10.3 e-Bharati : A multilingual Messaging System for Indian Scripts

1. Introduction

The main focus of Bharati Message Server is at those literate people who are presently not using e-mail services of Internet as it is mostly in Roman (English) script. These people know their language and script very well, may know even English, but they do not feel convenient about exchanging messages in English. This section of people includes most of the students who study in non-English medium schools and colleges, most of the Govt. staff where official language is not English, those offices where business transactions is in local language, housewives, etc. They are the people who fall on the other side of the digital divide.

Bharati Message Server is developed for exchanging electronic messages in all *the ten scripts of Indian languages, called Indic scripts*, viz., Assamese, Bangala, Dev Nagari, Gujarati, Gurumukhi, Kannada, Malayalam, Oriya, Tamil, Telugu, and English. In addition, a message can be composed that have letters of *any of the ten Indic scripts and English in the same text simultaneously*. The four Indian languages, viz., Hindi, Sanskrit, Marathi, and Nepali are written in Dev Nagari script itself.

Bharati presumes that the user is equipped with an *INSCRIPT keyboard of that specific script* in which he wants to send e-mails. The Govt. of India has standardized INSCRIPT keyboard for all ten Indic scripts of Indian languages. An INSCRIPT keyboard is usually a *bilingual* keyboard, i.e., each key top has English as well as one Indic script.

Bharati can be configured to give the users the *complete computer interface environment in any specific Indic script*, and nothing else. That is, a specific Bharati Message Server would give a user of Bangala script complete interface in Bangala script, a Hindi user in Dev Nagari script, a Punjabi user in Gurumukhi script, and so on.

For composition of e-mail, Bharati does provide an *offline editor, named Valmiki*, that can be used to compose messages in any of the Indic scripts.

2. Bharati as a part of Internet

Bharati is a message server and through it a user can send/ receive messages to/ from other Bharati users, or to/ from any other users of any other message server on the Internet in a uniform way. To maintain this uniform Internet connectivity *Bharati e-mail address field has to be in English*, as messages flow on the Internet based on "address field" written in English (ASCII standard).

Bharati user can send messages written in any specific Indic scripts, or any mixture of Indic scripts to any user on the Internet. The recipient can view the message through any standard browser like Internet Explorer as it is UNICODE compliant. *The recipient does not have to download any software whatsoever to read the received message.* Bharati encodes messages in UNICODE, and uses UTF-8 standard for message exchange.

Login Screen

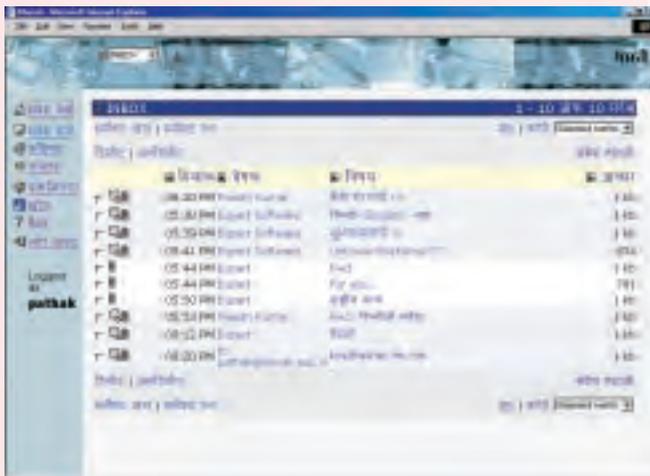### 3. Distinguishing Features of Bharati Message Server

User Interface in Indic Text

Bharati provides complete *user interface in Indic scripts* giving extremely familiar look to the users.

For example, if a Bangala user logs in Bharati he would find complete screen, i.e., all labels and commands, written in Bangala script. Even in the subject field of all e-mails he write in Bangala. And with a Bangala keyboard to interact with, he would feel complete at home to work.

UNICODE Encoding

Bharati permits users to send e-mails in any of the Indic script that is *encoded in UNICODE*, and does not require any special file to view the message. In contrast most of the other message servers provide "font encoding" scheme, that is mostly proprietary. In addition, the recipient needs to download the font file to view it.
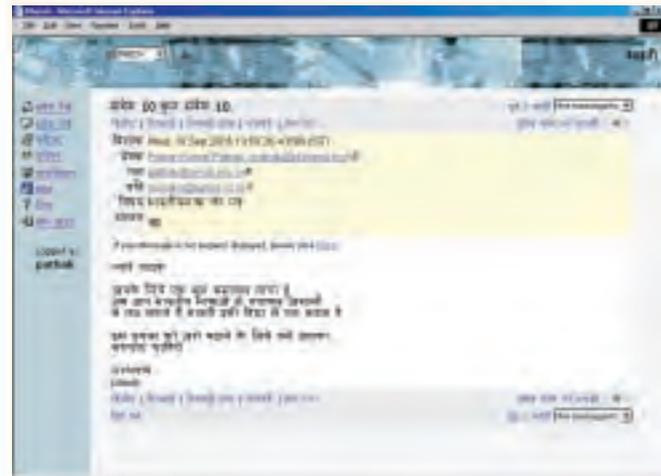

Inbox Screen

Multi-script Text Messages

As Bharati follows UNICODE encoding scheme, a text can be composed of having *characters from different Indic scripts (and also from English) simultaneously*. As most of the message servers have font encoding, they cannot provide this feature. The "*Subject" field of a message can also be in Indic scripts.*

Search Facilities on Indic Text

As UNICODE encoding scheme provide search order intrinsically, Bharati provides *search facilities*

View Message Screen

on its e-mails' text as well as on Subject field irrespective of what script/scripts has/have been used in the message text and in the Subject field.

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