

Reference: Evaluation of ATM Switches on behalf of MobilCom Multimedia GmbH

1 Customer

MobilCom Multimedia GmbH (<http://www.mobilcom.de>).

2 Project Targets

The objective of this project with MobilCom Multimedia GmbH was an evaluation of features and performance parameters of ATM switches. The switches were selected by MobilCom AG to build up the backbone of their new 3G / UMTS core network.

3 Test Organization

All tests were conducted at the EANTC test lab in Berlin, Germany. The two week test period was attended and supported by the manufacturer and Mobilcom. The following illustration shows the configured test network with the different test scenarios, using the components to be evaluated.

4 Test Scenarios

The test scenarios included the following test areas:

- ATM Functionality and Traffic Management
The tests in this group evaluated all switch ATM Traffic Management mechanisms including traffic category prioritisation, policing, and congestion management.

- Alarm and Failover Tests
This section evaluated the different management alarm, redundancy and resilience mechanisms of ATM switches, including
 - switch module redundancy
 - interface module redundancy
 - SDH Automatic Protection Switching
 - rerouting and connection failover performance at the signalling layer

- ATM Signalling
Different test cases of the ATM Forum signalling performance and conformance test suites were conducted here:
 - Signalling protocol UNI4.0 and PNI1.0 static and dynamic behavior
 - Signalling performance
 - Robustness: Long term signalling stability

- PNNI Routing Functionality and Performance

The correct routing process in large networks was tested with emulators. They allowed to configure a real switch in a complex emulated network and check its behavior and performance. The emulators also evaluated the switch behavior in an errored or a congested situation. It was verified, if the switches handle these situations in a correct and stable way.

5 Test Network Configuration

