



Project Case Study

Provider Name: KALKI Communication Technologies (P) Ltd.

Client Name: VoiceReach Pvt Ltd.

Project Title: CTI (Voicemail over web and telephone)

PART I: The Problem

The client required a system to provide voicemail functionality to end users as a low cost option avoiding STD-ISD charges. The requirement also envisaged attracting non-computer-literate users by providing the same functionality over the web as well as the telephone

PART II: The Solution

Description:

KALKI provided a DDC (Dedicated Development Center) with an initial team of 4 and delivered a solution in two stages, an initial prototype and a full system. The solution was to use the internet mail service to deliver voicemail messages thus avoiding STD-ISD expenses and to provide two front ends to end-users, namely a web-enabled browser front end and a telephone front end.

The solution consists of a web-server providing a standard mail portal site (www.voizme.com) with attractive features which is fully integrated to local servers. The mail portal has, in addition to standard mail portal features, a voice recording and playing capability. The local server modules can be installed at multiple locations (typically one for each city) and are accessible to users through a local call on the telephone. Most of the features of the mail portal have been replicated to the telephone servers (which have an inbox, addressbook, mail reply-forward options, inbox management etc.)

Other add-on modules have been integrated which provide users an option to send voice greetings to anybody (which can be played at the site), and a Phone-to-Phone option to have their voicemail delivered to any telephone number (the system actively places a call to the destination, instead of waiting for the recipient to log in)

Significant user activities are fully synchronized between the web-account and the user's associated telephone account

Technology Used:

Web server (Windows NT4.0, IIS)

Front end : HTML, Java Applets (AWT), ActiveX, Client-end voice compression routine in C

Communication : HTTP, Java Socket Networking.

Middleware : Java Servlets for the website, multithreaded Java Socket Server programs.

Back end : SQL Server 7, T-SQL.

Synchronization to Local Servers : Java Socket networking servers

Local Servers (Windows NT4.0 Server, Dialogic D/41ESC PCI card)

Front end : NA (Telephones)

B Logic : SMTP and POP3 mail clients in C, Dialogic API programming in C, Synchronization Server in Java

Back end : SQL Server 7

The middleware in the web server consists of java servlets and the following socket servers in Java. All these servers are multi-threaded to serve concurrent requests from users.

- AddressBook and Folder Applet server : Serves addressbook applets in the client with full data entry, edit and update features. Also serves Folder management applets in a similar fashion. Uses JDBC.
- Synchronization Server : Maintains connection between all local servers and web server and provides database synchronization between them using JDBC.
- Notification Server : Intercepts incoming messages and generates notification mails after checking user settings in database.
- Voice Server : Accepts voice files streamed from client and saves to disk. Makes necessary notifications in database tables using JDBC.

Dates: April 2000 till date (The project is ongoing as a DDC with new functionalities being incorporated on demand)

Duration: 12 months till date

Location of work: Bangalore, India. The project was developed in house at KALKI Communication Technologies (P) Ltd.

Team Size: 3 presently (Additionally 2 members were re-located to other projects)

<i>SR No.</i>	<i>Role Title</i>	<i>Name</i>	<i>Yrs. Experience</i>	<i>% Involvement</i>
1	Project Manager	Vinoo S Warriar	5	100
2	Analyst	Ancil K George	1.5	100
3	Analyst	Rajesh B	1	100

PART III:

PART IV: About the Client

VoiceReach Pvt Ltd is an enterprising start up based in Bangalore, India. Its promoters are pioneering Email on Phone services in India. The service is available through the web on www.voizme.com and the telephone service is presently available at Bangalore. Six more locations for setting up the telephone service are being finalized based on market analysis.