

Introducing #Dasher, A continuous gesture IDE, A work in progress paper

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Abstract. A work in progress Integrated Development Environment, #Dasher, based on continuous gestures is introduced. The challenges of such a user interface are considered with concept exploration studies and concept demonstrators. The language modelling requirements are considered and some other applications of the technology are discussed. Finally some questions currently being investigated are mentioned.

1 Introduction

While there have been substantial recent improvements in computer accessibility for disabled people, these improvements have generally not carried through into software development environments. This presents difficulties for some disabled users, including the increasing numbers who suffer from repetitive strain injuries.

This paper introduces #Dasher, a research software development environment operated by continuous gesture and limited button input. This paper also discusses other potential applications for derived technologies.

1.1 Speech Recognition and Software Development

Despite recent improvements there are severe problems in using speech recognition for development. The language models are highly unsuitable and the difficult navigation methodologies results in an interface with high viscosity [1]. This is problematic as it hinders the design explorations and structural modifications that are common in software development. The combination of these factors tends to make the environment inefficient, stressful to use and places a high strain on the developer's voice, potentially risking voice strain.

1.2 Dasher

Dasher [2] is a text entry system that operates by continuous gesture. The original version is steered by two-dimensional gestures conveyed by a mouse, touchscreen or gaze tracker [3]. It has been shown to be useful for users with impaired mobility, with

