Abstract

In this paper is studied the relation of WLAN, WIMAX and WCDMA towards UMTS in the point of whether these new technologies are the replacement or complementary to the UMTS. Currently, work is under way within ETSI to define a third generation mobile telecommunications system, known as the Universal Mobile Telecommunications System (UMTS), to be introduced in the early years of the 21st century. The main objective of UMTS is to offer a plethora of
advanced mobile telecommunication services via a variety of public and private network operators in both outdoor and indoor environments. To allow a cost-effective introduction of UMTS, migration/evolution scenarios have been defined within ETSI, aiming at a smooth introduction of the new services and systems, starting from existing contemporary mobile and fixed telecommunication systems. VLSI Design based implementations have been the key feature in this research paper.

**Reference**

- ETR 050101 Special Mobile Group (SMG): Universal Mobile Telecommunications System (UMTS) objectives and overview version 2.1.0
- ETR 050901 Special Mobile Group (SMG): Security principles for the Universal Mobile Telecommunications (UMTS) version 3.0.0
- AC095/Atea/WP21/DS/P/05/1 Migration Scenarios, ACTS ASPeCT deliverable
- AC095/Atea/WP21/DS/P/02/1 Initial report on security requirements, ACTS ASPeCT deliverable
- Design Patterns, Elements of Reusable Object-Oriented Software, ISBN 0-201-63361-2

**Index Terms**

Computer Science       Wireless

**Key words**

UMTS       Security

smart card