**Real-time pen input system for writing utilizing stereo vision**

ABSTRACT

A system that captures handwritten words on a piece of paper utilizing two cameras which observe and track a pen's tip lateral movement is presented. The system tracks the pen's tip in for accurate three dimensional (3D) positioning of the pen's tip. Pen's tip 3D coordinates are then being used to re-construct the handwritten input into computer image. Experimental results show that the system can detect and track handwriting within 1mm accuracy on the y-axis and 7 mm accuracy on the x-axis (depth).