

SoftPhone Story

Revision: 1.2

by Information Integrators, Inc.

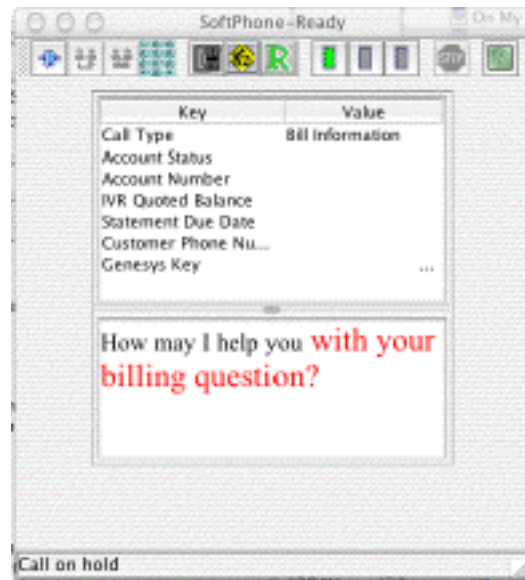
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1.

Warning:

Due to certain client confidentiality requirements we may not be able to mention them, or provide specific information about techniques used.



SoftPhone

2. Project Overview

Our client, a holding company of numerous Gas Local Distribution Companies with over \$20 billion in assets and revenues in excess of \$6.031 billion, was seeking to reduce their Average Speed to Answer (ASA) time while increasing Customer Service Representative (CSR) effectiveness and overall customer satisfaction. In previous technology projects and through corporate mergers and acquisitions, our client has four regional call centers with three different Integrated Voice Response (IVR) systems, three different Telephony implementations/switches, and two different Customer Information Systems (CIS).

Our project objective was to design and implement a common telephony application that accepts information processed by the IVR, messages the disparate CIS systems to provide context sensitive screen pops, and provide a common workflow/state management for the various Customer Service Representatives. To assist in this goal, the client evaluated several Computer Telephone Integration (CTI) frameworks and selected the Genesys CTI Framework.

3. Solution

First, a technology review of the Genesys Framework and development kit was conducted to address issues such as feasibility, scalability, and manageability. There were two main concerns. First, this would be the first Java™ desktop application to be used by the over 400 Customer Service Representatives (CSR) in four different call centers. Also, the client's deployment standard was SMS. Secondly, the two CIS applications which were to provide the screen pops had different application architectures. One CIS application is a heavyweight Client/Server application running on Windows NT/4.0 while the other CIS system is a green-screen legacy mainframe application running within CICS.

Next, several user story board scenarios were created and reviewed with CSR specialists. From these story boards, and following such design patterns as Model-View-Controller, Worker Thread, Decorator and various other J2EE patterns, appropriate class and object interaction models were developed.

While negotiations lagged with the CTI vendor, several design, code, and test iterations were undertaken to stabilize the client's desired User Interface. The principle goal was to eliminate the CSRs use of the hard phone while streamlining the call flow. Subsequently, a CTI lab was established to provide a production simulation environment upon which to continue testing. Once the CTI lab was in place, additional iterations were undertaken, tested, and rolled out to the various call centers for additional integration testing with the various telephony networks.

As a tribute to Java™'s portability, the application coding was started using a DELL Inspiron running Windows 2000 Professional, and, do to a malfunctioning keyboard, was completed on an Apple PowerBook G4 running OSX, 10.2!

The application was successfully deployed within the call centers and has matured through several minor maintenance and enhancement releases.

Technologies used to complete these objectives were:

- Java™ Version 1.3.1 Mac OSX 10.2
- Java™ Version 1.4.1 Windows NT, Windows 2000
- Java™ custom objects
- Genesys CTI Framework 6.x
- OOA/OOD
- UML
- Rational Rose
- Argo UML
- XML
- CVS on Linux

- Jakarta Ant, Velocity, DVSL
- Tigris Scarab
- MicroSoft SMS