



### 3. TDIL Vision

#### TDIL Vision 2010

(TDIL : Technology Development for Indian Languages)

##### A B C Technology Development Phases

India was long aware of the technological changes and the local constraints and development of Language Technology in India may be categorized in three phases:

- 1976-1990 : A-Technology Phase: Focus was on Adaptation Technologies; abstraction of requisite technological designs and competence building in R&D institutions.
- 1991-2000 : B-Technology Phase: Focus was on developing Basic Technologies- generic information processing tools, interface technologies and cross-compatibility conversion utilities. TDIL (Technology Development for Indian Languages) programme was initiated.
- 2001-2010 : C-Technology Phase: Focus is on developing Creative Technologies in the context of convergence of computing, communication and content technologies. Collaborative technology development is being encouraged to realise.

##### Vision statement

Digital unite and knowledge for all.

##### Mission statement

Communicating & moving up the knowledge chain overcoming language barrier.

##### Objectives

- To develop information processing tools to facilitate human machine interaction in Indian languages and to create and access multilingual knowledge resources/content.
- To promote the use of information processing tools for language studies and research.
- To consolidate technologies thus developed for Indian languages and integrate these to develop innovative user products and services.

##### Major Initiatives

- *Knowledge Resources*  
(Parallel Corpora, Multilingual Libraries/Dictionaries, Wordnets, Ontologies)
- *Knowledge Tools*  
(Portals, Language Processing Tools, Web based Tools)
- *Translation Support Systems*  
(Machine Translation, Multilingual Information Access, Cross Lingual Information Retrieval)
- *Human Machine Interface System*

(Optical Character Recognition Systems, Voice Recognition Systems, Text-to-Speech System)

- *Localization*  
(Adapting IT Tools and solutions in Indian Languages)
- *Language Technology Human Resource Development*  
(Manpower Development in Natural Language Processing)
- *Standardization*  
(ISCI, Unicode, XML, INSFOC, etc.)

##### TDIL Programme Goals

###### Short Term Goals

- Standardization of code, font, keyboard etc.
- Fonts and basic software utilities in public domain.
- Corpora creation and analysis.
- Content creation tools.
- Language Technology be integrated into IT curricula.
- Collaborative development of Indian language lexical resources.
- Writing aids (Spell checks, grammar checks and text summarization utilities).
- Sharing of standardized lexware & development of lexware tools.
- Training programs on ILT awareness, lexware development, and computational linguistics.

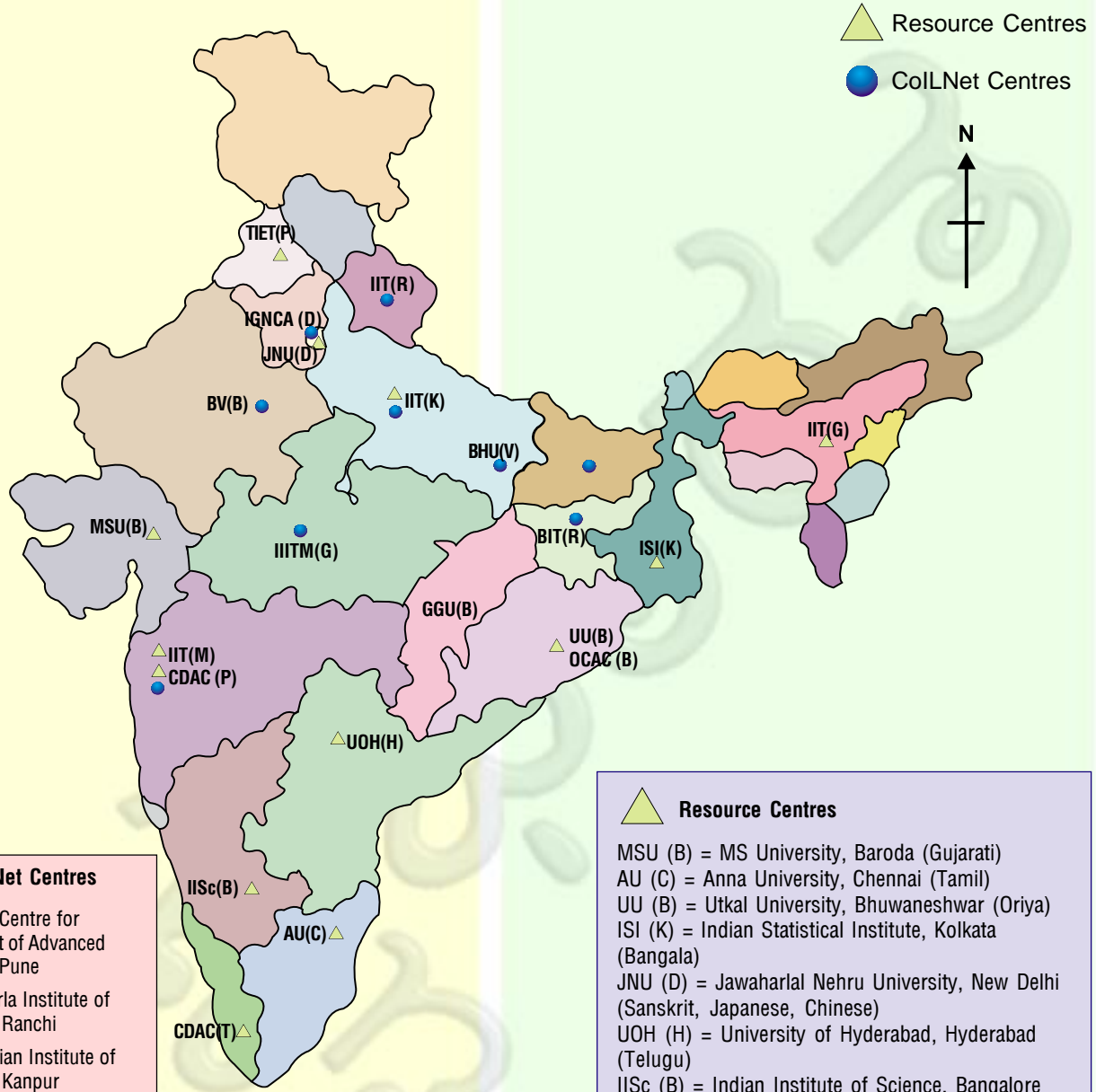
###### Medium Term Goals

- Indian language speech database
- Multilingual, multimedia, content development with semantic indexing, classical and multi font and decorative fonts, off-line/on-line OCR.
- Cross lingual information retrieval (CLIR) tools.
- Human speech encoding
- Speech Engine : Speech recognition, specific speech I/O.
- Indian language support on Internet appliances.
- Understanding and Acquisition of languages, knowledge representation, gisting and interfacing.
- Distinguished achievement awards for M. Tech/MCA/ Ph.D. level in Indian Language Technologies.
- Machine aided translation: English to Indian languages, among Indian languages, Indian languages to English and other foreign languages.
- On line rapid translation, gisting and summarization.

###### Long Term Goals

- Speech-to-speech translation.
- Human Inspiring Systems.

Language Technology Map  
Resource Centres & CoIL-Net Centres  
for Indian Language Technology Solutions



- CoIL-Net Centres**
- CDAC (P) = Centre for Development of Advanced Computing, Pune
  - BIT (R) = Birla Institute of Technology, Ranchi
  - IIT (K) = Indian Institute of Technology, Kanpur
  - IIITM (G) = Indian Institute of Information Technology & Management, Gwalior
  - BV (B) = Banasthali Vidyapeeth, Banasthali
  - BHU (V) = Banaras Hindu University, Varanasi
  - IIT (R) = Indian Institute of Technology, Roorkee
  - IGNCA (ND) = Indira Gandhi National Centre for the Arts, New Delhi
  - GGU (B) = Guru Ghasidas University, Bilaspur

- Resource Centres**
- MSU (B) = MS University, Baroda (Gujarati)
  - AU (C) = Anna University, Chennai (Tamil)
  - UU (B) = Utkal University, Bhubaneswar (Oriya)
  - ISI (K) = Indian Statistical Institute, Kolkata (Bangala)
  - JNU (D) = Jawaharlal Nehru University, New Delhi (Sanskrit, Japanese, Chinese)
  - UOH (H) = University of Hyderabad, Hyderabad (Telugu)
  - IISc (B) = Indian Institute of Science, Bangalore (Kannada)
  - IIT (K) = Indian Institute of Technology, Kanpur (Hindi & Nepali)
  - IIT (M) = Indian Institute of Technology, Mumbai (Marathi & Konkani)
  - IIT (G) = Indian Institute of Technology, Guwahati (Assamese, Manipuri)
  - CDAC (T) = Electronic Research & Development Centre of India, Thiruvananthapuram (Malayalam)
  - CDAC (P) = Centre for Development of Advanced Computing, Pune (Urdu, Sindhi, Kashmiri)
  - OCAC (B) = Orissa Computer Application Centre, Bhubaneswar (Oriya)
  - TIET (P) = Thapar Institute of Engineering & Technology, Patiala (Punjabi)