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Design and Development of a Java Client/Server Architecture System with access to several SQL Databases.

ABSTRACT - Masterthesis

KEYMILE GmbH is a leading manufacturer of data transmission systems. Keymile has been producing broadband Systems which are MileGate, XMC20, UMUX, XMP1 and Orcax. MileGate combines carriergrade broadband access, telephony and data interfaces in one single, compact IP/Ethernet-based Multi-Service Access Platform. As a result, network operators can continue to support traditional telephony and broadband services, migrate to the NGN (Next Generation Network) and provide Triple Play and broadband business services, too.

XMC20 is a purpose-built multi-service telecommunication family of network elements. It was designed to meet the stringent access & transport networks requirements for Mission-Critical Systems. UMUX is a multi-service access and transport system that can provide a variety of applications for dedicated network operators. It offers extensive multi-service capabilities, ranging from legacy data services to Ethernet-over-SDH functions. XMP1 is a modular multi-service access system, designed for usage in dedicated networks. It has a variety of interfaces for providing voice services telephony, data services, Ethernet, video and teleprotection.

For developing above products and an examining through Testcase Database Mangement (TCDB) application. In my master thesis work has included the designing and development of GUI(Graphical User interface) Frameworks for Testcase database management application(TCDB CLIENT as well as TCDB SERVER). System requirements are gathered in an SQL database for the product development.

Test cases are derived from the requirements and stored in another SQL database. For system and product qualification the test cases have to be executed by the test team and in case of deviations from the expected result a defect report has to be created. The defect reports are stored in a further SQL database. To manage requirements, test cases and defect reports different systems with GUI (graphical user interfaces) are used.

Aim of this work is to extend a Java Client/Server system with graphical user interface to access all databases and to link the relevant data. A consolidated view with full traceability to the datasets shall be possible. A concept of the system design to access and link data between several databases has to be developed. The database scheme and the views of the graphical user interface need to be designed.

The concept shall be implemented based on the Java Client/Server system and tested.