THE STUDY OF MPEG4 APPLICATIONS IN COLLABORATIVE VIRTUAL ENVIRONMENT

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ABSTRACT

CURRENTLY, THE COMMUNICATION SYSTEMS OF WEB VIRTUAL ENVIRONMENTS ARE MAINLY COMPOSED OF 2D USER INTERFACES AND TEXT CHAT TOOLS. THOUGH THEY ARE USEFUL AND EASILY DEVELOPED FOR WEB COMMUNICATION. THEY LACKED OF SUPPORTING REAL-LIFE LIKE NONVERBAL COMMUNICATION FEATURES SUCH AS GESTURE AND BODY LANGUAGE THAT IN SOME OCCASIONS ARE MORE POWERFUL THAN ITS VERBAL COUNTERPART. THIS DRAWBACK IS PERHAPS ONE OF THE MAIN PROBLEMS THAT WILL HINDER PEOPLE TO USE WEB COMMUNICATION SYSTEMS. SOME WEB SYSTEMS START TO BUILD ANIMATED FIGURES FOR BROADCASTING NEWS TO ATTRACT PEOPLE. HOWEVER, UP TO DATE, ONLY FEW OF CURRENT WEB SYSTEMS ARE ABLE TO SUPPORT SIMPLE AND PREDEFINED GESTURES FOR NONVERBAL COMMUNICATIONS. THE EMERGING TECHNIQUE, H-ANIM STANDARD SPECIFICATION OF MPEG-4, PROVIDES A GOOD OPPORTUNITY TO IMPROVE CURRENT WEB CHAT ENVIRONMENTS. THIS RESEARCH INTENDS TO INVESTIGATE HOW SUCH TECHNOLOGY CAN BE COMBINED WITH MULTI-USER 3D WEB VIRTUAL ENVIRONMENTS TO PROVIDE A BETTER WEB COMMUNICATION ENVIRONMENT. WE WILL DESIGN AND BUILD A PROTOTYPE SYSTEM USING THIS NEW TECHNOLOGY SO THAT PEOPLE ARE ABLE TO USE GESTURES TO COMMUNICATE WITH OTHERS IN A WEB 3D VIRTUAL ENVIRONMENT. THE PROBLEMS ENCOUNTERED AND RESULTS WILL BE REPORTED FOR FUTURE RESEARCH.

Keywords : VIRTUAL REALITY, VRML, MPEG-4, H-ANIM

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