ABSTRACT

Pencak silat is one of Indonesia's culture heritage that should be preserved by Indonesian people. There are many kinds of martial arts in Indonesia. Every each region has their own characteristic. Because of lacked of attention and deployment of pencak silat by Indonesian people, that problems cause a degradation of interest in pencak silat. By utilizing advanced technology development, made an interactive game as a media for learning pencak silat which are expected to increase public interest in pencak silat.

Method for making this game by the way of direct research on pencak silat movements in West Java. Pencak silat game created by Unity game engine and Kinect Sensor for X-Box. This game requires the player do pencak silat pose to form a step that can be used againts the enemy. Kinect sensor will capture the player's pose in real time, and then compared with the dataset in the game program. The pose recognition uses the method of forward chaining.

Based on the result of alpha and beta testing, pencak silat game has known 20 pose of pencak silat movements well. The accuracy of pose recognition using forward chaining method is 88,22%. This result was obtained from the average of 3 Scenarios of 20 pose recognition test inside the game. The result of the accuracy of those 3 scenarios are, for the accuracy of pose recognition using joint priority is 88,16%, the accuracy of pose recognition without joint priority is 87,99%, and the accuracy of pose recognition using marker is 88,5%.

Key Word: *Sensor Kinect, Skeleton Tracking, Human Posture Recognition*