



Section V e-Content

5.1 Bilingual Electronic Dictionary

- ▶ **Technology Developer**
Electronics Research & Development Centre
C-56/1, Anusandhan Bhawan,
Sector-62,
Noida – 201301
Tel. 91-4587717-25
Fax: 91-4587726
Shri V.N.Shukla, Director (Special Applications)
shuklavn@hotmail.com
- ▶ **Level: Product/ Subsystem**
Software Product
- ▶ **Description**
A English-Hindi Dictionary
- ▶ **Encoding Standards**
The storage code is ISCII.
- ▶ **Portability/ Expandability**
Expandable to other domains/ Lexicons. The system can be integrated with various windows based word processors.
- ▶ **Type of Technology**
e-Content
- ▶ **Readiness for ToT Documentation**
Installation guidelines and User's guide to use and configure the system are being prepared.
- IPRs**
Being applied for
- Testing**
Beta testing is in progress.
- ▶ **Potential beneficiaries**
All organization working in Hindi. Useful to Translators, Linguists and Office Assistants, Educational Institutes.
- ▶ **User Tie-ups**
CSTT, New Delhi

5.2 On Line English – Hindi Dictionary

- ▶ **Technology Developer**
Banasthali Vidyapeeth
Banasthali (Rajasthan)
Tel. 01438-27847/51(O), Fax: 01438-27850
Prof. Rekha Govil
rekha_govil@yahoo.com
- ▶ **Level : Product/ Subsystem**
Software Subsystem
- ▶ **Description**
English-Hindi Online Dictionary:
The Dictionary contains about 20,000 English words, their most common Hindi meaning, various usages of the word and different meanings of the word. In fact it is a data base which can be searched both alphabetically and for a specific word. The dictionary is completely ready and can be delivered in two forms:
 - A CDROM containing the database of HTML version of the dictionary accessible to the user using any browser.
 - As a Website containing the dictionary and the database.
- ▶ **Encoding Standards**
The storage code is ISCII.
- ▶ **Portability/ Expandability**
The dictionary can be viewed on the Internet with any Internet Browser. One has to copy the fonts for Hindi.
- ▶ **Type of Technology**
e-Content
- ▶ **Readiness for ToT Documentation**
Installation guidelines and User's guide to use and configure the system are being prepared.
- IPRs**
Not applicable
- Testing**
- ▶ **Potential beneficiaries**
Students and Teacher Community, Translators and Linguists.
- ▶ **User Tie-ups**
None

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5.3 Talking Punjabi-English Dictionary

- **Technology Developer**
Thapar Institute of Engineering & Technology
Department of Computer Science & Engineering
(Deemed University)
Patiala-147 001
Tel. 0175-214868, 393137 Fax: 0175-214498,
216391, 212012
Prof. R.K. Sharma
Shri G S Lehal (Asst. Prof.) (CI)
gslehal@mailcity.com
- **Level: Product/ Sub System**
Software Product
- **Description**
Punjabi-English or English - Punjabi Dictionary with Audio pronunciation of Punjabi words. It consists of 38000 words in Punjabi and 40000 words in English. The system has on screen active keyboard layout with composition reference.
- **Encoding Standards**
Data is stored as tables in MS-Access.
- **Portability/ Expandability**
Portable among any of the Windows 95/98/2000/ME & Windows NT environment. Developers can add any Active-X controls, Pictorial representation of the common objects and sentences of common words.
- **Type of Technology**
e-Content
- **Readiness for ToT**
Documentation
Installation guidelines and User's guide to use and configure the system is under preparation.
IPRs
Not yet applied.
Testing
- **Potential Beneficiaries**
Linguists, Students, Teachers, Punjabi Learner
- **User Tie-Ups**
None

5.4 Electronic Dictionaries (English-Telugu, Telugu-English)

- **Technology Developer**
University of Hyderabad
Dept. of Computer & Information Sciences
P.O. Central University, Hyderabad-500 046 (AP)
Tel. 040-3010500 Extn. 4056 (D), 3010064(O),
3010374(R)
Fax: 040-3010120, 3010145
Prof. K. Narayan Murthy (CI)
knmcs@uohyd.ernet.in
- **Level: Product/ Subsystem**
It is a Software Product.
- **Description**
Electronic dictionary are on-line dictionary for consultation.
- **Encoding Standards**
The storage code is ISCII.
- **Portability/ Expandability**
It can be integrated with text editor, spell checker and OCR system. Essential for any kind of work in language engineering.
- **Type of Technology**
e-Content
- **Readiness for ToT**
Documentation
Installation guidelines and User's guide to use and configure the system is under preparation.
IPRs
Not yet applied
Testing
Being tested against the Corpora fo CIIL Mysore.
- **Potential beneficiaries**
Students, Teachers, Authors.
- **User Tie-ups**
None

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5.5 Oriya Wordnet

- **Technology Developer**
Utkal University, Bhubaneswar
Department of Computer Science & Applications
Vani Vihar, Utkal University
Bhubaneswar – 751 004
Tel. 0674-580216(O), 540865(R)
Fax: 0674-581850
Prof. (Mrs) Sanghmitra Mohanty
sangham@dte.vsnl.net.in
- **Level: Product/ Subsystem**
Software Product
- **Description**
It is online lexical database having user friendly interface which can help the user to get needed information. For designing the wordnet the semantic relationship between words such as meronymy, holonymy, synonymy etc. have been identified. The processing of corpora has been done successfully for calculation of frequency. This frequency value is used for sorting the words in designing synonymy sets using Semantic Network. Designing part using MySQL is under processing.
- **Encoding Standards**
The storage code is ISCII.
- **Portability/ Expandability**
It is linux based but it can be extended to other operating systems if the database is changed.
- **Type of Technology**
e-Content
- **Readiness for ToT Documentation**
Installation guidelines and User's guide to use and configure the system is under preparation.
IPRs
Not yet applied
Testing
Self testing is under progress.
- **Potential beneficiaries**
For Machine Translation Systems pertaining to Oriya language also it can also be extended to other Indian languages and finally leading towards Universal Network Language.
- **User Tie-ups**
None

5.6 Tagged Hindi Corpora

- **Technology Developer**
Electronics Research & Development Centre
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&
Kendriya Hindi Sansthan, Agra-282005
Tel. 0562-322159, 320683 Fax : 350914
Prof. Thakur Das
- **Level : Product/ Subsystem**
Software Product for Public Domain.
- **Description**
It is a machine readable corpora for Hindi of three million words size developed on the basis of literature published in Hindi. It is tagged for various grammatical categories such as verbs, nouns, adjectives, etc. The tagger tags the grammatical information to a particular word making use of the immediate context. This Corpus covers 76 subjects, categorized into six broad categories.
- **Encoding Standards**
The storage code is ISCII.
- **Portability/ Expandability**
The product can be integrated with translation packages, Language Learning Packages, Hindi Spell checker and grammar checker software. It can be improved to give unique tagging.
- **Type of Technology**
e-Content
- **Readiness for ToT Documentation**
Installation guidelines to use and configure the system is being prepared.
IPRs
Owned by MIT
Testing
Testing over and first version released.
- **Potential beneficiaries**
NLP Software Developers, Publishers, Language Research Institutions, MHRD, etc.
- **User Tie-ups**
None



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5.7 Hindi Speech Database

- ▶ **Technology Developer**
Electronics Research & Development Centre,
CSIR Complex,
NPL Campus, Hillside Road,
New Delhi-110 001
Tel. 011-5781467/5783172
Dr. S. S. Aggarwal, Scientist G and Head
sagrawal@ceerid.ernet.in
- ▶ **Level: Product/ Subsystem**
Software Subsystem
- ▶ **Description**
It is a Speech database for different utterances of speech samples by large number of speakers in variety of environment and phonetic context and is very basic and essential knowledge source for any research and development activity in speech Technology.
- ▶ **Encoding Standards**
Here audio signal is digitized, data files are available in WAV format.
- ▶ **Portability/ Expandability**
The system can be used with any Pentium machine with Windows Operating System. This can be integrated with automatic speech recognition algorithms developed by CEERI and TIFR.
- ▶ **Type of Technology**
e-Content
- ▶ **Readiness for ToT**
Documentation
Project documentation is available.
IPRs
Not yet applied.
Testing
It is very useful database for R&D in Speech Technology.
- ▶ **Potential beneficiaries**
Speech Research Institutes can use this database for both fundamental research and application research.
- ▶ **User Tie-ups**
TIFR, Mumbai and other Speech Research Groups.

5.8 On Line Courseware for DOEACC 'O' Level

- ▶ **Technology Developer**
Banasthali Vidyapeeth
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Tel. 01438-27847/51(O), Fax: 01438-27850
Prof. Rekha Govil
rekhagovil@yahoo.com
- ▶ **Level : Product/ Subsystem**
Software Product
- ▶ **Description**
Web Based Tutorials in Hindi for the five modules of DOEACC 'O' level courses are being developed containing the multimedia text, online exercises and glossary for each module. The work for the following two modules is complete
 1. Information Technology
 2. PC SoftwareFor the rest of the modules the work has commenced, namely
 3. C Programming
 4. COBOL Programming
 5. Business SystemsIt is planned that DOEACC shall be hosting the advertisements for these courses and shall be providing online learning for these courses for its registered students.
- ▶ **Encoding Standards**
The storage code is ISCII.
- ▶ **Portability/ Expandability**
The courseware can be viewed on the Internet with any Internet Browser. One has to copy the fonts for Hindi.
- ▶ **Type of Technology**
e-Content
- ▶ **Readiness for ToT**
Documentation
Installation guidelines and User's guide to use and configure the system is ready.
IPRs
Not yet applied
Testing
Self testing is over.
- ▶ **Potential beneficiaries**
Students, Teacher Community, Translators and Linguists.
- ▶ **User Tie-ups**
None

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5.9 Multi-lingual Ayurvedic Knowledge Base

- **Technology Developer**
Electronics Research & Development Centre
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Tel. 0471-320116 Fax: 0471-331654
Shri Ravindra Kumar
ravi@erdcitvm.org
- **Level: Product/ Subsystem**
It is a Software Product.
- **Description**
The ancient science of Ayurveda is the oldest known form of health care in the world. Often called the mother of all healing, it originated in India some 5000 or more years ago. Recently Ayurveda has been having a profound impact upon the world of health care. The potential of this ancient healing system to bring healing to those suffering with chronic diseases has been recognised worldwide. The Ayurvedic Classics, Charakasamhita and Susrutasamhita contain about 10,000 *slokas*. The former is a major work on internal medicine and the later describes highly developed surgery. These classics along with the Malayalam interpretations of the *slokas* are made available in CD media. Transliterated versions of the *slokas* in all major Indian Languages are also made available.
- **Encoding Standards**
The storage code is ISFOC.
- **Portability/ Expandability**
As it is browser based it is fully portable.
- **Type of Technology**
e-Content
- **Readiness for ToT Documentation**
Installation guidelines and User's guide to use and configure the system is under preparation.
IPRs
Not yet applied.
Testing
Self testing is under progress.
- **Potential beneficiaries**
Students and professional of Ayurveda can use this for reference. Any individual who is interested in Ayurvedic System of medicine can also benefit from this.
- **User Tie-ups**
None

5.10 PRAKES: Expert System for Estimation of Prakruti

- **Technology Developer**
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Shri Ravindra Kumar
ravi@erdcitvm.org
- **Level: Product/ Subsystem**
It is a Software Product.
- **Description**
Prakes is a software package for estimating *Prakruti* (constitution) of a person as decided in Ayurvedic System of Medicine. The concept of *Prakruti* is very powerful in Ayurveda. The word *Prakruti* means nature (natural form) of the build and constitution of the human body. A balanced state of the *Tridoshas* (*Vatha*, *Pittha* and *Kapha*) makes a healthy and balanced person (Physically and Mentally). Since we all have different combinations of the *Tridoshas*, Ayurveda shows that the path to optimal health is different for each person depending on their *Prakruti*. The diagnosis of *Prakruti* offers unique insights into understanding and assessing one's health. It is not merely a diagnostic device but also a guide to action for good health. The expert system package developed by ER&DCI is a comprehensive scientific tool for estimating *Prakruti*. It assesses the dominance of *Tridoshas* and give advice for preventive and promotive health care.
- **Encoding Standards**
The storage code is ISFOC.
- **Portability/ Expandability**
As it is browser based it is fully portable.
- **Type of Technology**
e-Content
- **Readiness for ToT Documentation**
Installation guidelines and User's guide to use and configure the system are under preparation.
IPRs
Not yet applied.
Testing
Self testing under progress.
- **Potential beneficiaries**
Professionals and students of Ayurveda, Primary Health Centres and any individual interested in Ayurveda.
- **User Tie-ups**
None

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5.11 EZHUTHACHAN : Malayalam Learning Software

- **Technology Developer**
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Tel. 0471-320116 Fax: 0471-331654
Shri Ravindra Kumar
ravi@erdcitym.org
- **Level: Product/ Subsystem**
It is a Software Product.
- **Description**
EZHUTHACHAN is a self-instructional English software package meant for assisting foreigners and students to learn Malayalam easily. It is basically a multimedia package with animations, which show the method of writing the letters and sound giving the pronunciation of characters and words. A writing pad is also provided, where a shaded model of each character appears and the user can practice writing over this using the mouse.
- **Encoding Standards**
The storage code is ISFOC.
- **Portability/ Expandability**
It works on both Linux and Windows platform. Higher level lessons/grammar lessons can be added to the package.
- **Type of Technology**
e-Content
- **Readiness for ToT Documentation**
Installation guidelines and User's guide to use and configure the system is under preparation.
IPRs
Not yet applied
Testing
Self testing under progress.
- **Potential beneficiaries**
Tourist and second generation Malayalies living abroad can use this package to learn Malayalam. This package can be used to teach Malayalam in primary classes.
- **User Tie-ups**
None

5.12 Web Based Education System

- **Technology Developer**
University of Hyderabad
Dept. of Computer & Information Sciences
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Tel. 040-3010500 Extn. 4056 (D), 3010064(O), 3010374(R)
Fax: 040-3010120, 3010145
Prof. K. Narayan Murthy (CI)
knmcs@uohyd.ernet.in
- **Level: Product/ Subsystem**
It is a Software product.
- **Description**
A complete Web Based Education system including Authoring tools, Content Delivery tools, Interaction tools such as email, chat, discussion rooms and white board, software labs that support actual coding, compiling, linking and running programs written in C, C++, Java and Perl, sophisticated testing, evaluation and reporting tools, library links, etc.
- **Encoding Standards**
It supports both ISCII and Unicode.
- **Portability/ Expandability**
The entire system has been developed using MySQL DBMS, JAVA, JavaScript, HTML and Pearl on Apache web server running under Linux. It will include our text editor and web tools. It may also be integrated with the PSA - Personal Search Assistant - a Meta Search Engine.
- **Type of Technology**
e-Content
- **Readiness for ToT Documentation**
Documentation is being prepared.
IPRs
Not yet applied.
Testing
System is being alpha tested. Improvements and enhancements are going on.
- **Potential beneficiaries**
Students, Teachers, Autors, any body interested in learning or teaching Telugu.
- **User Tie-ups**
None



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5.13 Realizing a News Portal in Devanagari

- **Technology Developer**
Indian Institute of Technology
Department of Computer Science & Engineering
Kanpur- 208016
Phone: (0512)597618
Professor T.V.Prabhakar
tvpr@iitk.ac.in
- **Description**
The aim of the project was to look into the issues involved in working with Hindi fonts and Devanagari script in general. The major thrust of the project was on font analysis where the True Type Font (ttf) standards were studied and Yogeshweb ttf font was parsed. The analysis also helped in implementing a transliteration scheme for Yogeshweb font. Efforts were also made to font convert some of the fonts to Yogeshweb. Partial success was achieved here. This background was used in building a Hindi news portal which fetched news headlines from various news sites.
- **Encoding Standards**
It is ISCII, ASCII, font based
- **Portability/Expandability**
It is portable and expandable
- **Type of Technology**
e-Content
- **Readiness for TOT Documentation**
Installation guidelines and User's guide to Use and configure the system are being prepared.
IPR
None
Testing
No alpha-beta testing done yet.
- **Potential beneficiaries**
Portal developers in vernacular
- **User Tie-ups**
None

5.14 Knowledge System on Indian Philosophy in Sanskrit

- **Technology Developer**
Utkal University, Bhubaneswar
Department of Computer Science & Applications
Vani Vihar, Utkal University
Bhubaneswar-751 004
Tel. 0674-580216(O), 540865(R)
Fax: 0674-581850
Prof. (Mrs) Sanghmitra Mohanty
sangham@dte.vsnl.net.in
- **Level: Product/ Subsystem**
Software Product
- **Description**
In CD form it contains books on Indian Philosophy that is Sarala Mohabharat and work on Daru Debata is under process.
- **Encoding Standards**
The storage code is ISCII.
- **Portability/ Expandability**
It is platform independent.
- **Type of Technology**
e-Content
- **Readiness for ToT Documentation**
Installation guidelines and User's guide to use and configure the system are under preparation.
IPRs
Not yet applied
Testing
Self testing is under progress.
- **Potential beneficiaries**
Persons interested in Indian Philosophy.
- **User Tie-ups**
None