Application # \_\_\_\_\_\_\_\_/12

**Initial Ethics Review Form**

**Project Title**:

Using gaze to enhance voice dictation in Human Computer Interaction

**Project description**: (not more than 500 words) including aims of the project, the proposed research design and methods to be used, proposed participant pool, sources of any external funding and details of any third party/ contractor arrangements and incentive payments.

Gaze tracking has traditionally been suggested as an alternative to traditional pointing mechanisms for computer input. However, the accuracy limitations of gaze estimation algorithms has constrained its potential to become a reliable substitute of the mouse/keyboard. Additionally, overloading a perceptual channel such as vision with a motor control task can be cumbersome and fatiguing. Rather than using gaze tracking as a complete pointing mechanism, this work explores how to use gaze

tracking as a complement to aid traditional voice dictation task to a computer using a voice recognition engine. Computer based voice recognition is a challenging problem that often misrecognizes the intended words uttered by users. In this experiment we intend to measure and compare 3 different ways of correcting misrecognized dictated words:

1. Using traditional input mechanisms for correction: keyboard and mouse

2. Using voice to correct

3. Using gaze and looking at misrecognized words for the GUI to display alternative words

The experiment will require the subjects to sit for less than 20 minutes in front of a computer equipped with a microphone headset and dictate 30 sentences while their gaze is being tracked. Subjects will be required to correct misrecognized words with one of the previously listed methods. The results obtained for each trial for each experimental conditions will be compared and the results published in an academic journal.

In Summary, the experiment will only require users to dictate sentences and use the mouse and the keyboard for less than 20 minutes.

**Project Location(s):** ICT Centre - QCAT

**Proposed Start Date**: 04/02/2013 **Proposed Finish Date**: 14/02/2013

***Principal Researcher/ Project Leader***

Name: David Rozado

Position:Postdoctoral Fellow

Division/ Group:ICT Centre Location:ICT Centre -QCAT

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***Please check the relevant box to answer yes or no to each of the following questions****[if answering ‘yes’ to any questions please ensure further details are provided in the project description above]****:***

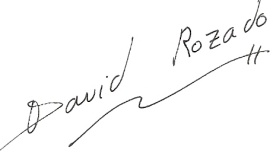
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| --- | --- |
| 1. Has this project been reviewed and conditionally approved or rejected by another ethics committee? | Yes  No |
| 1. Is the project being externally funded or provided with in-kind support by an external party? | Yes  No |
| 1. Will there be any restrictions (or restrictive procedures) placed on the publication of results from this research as a result of the funding or support arrangements? | Yes  No |
| 1. Will any part of the project be undertaken by or outsourced to a third party? | Yes  No |
| 1. Are there any potential conflicts of interest for the research team or organisation(s) associated with the project eg. arising from any involvement or role that researchers may have with other projects or external organisations, an existing relationship between a member of the research team and the potential participants? | Yes  No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1. Will the project specifically target or include any of the following groups as participants?  * Aboriginal and Torres Strait Islander peoples * People in other countries * People whose primary language is other than English * People from a workplace which will be the subject of the research * People who may be involved in illegal activities * People in dependent or unequal relationships eg. government agencies and the service providers they fund/ or communities to whom the service is provided | | | Yes  No | |
| 1. Will consent for participation in this research be sought from all participants? | Yes  No | |
| 1. Will there be any participants involved in the project who do not have the capacity to give consent for themselves? eg. children/ young people, people with a cognitive impairment or intellectual disability. | Yes  No | |
| 1. Will there be any incentive/payment (eg. money, movie tickets, food vouchers) or reimbursement (eg. travel expenses) given to participants? | Yes  No | |
| 1. Will the information being collected from and stored about participants be in an individually identifiable or re-identifiable form? | Yes  No | |
| 1. Does the research involve limited disclosure to participants or active concealment? | Yes  No | |
| 1. Are there any risks (eg. social, psychological, financial, physical, legal) to participants, the research team or others arising from their involvement in the research which **cannot** be mitigated/ negated through project design? | Yes  No | |
| 1. Is it likely that the research will involve the disclosure of unlawful conduct, or concealment of a crime, by individuals or definable groups? | Yes  No | |
| 1. Will the information to be collected about participants during the project come from any of the following sources:  * another person about the research participant * an agency, authority or organisation other than CSIRO * a data source collected previously by CSIRO for a purpose other than this research project | Yes  No | |
|  | |
| 1. Will this research project involve access to, use, collection or acquisition of culturally sensitive materials or artefacts? | Yes  No | |

***Signature***

As Principal Investigator/ Project Leader for this research project I certify that:

* the information provided in this application is correct to the best of my knowledge
* I will notify in advance the CSSHREC of any ethically relevant variations to the project
* I will immediately report to the CSSHREC any adverse events or harm that occurs to participants during or resulting from the research
* the research team have read and agree to abide by the principles contained in the *National Statement on Ethical Conduct in Human Research (2007)*

Signed:  Date: 17/01/2013

***(Principal Investigator/ Project Leader)***

Please email this form along with a copy of your full project proposal to [csshrec@csiro.au](mailto:csshrec@csiro.au)

\*Please note, that this is a very small research effort being carried out as part of my Postdoc capability fund, and it is not related to any formal project.

***Initial Review/ Risk Assessment Decision***

Project assessed as low/ negligible risk

Project will require review by CSSHREC

*Comments*

Signed: Date:

***(CSSHREC Chair)***

Applicant notified: Date:

***(CSSHREC Executive Officer)***