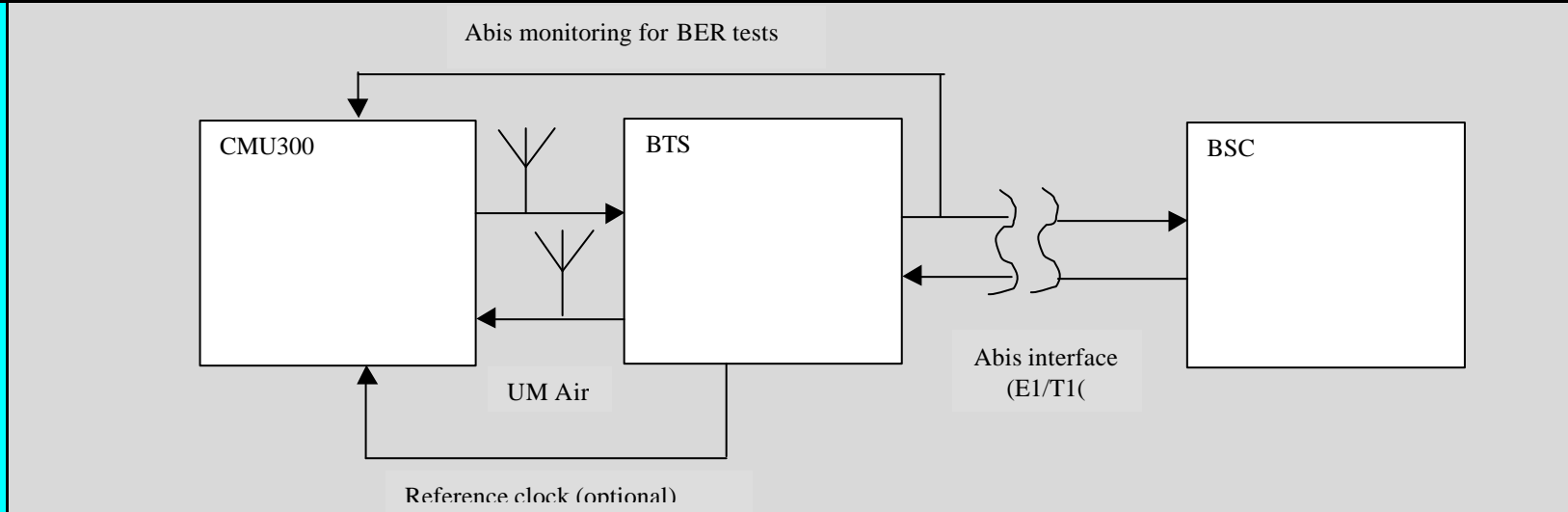


RF test of GSM / EDGE BTS's, operated in the real network (controlled via line interface (E1/T1; Abis by BSC))

(application: maintenance)

Test Set-up



Characteristics of test environment

- “Multi-carrier” RF conditions; i.e. several physical RF carriers might be active and applied to In- / Out-puts of BTS and tester
- for establishment of traffic channel (to be measured) the tester must support signalling procedures; i.e. tester must simulate a MS
- BER tests normally only possible via Abis monitoring; i.e. implementation of “T” connector into Abis up-link required

Suggested configuration

CMU300; CMU-B12 (optional); CMU-B21; CMU-K31...34; CMU-K39; CMU-B71

Supported measurements

- Synchronised to TDMA timing of BTS (CMU = Signalling Mode incl. Location update procedure and call procedure MOC based on option CMU-K39):
- TX-Tests
 - Mean transmitted RF carrier power
 - Transmitted RF carrier power versus time
 - Modulation accuracy
 - Spectrum due to Modulation
 - Switching Transients Spectrum
- RX-Tests: BER measurements on TCH's via Abis monitoring

Remarks

- All tests related to GSM channels TCH/FS, TCH/EFS, TCH/HS
- SIM card reader not supported; IMSI / IMEI can be selected manually; instrument can not be used, if network requires ciphering (reason: missing ciphering key which is stored on the – in this case missing - SIM card)
- Multicarrier Environment: Tests can be performed, if the interferer (same level) has a spacing of more than 10 GSM channels