



# IIT MADRAS

Indian Institute of Technology Madras

## Technology Transfer Office TTO - IPM Cell



### Industrial Consultancy & Sponsored Research (IC&SR)

## A Device & a Language Technology for Indian Languages IITM Technology Available for Licensing

### Problem Statement

- In the present era, there is a need of the art to develop an easy to learn script, which is made of a **small number of strokes** & suitable for use in Online Handwritten Character Recognition (OHCR) systems & has a rational composition.
- Further, there is no solutions discussed in the prior art patent literatures, & Present invention is addressed the issues efficiently.

### Intellectual Property

**IITM IDF Ref. 875; Patent No:377318;**

### Technology Category/ Market

**Technology:** Transliteration system for all the Indian languages into a single unique script called as "Bharati"; **Industry:** National Library & TKDL; **Application** Phone Apps

**Market:** The global language services market size is growing at a **CAGR** of **6.32%** during **2024-2029**.

### Technology

- Present invention describes a **device** & a **multilingual language technology** for Indian languages.
- Further subject invention discussed about said **device** which is installed with an application capable of **understanding the script** & **translating it to a desired Indian language**.
- The script of the present invention is made of a **small number of strokes** & has a **rational composition**, which is easy to learn, & suitable for use in **OHCR systems**.

### TRL (Technology Readiness Level)

**TRL-4**, Proof of concept tested in Lab;

### Research Lab

**Prof. V Srinivasa Chakravarthy,**  
Dept. of Biotechnology

### Key Features / Value Proposition

- Present invention provides a **transliteration system** for all the Indian languages into a **single unique script** called as "**Bharati**".
- **Bharati** script is entirely new script, consist of **minimum characters** having small number of strokes, that do not belongs to any language but **transliterate all the major Indian language script**.
- Thus our transliteration system includes a user interface with an application **pre-programmed** with **Bharati characters** that automatically identifies a text in an **Indian language** & transliterates the text.
- **The tens of thousands of characters** in all the **major Indian languages** can be transliterated using only these **Bharati characters**.
- A lot of morphologies of Bharati used are drawn from typically occurring themes in Indian alphabets systems & in English alphabets.
- Bharati vowels are distinguished by a **unique diacritic added** to a **common base** which resembles a **'c' character** turned leftwards, indicating the character as a pure vowel.
- Recommended to implement the system in **Traditional Knowledge Digital Library** & other National Indian Libraries.

<u>Bharati</u>	<u>English</u>
ome	Kamala
ᳵ ᳚᳚᳚	Sai Kiran
᳚᳚᳚	Bharateeya

### CONTACT US

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