Now Indic Computing Breaks Free of Shackles

Swaran Lata, Director and Head TDIL Programme, DIT

Vijay Kumar, Scientist 'D', TDIL Programme, DIT

India is a multilingual country with as many as 22 scheduled languages and computer technology breaks the language barrier and bridges the gap between the various sections of the society through easier access to information using their respective languages and hence language computing becomes central to the exchange of information across speakers of various languages.

Technology Development for Indian Languages (TDIL) Programme initiated by the Department of Information Technology (DIT), Under Ministry of Communications & Information Technology, Govt. India has the objective to develop information processing tools to facilitate human machine interaction in Indian languages and to develop technologies to access multilingual knowledge resources. Mrs. Swaran Lata, Director, Technology Development in Indian languages (TDIL), DIT director and Head of TDIL programme is playing a leading role in various areas of Language technology including consortium projects such as development of English-Hindi; Indian language to Indian language; Sanskrit – Hindi Machine Translation systems, Cross Lingual Information Access, Optical Character Recognition and Online Handwriting Recognition system

Department of Information Technology launched a major initiative called National Rollout Plan to aggregate these software tools and to make these available through a web based Indian Language Data Centre (ILDC). This activity is being executed in close coordination with CDAC, Gist,Pune. Under this user friendly software tools and fonts are being made available free for public through language CDs and web downloads for the benefit of masses. This initiative has crossed the half way mark with the recent release of Sanskrit language CD at Rashtriya Sanskrit Vidyapeetha, Tirupati on 25th Nov. 2008. Prior to this 11 language CDs have already been released namely Tamil, Hindi, Punjabi, Urdu, Telugu, Marathi, Kannada, Malayalam, Oriya, Assamese, Gujarati. These are made available to the public free of cost by post after registration and can also be downloaded from the website www.ildc.gov.in without registration.

The first step to break the language barrier was taken by TDIL Programme in association with Centre for Development of Advanced Computing (C-DAC) a few years back. In a public ceremony, at Vigyan Bhawan, New Delhi Smt. Sonia Gandhi, Chairperson of the National Progressive Alliance, dedicated the software CD package of computer tools for Hindi -- India's most spoken language to the Nation. Hindi is the second most spoken language in the world and globally more than 800 million can understand it. This free CD includes a full suite of Hindi office automation tools, web browser, email client, OCR tools and language interface facilities.

The availability of these free software tools, fonts and resources in local languages at no cost is intended to motivate general public to use ICT tools and technology in their day to day work like Word Processing, Presentation preparation, Spread Sheets preparation, Web Page Surfing & Designing, Messaging etc. in local languages. This is expected to spur the demand for PC, telecom, broadband and applications & contents in e-Governance & education in local languages in the rural areas.

In the economically difficult times of today availability of basic language processing software for free becomes meaningful and desired.

Further, the consolidated availability of linguistic resources and tools at one place will help researchers to carry out their research in a smooth and efficient manner.

The CD contains numerous tools for usage by the common man. The common tool set includes:

- True Type Fonts with Keyboard Driver
- Multifont Keyboard Engine for True Type Fonts
- Unicode Compliant Open Type Fonts
- Unicode Compliant Keyboard Driver
- Generic Fonts Code and Storage Code Converter
- Hindi Language Version of Bharateeya OO.o (OpenOffice.org)

- Firefox Browser
- GAIM - Multi Protocol Messenger
- Columba - Email Client
- Typing Tutor
- Dictionary
- Spell Checker
- Transliteration Tool

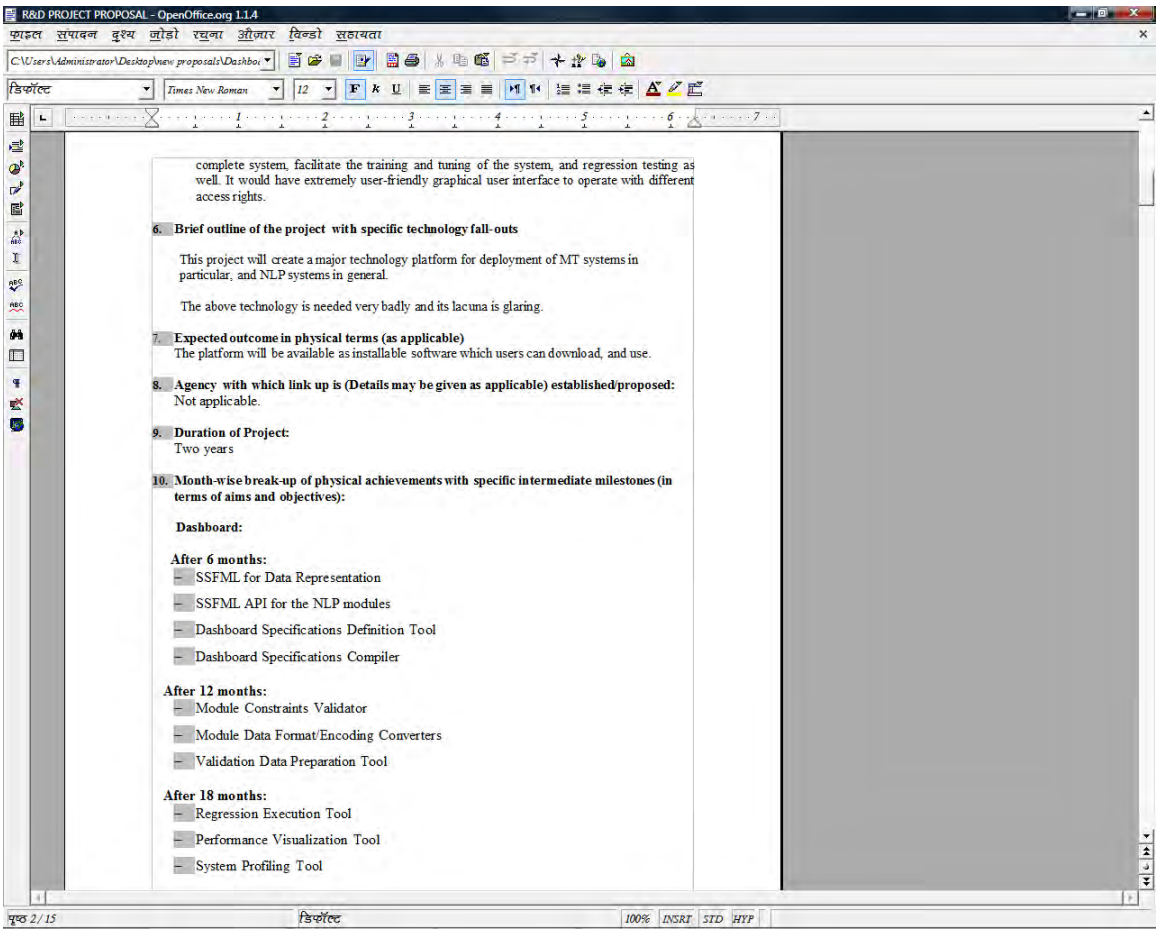
Here, readers would be educated on free open source tools made available in these language CDs.

- OpenOffice
- Firefox Browser
- GAIM Multi Protocol Messenger
- Columba Email Client
- Limewire

OPEN OFFICE

BharateeyaOO.o = Bharateeya(Indian) + OO.o(OpenOffice.org)

The BharateeyaOO.o project aims make avialble OpenOffice.org to India in Indian languages, by the ICT Research and Training Centre (India), as part of activities of the Development Gateway Foundation. Here the objective is to enable Indian languages support in all applications of the OpenOffice.org suite on Windows as well as Linux platforms.(Ref: http: //l10n.openoffice.org /localization_responsibilities.html). OpenOffice.org is the Open Source project Open Source project through which Sun Microsystems has released the technology for the popular StarOffice[tm] Productivity Suite. All of the StarOffice source code is available under the GNU Lesser General Public License (LGPL) as well as the Sun Industry Standards Source License (SISSL).OpenOffice.org is a unified suite of productivity applications for all common office applications, including such functions as word processing, spreadsheets, drawings, presentations, html pages, data charting and formula editing.



Major functionalities available in the OpenOffice are as follows :

OpenOffice.org Writer is the word processor component of the OpenOffice.org software package. Writer is compatible with number of platforms, like Mac OS , MS Windows, Linux, FreeBSD and Solaris.

Writer can handle documents in varoius formats, like the OASIS Open Document Format 1.1 (its default format), MS Word's DOC, RTF and XHTML.

It has the ability to export to the PDF format. It also includes a word completion mechanism for predictive writing. Other features include:

- AutoCorrect
- AutoComplete
- Styles and Formatting
- Text Frames and Linking
- Cross references
- Tables of Contents
- Indexing
- Bibliographical References
- Illustrations

- Tables

It can be used for anything from writing a quick letter to producing an entire book, creating multi column newsletters, brochures etc with above features and moreover real time spell checking makes the task much easier.

OpenOffice.org Calc is the spreadsheet component of the OpenOffice.org software package.

Calc is similar to Microsoft Excel, with a roughly equivalent range of features. Calc is capable of opening and saving most spreadsheets in Microsoft Excel file format. It provides a number of features not present in Excel, including a system that automatically defines series for graphing based on the layout of the user's data. Calc is also capable of writing spreadsheets directly as PDF files.

The default file format for OpenOffice.org 2.0 Calc can be set to either Microsoft Excel's native file format or the OASIS Open Document Format (ODF). Calc also supports a wide range of other file formats, for both opening and saving files.

As with the entire OpenOffice.org suite, Calc can be used across a variety of platforms, including Mac OS X, Microsoft Windows, Linux, FreeBSD and Solaris.

OpenOffice.org Impress, a part of the OpenOffice.org office suite and developed by Sun Microsystems, is a presentation program similar to Microsoft PowerPoint. In addition to being able to create PDF files from presentations, it is also able to export presentations to SWF files allowing them to be played on any computer with a Flash player installed. It is able to view, edit and save files in several file formats, including the .ppt format, which is used by Microsoft PowerPoint.

The program lacks ready-made presentation designs, although third-party templates are readily available on the Internet. An advantage that Impress has over PowerPoint is that it is distributed under an open source licence and so is freely available for download without charge.

OpenOffice.org Impress users can install the Open Clip Art Library, which adds a large gallery of images for general presentation and drawing projects. Linux distributions Debian, Gentoo, Mandriva and Ubuntu have provided the ready-to-use openclipart package for download and install from their online software repositories.

OpenOffice.org Base is the database module initially released with OpenOffice.org version 2.0. Currently it is based on the HSQLDB database engine written in Java. Note that another database engine, SQLite, had been considered[citation needed] but the OpenOffice.org team decided to go with HSQLDB after evaluating the features, connectivity and embed quality of both database engines.

The HSQLDB developers have suggested only 76% of the target has been met in the 1.8.0 release[1], which is the version that was integrated with OOo 2.0. They have been appealing for contributions[2] to fulfill all the feature targets, since the core database engine itself is an independent project with no external funding.

OpenOffice.org users, however, can choose to connect to external full-featured SQL database such as MySQL, PostgreSQL and even Oracle through ODBC or JDBC drivers. OpenOffice.org Base can hence act as a GUI frontend for SQL views, table design and query. In addition, OpenOffice.org has its own Form wizard to create dialog windows for form filling and updates.

Starting with version 2.3, Base will offer report generation based on Pentaho software.[3]

OpenOffice.org Draw is a vector graphics editor and is part of the OpenOffice.org office suite. It features "connectors" between shapes, which are available in a range of line styles and facilitate building drawings such as flowchart. It also includes many features found in desktop publishing software. Draw is similar to Microsoft Publisher.

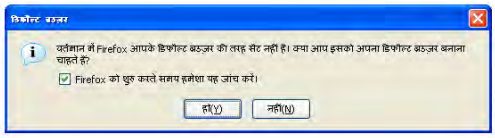
OpenOffice.org users can also install the Open Clip Art Library, which adds a huge gallery of flags, logos, icons and banners for general presentation and drawing projects. In particular, Linux distributions Debian and Ubuntu have provided ready-to-use openclipart packages for easy download and install from their online software repositories.

OpenOffice.org Math is a tool for creating and editing mathematical formulae, similar to Microsoft Equation Editor and is part of the OpenOffice.org office suite. The created formulae can then be embedded inside other OpenOffice.org documents, such as those created by Writer. It supports multiple fonts and can export to PDF.

FIREFOX

Firefox in hindi is the localization of Firefox in India's national language, Hindi. The huge Indian non-English speaking population will be able to use the Mozilla Firefox browser on providing localization support for Hindi.

Mozilla Firefox is a free and open source web browser descended from the Mozilla Application Suite, managed by the Mozilla Corporation. Firefox had 20.78% of the recorded usage share of web browsers as of November 2008, making it the second-most popular browser in current use worldwide, after Internet Explorer.



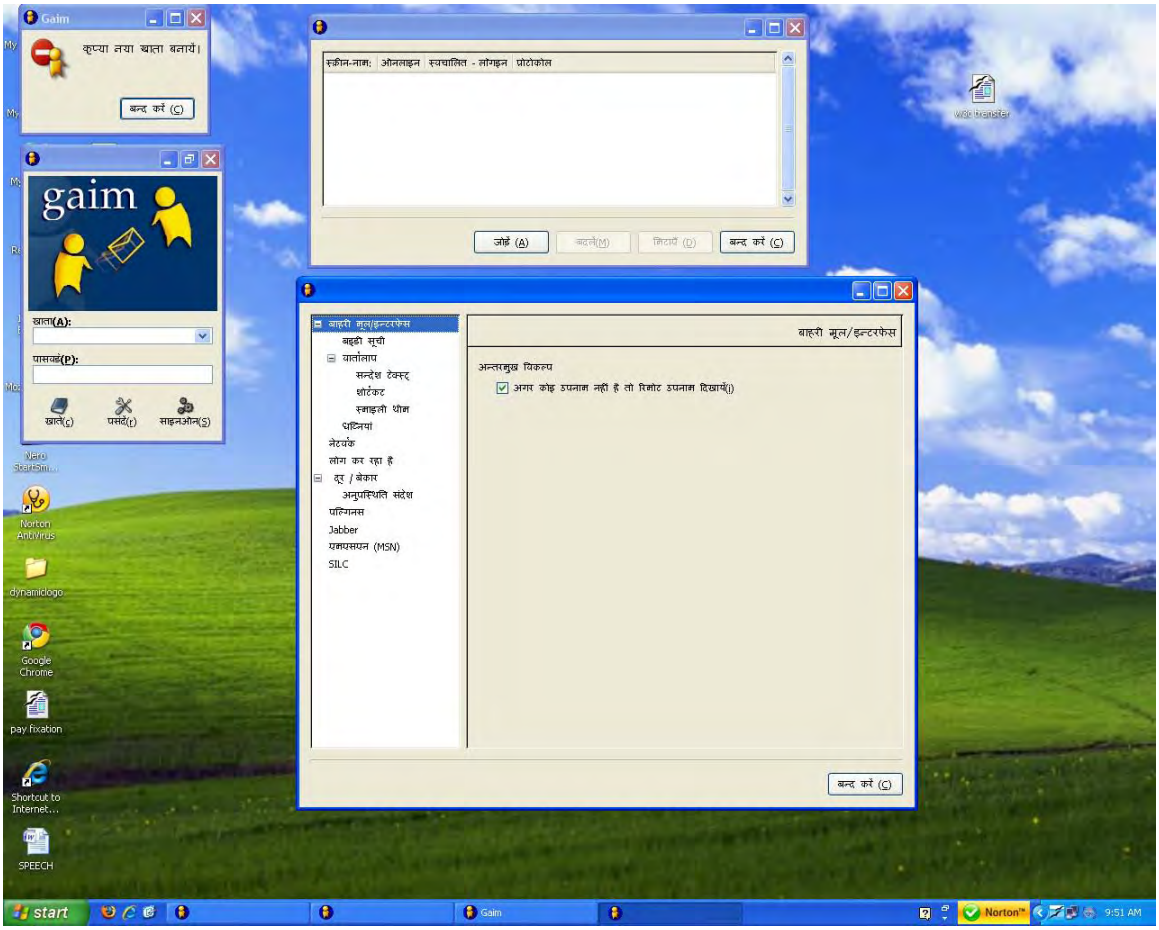
To display web pages, Firefox uses the Gecko layout engine, which implements some current web standards plus a few features which are intended to anticipate likely additions to the standards.

Firefox includes tabbed browsing, a spell checker, incremental find, live bookmarking, a download manager, and an integrated search system that uses the user's desired search engine. Functions can be added through add-ons created by third-party developers, the most popular of which include the NoScript JavaScript disabling utility, Tab Mix Plus customizer, FoxyTunes media player control toolbar, Adblock Plus ad blocking utility, StumbleUpon (website discovery), Foxmarks Bookmark Synchronizer (bookmark synchronizer), DownThemAll! download enhancer, and Web Developer toolbar.

Firefox runs on various versions of Microsoft Windows, Mac OS X, Linux, and many other Unix-like operating systems. Its current stable release is version 3.0.4, released on November 12, 2008. Firefox's source code is free software, released under a tri-license GPL/LGPL/MPL.

GAIM

GAIM is a multi-protocol instant messaging (IM) client for Linux, BSD, MacOS X, and Windows. It is compatible with AIM and ICQ (Oscar protocol), MSN Messenger, Yahoo!, IRC, Jabber, Gadu-Gadu, SILC, Novell GroupWise Messenger, Lotus Sametime, and Zephyr networks.



Gaim users can log in to multiple accounts on multiple IM networks simultaneously. This means that you can be chatting with friends on AOL Instant Messenger, talking to a friend on Yahoo Messenger, and sitting in an IRC channel all at the same time.

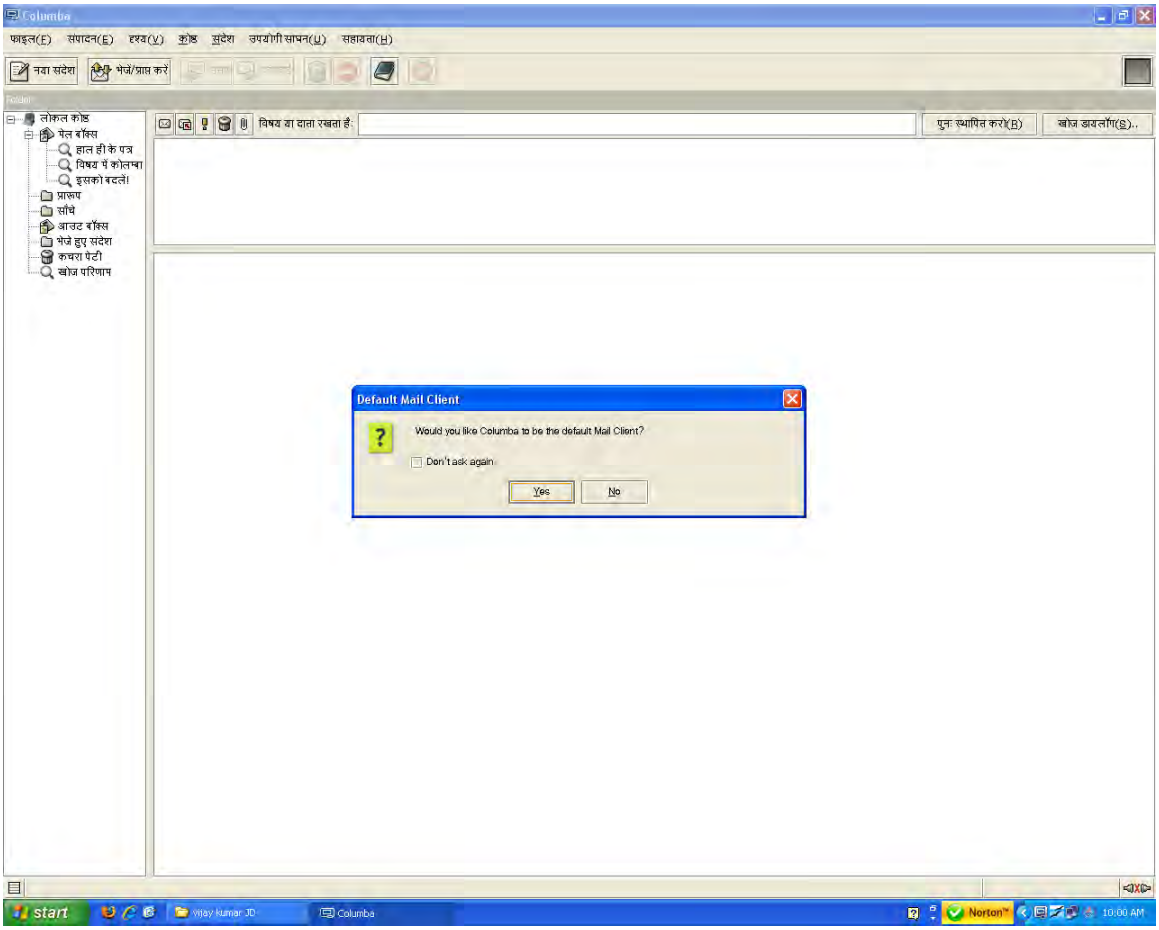
Gaim supports many features of the various networks, such as file transfer, away messages, and typing notification. It also goes beyond that and provides many unique features. A few popular features are Buddy Pounces, which give the ability to notify you, send a message, play a sound, or run a program when a specific buddy goes away, signs online, or returns from idle; and plugins, consisting of text replacement, a buddy ticker, extended message notification, iconify on away, spell checking, tabbed conversations, and more.

GAIM is now available as Pidgin as a free IM client used to connect to AIM, MSN, Yahoo, and more IM networks all at once.

COLUMBA

COLUMBA is a free software e-mail client for all Java-supported operating systems, that aims to be similar to Mozilla's Thunderbird, but based on the Java toolkit instead of the Mozilla toolkit Thunderbird uses.

Columba is an Email Client written in Java, featuring a user-friendly graphical interface with wizards and internationalization support. Its a powerful email management tool with features to enhance your productivity and communication.



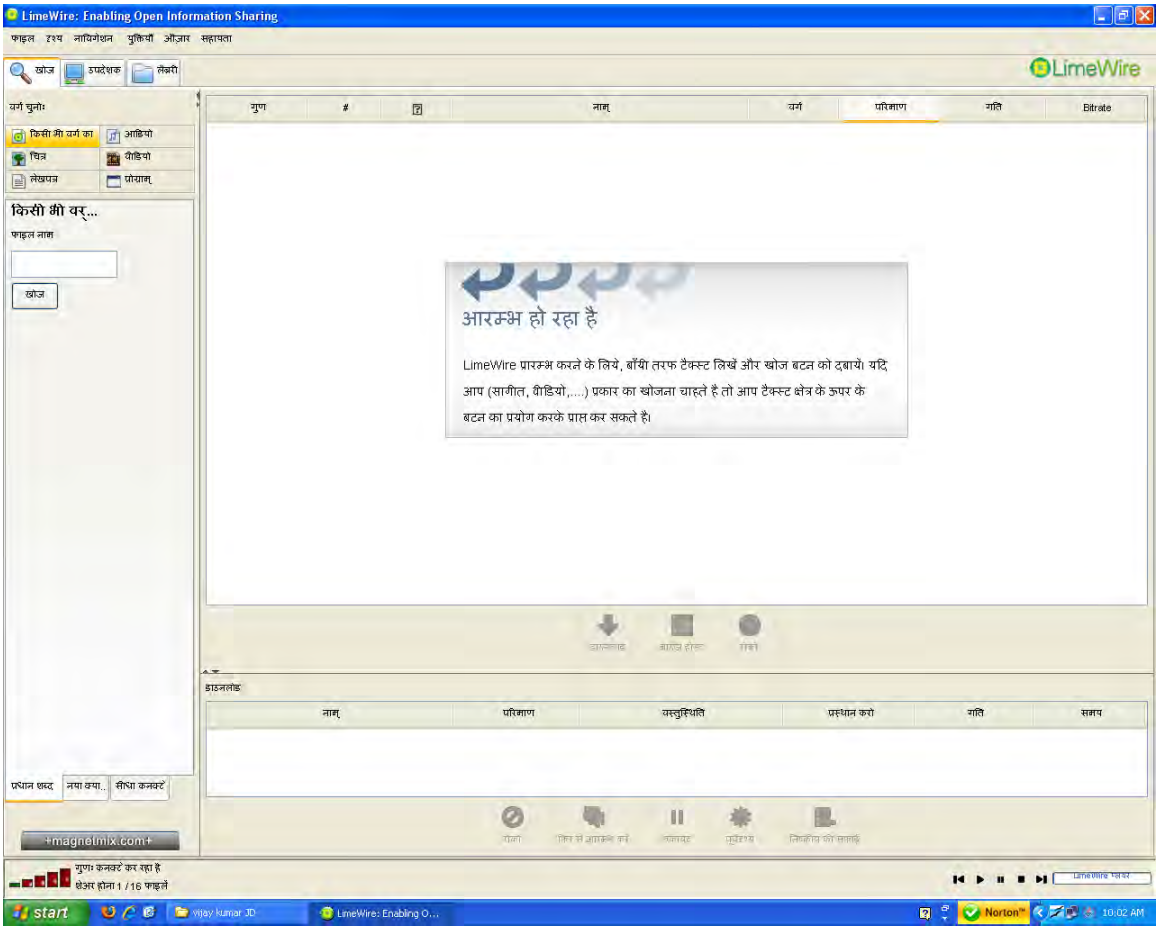
Feature Highlights

- Clean User Interface
- Cross Platform
- Internationalization
- Unlimited Functionality using Plugins
- Safe and Secure

- Glueing together Third-Party Tools
- Multiple Accounts and Profiles

LIMEWIRE

LimeWire is a free peer-to-peer file sharing (P2P) client for the Java platform, which uses the Gnutella network to locate files as well as share files. File sharing refers to the providing and receiving of digital files over a network, usually following the peer-to-peer (P2P) model, where the files are stored on and served by personal computers of the users. Most people who engage in file sharing on the Internet both provide (upload) files and receive files (download).



Source: http://www.openoffice.org/

http://documentation.openoffice.org

http://wikipedia.org/

http://www.ildc.in/

http://www.mozilla.com/en-US/firefox/

http://gaim.sourceforge.net

http://www.columbamail.org/drupal/