

InclineType: An Accelerometer-based Typing Approach for Smartwatches

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Small mobile devices such as smartwatches are a rapidly growing market. However, they share the issue of limited input and output space which could impede the success of these devices in future. Hence, suitable alternatives to the concepts and metaphors known from smartphones have to be found. In this paper we present InclineType a tilt-based keyboard input that uses a 3-axis accelerometer for smartwatches. The user may directly select letters by moving his/her wrist and enters them by tapping on the touchscreen. Thanks to the distribution of the letters on the edges of the screen, the keyboard dedicates a low amount of

space in the smartwatch. In order to optimize the user input our concept proposes multiple techniques to stabilize the user interaction. Finally, a user study shows that users get familiar with this technique with almost no previous training, reaching speeds of about 6 wpm in average.