

ABSTRACT

Webinar applications generally have small resolution video panel and presentation panel on the separate section. This problem affects users on how they presentate in way less interactive. In this project was made web-based augmented reality application to display presentation slide in video conference. The presentation slide displayed with alpha channel configuration in front of presenter in videoconferencing screen. It makes the presenter can interact with presentation object. The presenter can adjust the displacement of slide presentation page by directing colored ring on his finger. In the other place, the audience can see the presenter and his presentation object by videoconferencing sytem.

This application was made using the actionscript 3.0 programming language that is based on adobe flash. Actionscript 3.0 can be programmed to detect the movement of the colored marker of and to show the captured webcam stream. The protocol used for streaming is rtmp and the red5 media server was used to flow rtmp streams. The remote shared object methods in actionscript 3.0 was used to control the displacement of presentation slide by send value page to the audience side.

The evaluation showed that the marker detection works well on high end webcam, changes in the average distance of less than 5 meters, as well as a plain color background. Based on the analysis of QoS and MOS, the quality of the video conference went well with the range of the network bandwidth of at least 2.4 mbps upstream and downstream of at least 2.4 mbps. On a network that meets the minimum requirements, quality appearance of virtual objects as communication video conferencing has shown good results in terms of user perception and interaction as well as the synchronization and integration of virtual objects with real objects. Comparison of usability factors in the way of presenting the webinar application shows that users prefer the application of augmented reality in the way of interactive presentations, presenter's satisfaction in the video display, and the audience will be more focused in the presentation.

keywords : augmented reality, video conference, presentation, color detection