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HUMAN COMPUTER INTERACTION FOR ILLITERATE AND SEMI-ILLITERATE USERS TO ACCESS e-GOVERNANCE APPLICATION
In this multimodal, we refer to the inclusion of speech and hand-writing interfaces along with the key-board interface of the computer.

Rural people can use internet to either access an e-governance application, to contact a city hospital or get vital crop information or to communicate with a relative somewhere else.
Details of work

- Modifications are made to the kernel part of the operating system to enable speech and hand-writing interfaces.
- Advantage of this approach is new interfaces enabled in kernel are inherited by all applications.
An editor program and a generalized viewer program to prepare and display text in different local languages.

A program to prepare printed output

Lip movement recognition by pattern recognition along with voice recognition to improve the interface for voice input mode.
Key findings

- Local language interface for computer applications is a necessity for majority of people in less-developed and developing nations.

- Since, giving input for computer applications in local languages with the available standard keyboard interface is very complex, there is a need for natural interfaces like speech and handwriting to provide local language input to the computer.
This Multimodal interaction (MMI) permits the switching of these input modes from one to another interface instead of replacing it.

There is a need for testing higher versions of this newly developed user-friendly interface.
Future plan

- There is a need for incorporation of natural interfaces such as lip movement, hands movement etc. to the Multi Modal interface.

- The recognition mechanism of natural modes is not fully advanced. To make the MMI more robust and to reduce the errors in the recognition of natural modes the inputs from different modes can be used to get the resultant input.