Legacy System Interface

Depending on the need of the client the system can be customized to access specific data from legacy system. Third party tools and API's will be used to access data to and from legacy system.

For example: For data access from AS/400 on Web Sphere Application server we use the JTOpen API's and make use of PCML, RFML and Data Queues to call RPG programs. However the Framework has the plug-in facility for JDO to integrate with EIS back-end systems. JDO can be used to make the connectivity to Legacy system independent.

✍✍ Interface to Authenticate Server

The system talks to third party authentication server for credit card authorization and settlement.

9. Network Topology

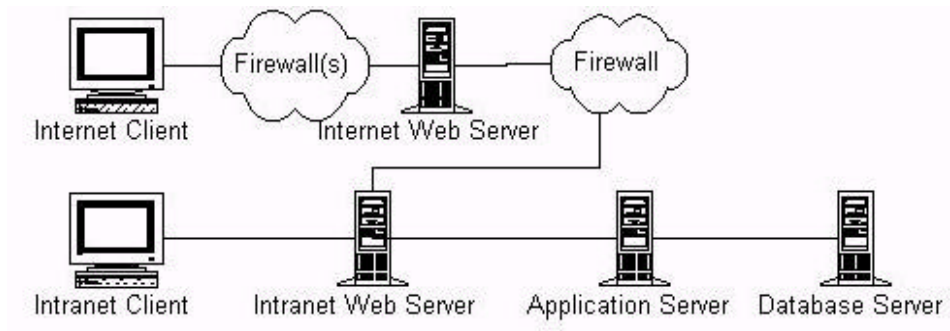


Figure 5: Network Topology

Network Topology covers hardware and software required at execution environment. The deployment environment needs to be thoroughly evaluated before deployment of the application for need of hardware which includes computers, routers, network switches and the network topology itself, because they impact system performance and reliability.

The simple Network Topology for multi-tier distributed architecture shown in Figure 5, has the following components:

- ✍✍ Web browser client may or may not sit behind the firewall.
- ✍✍ An HTTP server is the web server, which provides a response to every incoming request.
- ✍✍ Web containers host presentation and possibly Business logic components.
- ✍✍ Application containers host Business logic components.
- ✍✍ Relational Database Management Systems host databases and data logic.

The system architecture depends on the requirements for security, performance, reliability and the organizational needs. This decision will be based on the thorough evaluation of software infrastructure, including the web server, security management software, application server, domain name management server, database management system, and third-party software components. For example some high-end organizations may require a system that continually supports security, high transactions and unpredictable network traffic. In this situation we employ n-tier architecture with web servers and application servers configured as clusters for fault tolerance.

10. Customization services rendered

The solution is customized to the specific need of the customer. The customization includes the following standard services.

System Customization:

- Implementation of Access rights for the users.
- Plan rating and underwriters logic implementation.
- Customized Reports.
- Credit Card transaction implementation. It also includes other money transaction services like Bankeinzugsverfahren or online payment Gateways.
- Confirmation and Cancellation of Quote based on criteria.
- Re-Quoting of the proposal.
- Sending alert messages and mails.
- Interfacing to legacy system.
- Executive Dashboard customization.
- Any other additional functionality required by the client.

Presentation tier changes:

- Developed on Struts Framework
- Implementing customized GUI screens.
- Customized buttons and navigation bars.
- Headers and footers.
- Logos and animations as required.
- Any other new GUI functionality to be provided.

11. Development and Deployment Environment

Development Environment

Tools and Technologies :	
Front End	HTML, JavaScript , XSL FO,CSS,
Server Side	JSP / Servlets
Middleware	EJB 2.0
RDBMS	Oracle 8i / MS-SQL 2000 / AS400
Web Server/App Server	Web Sphere 5.0. , BEA Weblogic 5.1
OS	WIN NT / WIN 2K
Framework	Struts / J2EE
Rich Media	Macromedia Flash
Graphics:	Adobe Photo Shop
Utility API's and Tools	IBM Tool Kit for Java , Acrobat Reader 5.0
IDE	WSAD, Visual Age For Java , E-Macs
Software Development Process:	RUP
Design Tool	Rational Rose 2000
Configuration Management System	Visual Source Safe
Communication Support Tools:	VPN , Terminal Services

Hardware and Software :		
Category	Server	Client
Operating System	Windows 2000 Advance Server	Windows 2000
Hardware	IBM Clones	PC workstations
Database	Oracle 8i / MS-SQL 2000	
Client Application		IE 5.0 or Above , Acrobat Reader, Flash

Deployment Environment

The application can be deployed on any J2EE compliant application servers with their supported hardware and operating systems. A few of them are listed below.

Application Server:	Vendor :	Platform:
Web Sphere Application Server 5.0	IBM	Windows NT, Solaris/SPARC,HP, Linux
BEA WebLogic Server 6.1	BEA Systems	Solaris/SPARC, Windows NT
Oracle9i Application Server 1.0.2.2	Oracle	Solaris/SPARC, Windows NT, Windows 2000, Linux, HP-UX, AIX, Compaq Tru64 UNIX
iPlanet Application Server	Sun Microsystems	Solaris/SPARC, Windows NT
Java 2 SDK, Enterprise Edition 1.2.1 for Solaris	Sun Microsystems	Solaris/SPARC

12. Implementation Model

The following implementation models are available at CCE:

- ?? Licensed software – CCE would own the responsibility of , maintenance during warranty period as agreed upon.
- ?? Onsite ASP model – Hosting by client; Admin, support, maintenance by CCE local partner at extra cost on the basis of “Usage Time” of application

13. Conclusion

PQ is a comprehensive web-based Selling Chain solution. It is integrated to the Enterprise Business Model. The value derived by the Customers, Selling Agents and the Insurance Company makes PQ the ideal engine for a Web-based, reliable and scalable insurance business that brings in faster growth and more profit.