

# Online Handwriting Recognition

Consortium of Indian Language Online Handwriting Recognition (OHWR)



## Indic Script Online Handwriting Recognition System

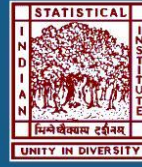
A novel solution for the majority of Indian population, who may not read and write well in English, to be able to write and interact with computing systems and fill up forms in Government offices and elsewhere.

### Languages supported

Hindi, Tamil, Kannada, Malayalam, Telugu and Bengali    Recent Additions: Assamese & Punjabi

### Consortium Members

C-DAC Pune, IISc Bangalore, IIIT Hyderabad, IIT Madras, ISI Kolkata, IIT Guwahati, Thapar University Patiala,



- How it works

Any stylus based inputting device can be used to input text using handwriting. All the stylus based devices provide basic data in the form of X-Y co-ordinates called as stroke/trace. This handwritten text in the form of stroke/trace is recognized by the Online Handwriting Recognition algorithms and converted to editable text.

- Benefits/Application Areas:

- Form-filling applications

Easing the process of collecting customer records in digital form using pen-based devices for institutions such as banks, railways, hotels, RTOs and National ID authorities, ration card, BPL card, voter ID, MNREGA card and farmers' pattadar passbook.

- Census data collection

One of the form-filling applications could be census data collection. India census creates gargantuan amounts of data to be digitized. A data capture device when combined with OHWR capability can be used to easily automate the whole process resulting in a much better organization of data.

- Other applications

Being a natural man-machine interface, Indic script OHWR can be used for a variety of applications such as user information collection by anganwadi workers and primary health centers, accident and FIR reports by police and note taking etc. It is also useful for sending text messages, language learning games for kids, as digital transcriber for PDA's and Tablet PC's etc.

- Which devices can support this technology?

- Any mobile phone with a stylus input
- Any Tablet device or PC
- Devices with provision to collect and store handwritten inputs
- Any stylus based digital writing device

- Key Features

- 100000 handwritten words data collected for each language
- 100000 words data annotated for each language
- Well defined API's for easy application interface
- Standardized XML database format for easy interoperability
- Portable recognition engines for mobile devices

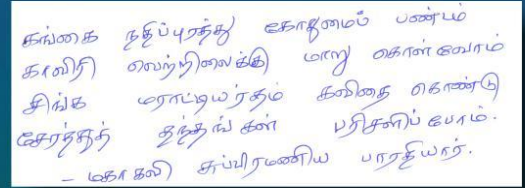
- Next Challenges in OHWR

- Writing style variations
- Geographic influences on writing styles
- Changes in specifications of writing devices
- Highly cursive nature of writing
- Broken, overwritten writing
- Free flowing text having diagrams, tables, annotations etc.

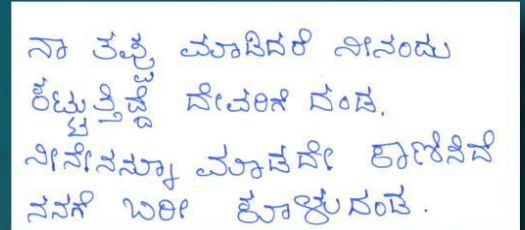
Web: [www.tdil-dc.in](http://www.tdil-dc.in)

Contact:

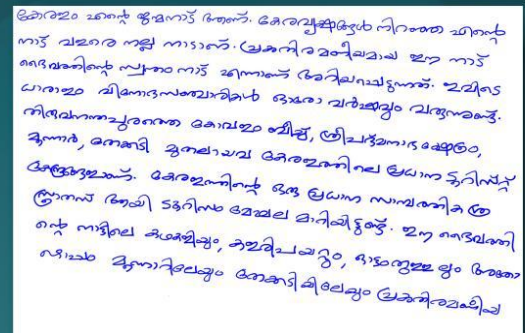
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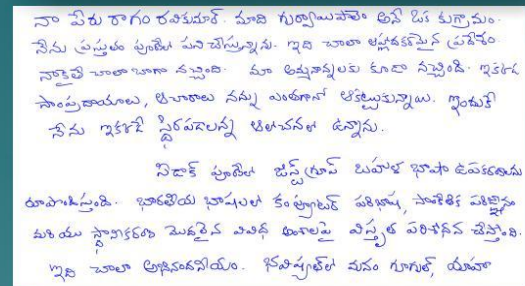
Tamil



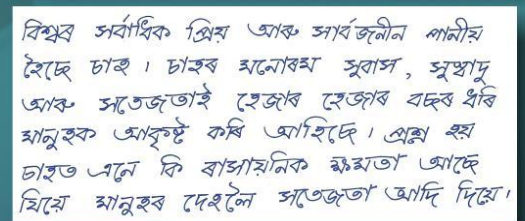
Kannada



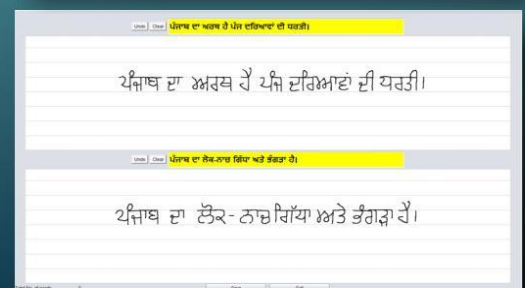
Malayalam



Telugu



Assamese



Punjabi