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.

TDIL Vision 2010

(TDIL : Technology Development for Indian Languages)

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
  (ISCII, 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.