

8.1 Indian Language Messaging System

8.1.1

- ▶ **Name of the Technology :** *Hindi E-mail Seva*
- ▶ **Nature of Technology :** Web service
- ▶ **Level:** (Product / Technology / Sub-system) service
- ▶ **Technical Description of the Technology / Product** including Basic block diagram, Algorithm used, O/S used, Front-end / user interface, and Specification of the Technology / Product:

Hindi e-mail seva : Hindi e-mail seva facilitates sending email in Hindi language. This service allows to type using any of the 3 keyboard layouts (Inscript, Remington and Roman). These layouts can be used according to user's familiarity with the Hindi keyboards, if user knows Hindi typing he could use Remington layout, if user knows Inscript standard for typing this layout is also available, if user does not know how to type in Hindi he can take the help of phonetic way of typing. User can format the mail text & can send the attachments also along with the mail.

Features:

- 1) Very simple user interface
- 2) Online active Keyboards for users who do not know how to type in Hindi.
- 3) Choice of 3 Keyboard layouts: Remington, Inscript, Roman.
- 4) Formatting of email text in HTML.
- 5) File attachment with email.
- 6) Mail priority can be set.

Platform: IBM Compatible PC with 486 or Pentium CPU

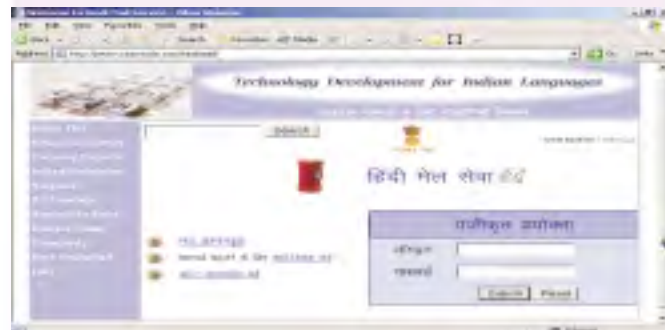
Operating System: Windows 95, 98, NT, 2000, XP, ME

Programming Interface: Visual Basic 6.0

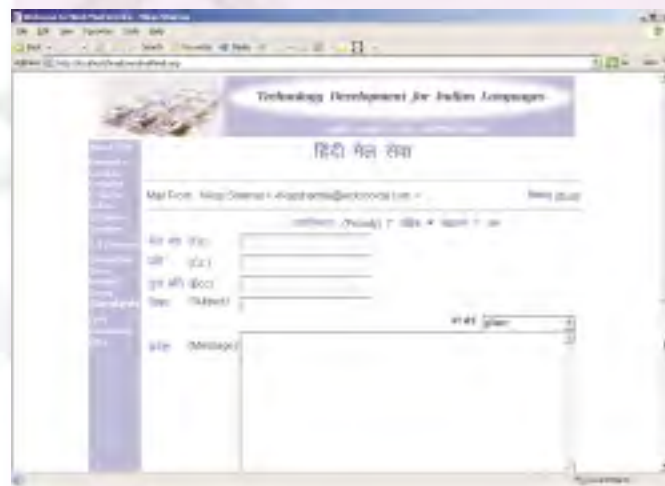
Server Technology: ASP

Client Technology: JavaScript, VBScript.

- ▶ **Representative Snapshot / screenshot of the Technology / Product :** Screenshots:



Screenshot of Hindi Email Seva - log in page:



Screenshot of Hindi E-mail seva page



Screenshot of Onscreen Keyboard:

- ▶ **Scalability / Portability / Expandability :** Portable among any of the Windows environment Win 95, 98, Window-ME, Win-2000, Win-NT, Windows XP
- ▶ **Readiness of Transfer of Technology (ToT) :** Yes
- ▶ **Availability of documentation :** Yes
- ▶ **Testing of the Product / Technology:** Testing done
- ▶ **IPR / Open-source:**
- ▶ **Potential Beneficiaries :** Hindi Loving People, Typists, Linguists, Students, Educationists, Office Personnel etc.
- ▶ **User-agency tie-up :** Solicited
- ▶ **Name and address of the Resource Person:**
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8.1.2

- ▶ **Name of the Technology :** *Malayalam e-mail server*
- ▶ **Nature of Technology :** Service
- ▶ **Level :** Product
- ▶ **Technical Description:** Sandesam is a solution for a Web based mail service in Malayalam. The back-end mail server comprises of, or is based on the Qmail, Vmailmgr and Courier-IMAP running on Redhat Linux. The Qmail server supports the SMTP and POP3 services, the Vmailmgr program performs the management of user accounts effectively, while the Courier –Imap server supports the IMAP service. The web interface is developed using Java Server Pages and the Java mail API and does not use Java on the client side. The database server used is Postgres SQL

This is a lightweight and a fast solution to provide an easy-to-use web interface in Malayalam. The storage of mailboxes is based on *maildir* structure and the mail is read directly from the disks. The administration of user accounts is done through the Vmailmgr program. Authentication is also done via Vmailmgr for both Qmail and Courier servers. The service gives the user complete access to his POP3 or IMAP mailboxes via an easy-to-use web interface.

Some of the facilities provided in the service are the IMAP support with user manageable folders, extensive mime support for attachments. The interface is in Malayalam and includes easy input facilities with keyboard drivers and floating character maps. The service provides facilities for sending and receiving mail in Malayalam, storage of addresses in address book with Malayalam names and description. The service also provides facilities for user configuration like changing the password, setting quota for mailboxes etc.

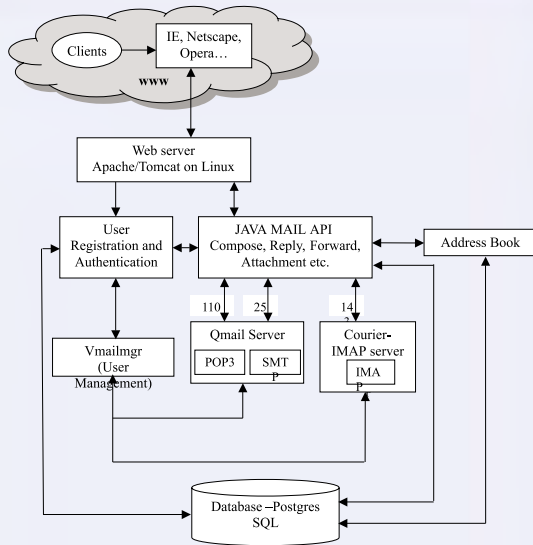
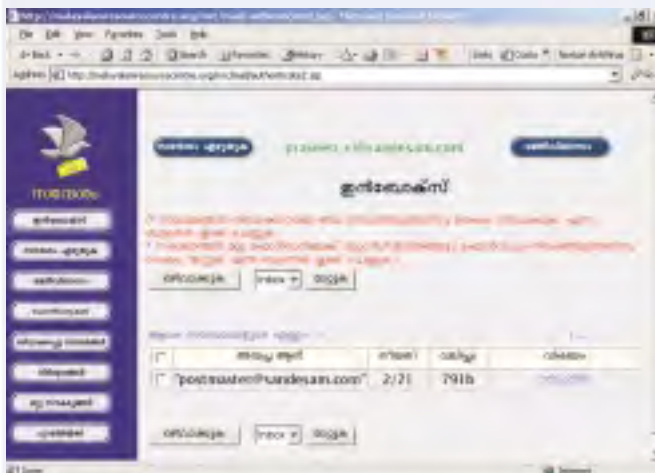


Figure 8.1 Block diagram of Malayalam E-mail Server

Representative Screen shot



- Scalability / Portability / Expandability: The server can be extended to support any IMAP compliant mail server running on Linux platform.
- Readiness of Transfer of Technology (ToT): Ready for TOT
- Availability of documentation: Documentation available.
- Testing of the Product / Technology : Development testing done.
- Potential beneficiaries: Small and medium ISPs, Business Organisations, Government Sectors, Multilingual Portal Developers.

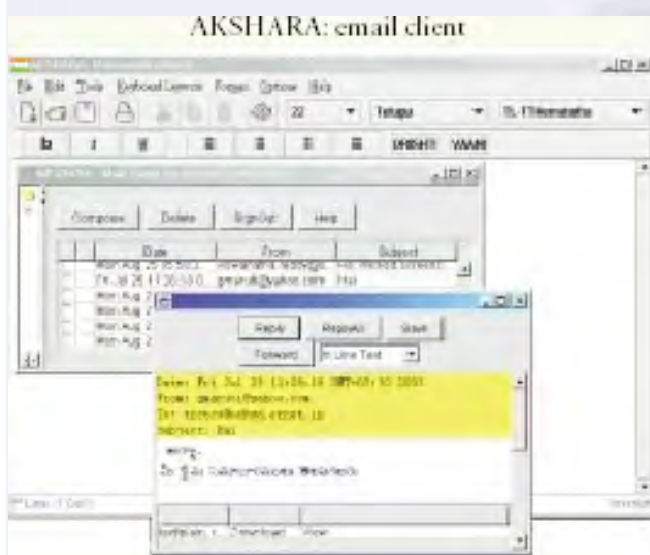
- User-agency tie-up: Nil
- Name and address of the Resource Person:

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8.1.3

- ▶ **Name of the Technology :** *AKSHARA: e-mailing client*
- ▶ **Nature of the Technology :** Application
- ▶ **Level :** Product is ready for technology transfer
- ▶ **Technical Description :** AKSHARA is unique in providing multilingual email sending as well as receiving facilities. All you need is a public email account somewhere. While many other systems allow you to send emails, receiving mails is not as easy. With AKSHARA there is no longer any need to depend on any third party sites on the Internet. It needs a public email account (that supports POP3 or IMAP protocols) somewhere. Unlike other technologies, here there will be no dependence on any other third party web sites. AKSHARA installed on your local machine will be your email client.
- ▶ **Representative Screenshot**



- ▶ **Operating System used :** LINUX ,
- ▶ **Scalability / Portability / Expandability :** Available
- ▶ **Availability of documentation:** Yes
- ▶ **Testing of the Product / Technology :** Testing has been done
- ▶ **IPR / Open Source :** IPR lies with University of Hyderabad and Dept of Information Technology

- ▶ **Potential beneficiaries :** Users of telugu e-mail, public and government organizations.
- ▶ **Name and Address of the Resource Person :**
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Hyderabad-500046, A.P. India

8.1.4

- ▶ **Name of the Technology :** *Oriya Bi-lingual chat server*
- ▶ **Nature of the Technology :** Application
- ▶ **Level :** Product is ready for technology transfer
- ▶ **Technical Description :** Oriya Chat is a Standalone Chat Application in Oriya Language developed in JAVA. After connecting to the Server, one can chat in one's favorite room, send direct messages with emotion icons to other online users as well as send public messages.

Features

User Log in to Chat Server with unique ID, Connect to the Server, with or without firewall/proxy, Phonetic Keyboard Layout to write in Oriya, Send Oriya text with Emoticons (images), Private and Public Chat With Friends, Domain specific Predefined Public Rooms.

- ▶ **Representative Screenshot**



- ▶ **Operating System used :** LINUX ,
- ▶ **Scalability / Portability / Expandability:** Available
- ▶ **Availability of documentation:** Yes
- ▶ **Testing of the Product / Technology :** Testing has been done
- ▶ **IPR / Open Source :** Not Open source
- ▶ **Potential beneficiaries :** Public, Government offices etc. using Oriya e-mail.

- ▶ **User-agency tie-up :** Solicited
- ▶ **Name and address of the Resource Person :**
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8.1.5

- ▶ **Name of the Technology :** *Information Retrieval System for Bengali*
- ▶ **Nature of Technology :** Application oriented.
- ▶ **Level :** Prototype
- ▶ **Technical Description:** Digital information is available in various forms like text, image and speech data or multimedia content. Among them the text information is considerably abundant and can be easily created. Passage retrieval from text documents is gaining momentum over document retrieval for the last several years. Document ranker returns documents, which is often infeasible to search and extract the necessary information from the entire document. Passage retrieval on the other hand returns fixed or variable sized text chunks from document(s) where the information is likely to reside. This saves both time and effort for searching from a huge text document corpus.

Indian languages can be grouped into five categories based on their origins: Indo-European (Hindi, Bangla, Marathi, etc.), Dravidian (Tamil, Telugu, etc.), Tibeto-Burmese

(e.g., Khasi), Astro-Asiatic (Santhali, Mundari, etc.) and Sino-Tibetan (e.g., Bhutanese).

Languages within a group share a number of common elements. For instance, there is a significant overlap in the vocabulary of Bangla and other Indo-European languages and are mutually closer than the profiles for a pair of languages from two different groups. We have tested the character level n -gram algorithms for language identification from a multilingual collection of Indian language documents. Also, a prototype of a “English to Bangla” phonetic transliteration scheme is designed and implemented for cross-lingual information.

A passage detection and ranking algorithm for Bangla text has been designed and implemented. *Stop-word-list* are common words ignored by search engines at the time of searching and these words generally do not contain any information.

For constructing Bangla search engines by combining statistical and manual methods, about 500 stop words are identified. The DoE Bangla corpus is used for this purpose.

- ▶ **Representative Screen Shot:** Not Available:
- ▶ **Scalability :** Yes
- ▶ **Portability :** Yes
- ▶ **Readiness of Transfer of Technology :** Yes
- ▶ **Availability of documentation :** Technical Manuals are being prepared.
- ▶ **Testing of the Product / Technology :** α level testing done
- ▶ **Open-source / IPR :** Not Open Source
- ▶ **Potential Beneficiaries :** Cross-lingual database search
- ▶ **User-agency tie-up :** Solicited.
- ▶ **Name and address of the Resource Person:**
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