

- ▶ **Testing of the Product / Technology :** Testing has been done
- ▶ **IPR / Open Source :** IPR lies with University of Hyderabad and Dept of Information Technology
- ▶ **Potential beneficiaries :** Users of telugu softwares public and government organisations.
- ▶ **Name and address of the Resource Person :**  
Dr. K. Narayanamurthy  
Department of CIS, University of Hyderabad  
Hyderabad-500046, A.P. India

## 5.4 Transliteration Tools

### 5.4.1

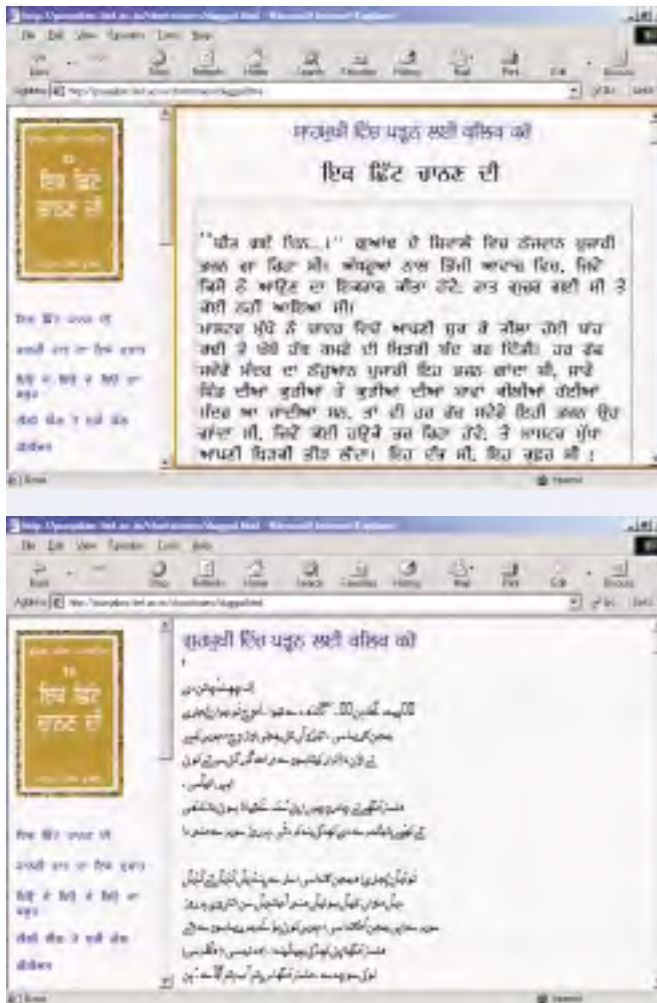
- ▶ **Name of the Technology :** *Transliteration from Gurmukhi To Shahmukhi*
- ▶ **Nature of Technology :** Knowledge Tool (Software for Punjabi to Urdu Transliteration)
- ▶ **Level:** (Product / Technology / Sub-system)  
Product developed in collaboration with CDAC, Pune
- ▶ **Technical Description of the Technology / Product including Basic block diagram, Algorithm used, O/S used, Front-end / user interface, and Specification of the Technology / Product :** Punjabi Language is used in both parts of Punjab in India and Pakistan. In East Punjab (India) Punjabi is written in Gurmukhi script. This script was created by Guru Angad Dev Ji. This is written from left to right. In West Punjab (Pakistan) Punjabi is written in Shahmukhi script. This is written from right to left like Urdu and Persian. Both Shahmukhi and Gurmukhi have been in use simultaneously for writing in Punjabi Language. A transliteration program was required to break the barrier between the Punjabi Language written in these two scripts which can convert Gurmukhi Text to Shahmukhi and vice versa. In this direction the Punjabi resource Centre has collaborated with the Urdu resource Centre established at CDAC, Pune to develop a computer program which will automatically convert the Gurmukhi text to Shahmukhi. Using this software, a collection of short stories by Mr. K.S. Duggal in Gurmukhi has been converted to Shahmukhi.

**Platform:** IBM Compatible PC with 486 or Pentium CPU.

**Operating System:** Windows 95,98,2000, XP.

**Programming Interface:** Delphi

- ▶ **Representative Snapshot / screenshot of the Technology / Product:** Screenshot of Gurmukhi Input Text : Screenshot of Shahmukhi Output Text :



► User–agency tie-up : 25 short stories by Mr. Kartar Singh Duggal have been transliterated from Gurmukhi to Shahmukhi using this product. These stories are available on : <http://punjabirc.tiet.ac.in/shortstories/duggal.html>

► Name and address of the Resource Person:  
*Dr. R.K. Sharma,*  
*Coordinator,*  
*Resource Centre for Indian Languages Technology Solutions – Punjabi (RCILTS - Punjabi),*  
*School of Mathematics and Computer Applications (SMCA),*  
*T.I.E.T, Patiala - 147004*  
*Punjab (India).*  
*E-mail : [rksharma@tiet.ac.in](mailto:rksharma@tiet.ac.in)*  
*Web : <http://punjabirc.tiet.ac.in/rcentrei.asp>*

- **Scalability / Portability / Expandability:** Portable among any of the Windows environment Win 95, 98, Window-ME, Win-2000, Win-NT.
- **Readiness of Transfer of Technology (ToT) :** Yes
- **Availability of documentation :** Yes
- **Testing of the Product / Technology :** Testing has been done
- **IPR / Open-source :** Product developed in collaboration with CDAC, Pune and the transliteration of the Punjabi short stories in Punjabi by Dr. Kartar Singh Duggal to Shahmukhi is available on the Resource Centre website as open source. The URL for it is : <http://punjabirc.tiet.ac.in/shortstories/duggal.html>
- **Potential Beneficiaries :** Typist, Linguists, Students, Teachers, Punjabi Learners, Urdu Learners, Translators, Educationists, Office Personnel, Corpus Developers etc.

5.4.2

- ▶ **Name of the Technology :** *Transliteration from Punjabi To Roman*
- ▶ **Nature of Technology :** Knowledge Tool (Software for Punjabi to Roman Transliteration)
- ▶ **Level:** (Product / Technology / Sub-system) Product
- ▶ **Technical Description of the Technology / Product including Basic block diagram, Algorithm used, O/S used, Front-end / user interface, and Specification of the Technology / Product:** For many years Roman transliteration had been used to represent text in Indian languages. The transliteration utility may be effectively used in converting the Punjabi texts into the form suitable for display in Roman scripts. The software permits text in Punjabi to be transliterated to Roman, which is the phonetically equivalent English language output. The words in the given text are converted into appropriate phonemes and displayed in English. This is the aspect of fonts wherein the language can easily be transliterated into any script and be read phonetically. Punjabi to Roman transliteration is available so that people who don't know Gurmukhi could also read Punjabi texts.

**Platform:** IBM Compatible PC with 486 or Pentium CPU

**Operating System:** Windows 95,98,2000, XP

**Programming Interface:** Delphi

- ▶ **Representative Snapshot / screenshot of the Technology / Product:** Screenshot of Gurmukhi to Roman Transliteration :



- ▶ **Scalability / Portability / Expandability :** Portable among any of the Windows environment Win 95, 98, Window-ME, Win- 2000, Win-NT.
- ▶ **Readiness of Transfer of Technology (ToT) :** Yes
- ▶ **Availability of documentation :** Yes
- ▶ **Testing of the Product / Technology :** Testing is being done
- ▶ **IPR / Open-source :** Open Source
- ▶ **Potential Beneficiaries :** Typist, Linguists, Students, Teachers, Punjabi Learners, Translators, Educationists, Office Personnel, Corpus Developers etc.
- ▶ **User-agency tie-up:**
- ▶ **Name and address of the Resource Person:**  
*Dr. R.K. Sharma,*  
*Coordinator,*  
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