THE STUDY OF OBJECT DISTRIBUTED EVENT MODELING IN MULTI-USER VIRTUAL ENVIRONMENT FOR E-COMMERCE

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ABSTRACT

WEB-BASED MULTI-USER COLLABORATIVE VIRTUAL ENVIRONMENT HAS BEEN A HOT RESEARCH AREA IN MANY RESEARCH COMMUNITIES FOR MANY YEARS. MUCH RESEARCH HAS BEEN TOWARD DEVELOPING SUCH VIRTUAL ENVIRONMENTS BASED ON THE SPECIFICATION OF LIVING WORLD (LW) PROPOSAL. UP TO DATE, HOWEVER, MOST DEVELOPED SYSTEMS ARE BUILT TO PROVIDE SHARED VIRTUAL WORLD FOR SOCIAL ACTIVITIES SUCH AS ENTERTAINMENT AND INTERNET CHATTING. THEY ARE LACK OF SUPPORT IN E-BUSINESS FUNCTIONS (I.E. BUSINESS REPORTS ON DEMAND, REAL TIME TASK NOTIFICATION, COLLABORATION ACTIVITIES AND SESSION MANAGEMENT), WHICH LIMITS THEIR USEFULNESS IN ELECTRONIC COMMERCE APPLICATIONS SUCH AS WEB-BASED COLLABORATIVE LEARNING AND VIRTUAL TEAM (ENTERPRISE) PROJECT DEVELOPMENT. THE NEED OF WEB-BASED MULTI-USER 3D COLLABORATIVE ENGINE FOR E-COMMERCE HAS BEEN RECOGNIZED BY SOME RESEARCHERS IN RECENT YEARS. HOWEVER, THEIR RESEARCH IS STILL IN INFANT STAGE. AN INTENSIVE STUDY OF HOW TO BUILD A DYNAMIC COLLABORATIVE ENGINE PERFORMING E-BUSINESS IN SHARED VIRTUAL ENVIRONMENT DESERVES SPECIAL ATTENTION. BUILDING SUCH A VIRTUAL ENVIRONMENT, HOWEVER, IS A GREAT CHALLENGE FOR MANY RESEARCHERS. IT REQUIRES TO INTEGRATE SEVERAL STATE OF ART TECHNOLOGIES SUCH AS JAVA NETWORKING (RMI), VRML, EAI (EXTERNAL AUTHORING INTERFACE) AND DISTRIBUTED OBJECT DATABASE PROGRAMMING. IN THIS PAPER, WE WILL PROPOSE A VIRTUAL WORLD MODEL AND A COLLABORATIVE ENGINE FOR PERFORMING DYNAMIC E-BUSINESS FUNCTIONS IN SHARED VIRTUAL ENVIRONMENT. THE VIRTUAL WORLD MODEL ENABLES USERS TO DEVELOP VIRTUAL WORLDS AS SESSION ENVIRONMENTS EASILY BASED ON THE STANDARD VRML AND LW SPECIFICATION. THE COLLABORATIVE ENGINE SUPPORTS A SET OF API'S THAT WILL PROVIDE HIGH LEVEL SUPPORT OF E-BUSINESS FUNCTIONS BASED ON JAVA RMI EVENT NOTIFICATION AND DISTRIBUTED OBJECT TECHNOLOGY. SINCE OUR DESIGN IS BASED ON OPEN STANDARDS AND PLATFORM-INDEPENDENT LANGUAGES, THIS PROJECT WILL MAKE A SIGNIFICANT CONTRIBUTION FOR FUTURE SEARCHERS IN PURSUING SIMILAR RESEARCH AREA.

Keywords: RML, VIRTUAL ENVIRONMENT, E-COMMERCE, EAI, RMI, DISTRIBUTED EVENT.

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