ABSTRACT

The VHW simulates the movement of the finger of the user as writes on the monitor screen. When we want to make a line on the screen, certainly can't break. This case can occur when the object is focused out of the view camera, so it must be re-initialized from the last position in the frame. This VHW system is intended for a comic creator with disabilities.

Object Tracking Method can be applied to create a virtual handwriting system (VHW). Current methods for object tracking perform adaptive tracking-by-detection, meaning that a detector predicts the position of an object and adapts its parameter to the object's appearance at the same time. While suitable for cases when the object does not disappear from the scene, these methods tend to fail on occlusion. In this final project, VHW system is built by the Tracking-Learning-Detection Method (TLD). This method uses a bounding box or indicates an invisible object in each frame. The output TLD has noise, so the VHW system helped by Density Clustering, which is useful for denoising and interpolate from the TLD output.

The final result of this project is an object that forms a line. Using full frame rate data and sampling factor 3. Analysis of this system using like denoising and interpolate, overlap and precision, times parameters. The best results of this system on full frame rate data which has an overlap percentage of 99.52% and precision 91.35%.

Keywords : Object tracking, Virtual handwriting, Tracking-Learning-Detection, Density Clustering, AUC.