

Workpackage 6: Trials and Evaluation. RNID

Objectives: Qualitative and quantitative evaluation of transport mechanisms for and the underlying mechanisms of virtual signing.

Milestones to date:

Evaluation of Constrained PO system due month 9; delivered month 7.

Achievements to end of July 2000

Work to date has primarily entailed a formal evaluation of the Constrained Post Office system developed in WP 3 (executive summary attached). With UEA and the Post Office, formal evaluations were conducted in May. Six profoundly deaf people and three Post Office clerks took part. The evaluations indicated that there is scope for improvement of TESSA, gave some insight into how these improvements could be achieved and provided baseline outcome measures against which improvements could be assessed. Modifications are planned for all aspects highlighted as needing improvement, including implementation of an unconstrained version, where phrases need not be repeated word for word, which should enable much more natural communication. There is a need for community evaluations to assess the views of more deaf people and further evaluations of a modified, unconstrained version of the system (scheduled for next year) to establish the ultimate potential benefits of TESSA.

Progress towards next milestones

Recruitment is in progress for a Community Evaluation Officer who will carry out community evaluations, set up focus groups and obtain general feedback from as many deaf people as possible in the UK. While there have been delays in this recruitment process, this is unlikely to affect completion of milestones as the majority of RNID evaluation work is scheduled for later in the project. It is anticipated that someone will be in post by November.

ViSiCAST: Evaluation of the constrained system for face-to-face communication in the Post Office - 10th July 2000

Executive summary

Evaluations are reported for a system – “TESSA” – developed to help sign-language communication for face-to-face transactions in the Post Office (PO). TESSA recognises what a clerk says, from a restricted list of phrases, and plays an appropriate pre-recorded phrase signed by an avatar on a screen. Six profoundly deaf people whose first language is British Sign Language (BSL) and three PO clerks took part. The main findings were:

- On average, 80% of the signs produced by the avatar and 61% of whole phrases were identified correctly.
- For ratings of ease of identification on a 5-point scale from 1-“Very difficult” to 5-“Very easy”, 79% of phrases were rated 3 or higher.
- For ratings of acceptability on a 3-point scale from 1-“Low” to 3-“High”, 63% of phrases were rated as 2 or 3.
- On average, the time taken to complete staged transactions was longer with TESSA than without, and the deaf participants, and to a lesser extent the clerks, rated communication with TESSA as more difficult and as less acceptable than without TESSA.
- Two of the six deaf participants said they would prefer to have the system available in the PO for use when communication became difficult. The other four said they would prefer to communicate without TESSA in its present form.
- The three deaf participants who usually experienced some worry or upset using the PO said communication with TESSA in the PO would not bother them at all.
- Aspects identified as needing improvement included facial expressions, clearer handshapes, finger configurations and lip patterns (especially for numbers and finger-spelling), the delay between spoken and signed phrases and a clearer distinction between face/hands and plain clothing.
- All clerks said they would prefer to have the system available as they thought it would make communication with deaf customers easier and more effective, though may take more time. Use of the system for multiple languages would ensure more frequent use and hence more likely use with deaf people.
- The clerks suggestions for improvement were primarily access to more phrases and an unconstrained system where phrases need not be spoken verbatim.

In conclusion:

The evaluations indicated that there is scope for improvement of TESSA, gave some insight into how these improvements could be achieved and provided baseline outcome measures against which improvements could be assessed. Modifications are planned for all aspects highlighted as needing improvement, including implementation of an unconstrained version, where phrases need not be repeated word for word, which should enable much more natural communication. There is a need for community evaluations to assess the views of more deaf people and further evaluations of a modified, unconstrained version of the system, eventually in a real PO setting, to establish the ultimate potential benefits of TESSA.