

GSM BSS G10 BSC Operation and Configuration



LZU 108 7500 R1A

Description

Upon realization of this course the students will be able to perform configuration of any boards from the BSC/TRC (such as TRHB, TRA and ETC) and understand the APZ 212 55 and APG 43 concepts. The students will also be able to perform integration of any 2000 family of Ericsson's RBS, configure the necessary cell parameters and RBS internal connections. This course brings an excellent introduction of the Abis over IP feature, showing all functions of the Site Integration Unit (SIU), in accordance with the IP RAN R5 Solution, that was called PRAN Solution before this release. In addition, the participants will receive good knowledge regarding of many tools, like MTR (Mobile Traffic Recording), CER (Cell Event Recording) and FAS (Frequency Allocation Support). As an extra information, this course brings several new and enhanced features used in Ericsson's GSM BSS G10 Release.

Learning objectives

On completion of this course the participants will be able to:

- 1 Identify the GSM/GPRS/EGPRS system using diagram in blocks of the identities and descriptive of all the units that compose the system**
 - 1.1 List the Network Nodes of an Ericsson GSM System
 - 1.2 Understand the purpose of GSM-ID numbers (MSISDN, IMSI, LAI, CGI, IMEI, MSRN)

- 2 Indicate the channels in the GSM/GPRS/EGPRS System explaining their purpose using pictures and table available in student material**
 - 2.1 Explain the purpose of the logical channels used on the Air Interface for GSM and GPRS network
 - 2.2 Discuss the EGPRS Coding Schemes and the EGPRS interface to RBS equipment based on network topology and interface description and definition
 - 2.3 Clarify the measurement procedure used by GSM terminal equipment
 - 2.4 Describe the purpose of System Information in GSM
 - 2.5 List the basic traffic cases in BSC

- 3 Configure the BSS Subsystem using Winfiol providing the student with knowledge of the BSC, TRC and BSC/TRC hardware as well as the different magazines available**
 - 3.1 Describe the BSC and TRC hardware
 - 3.2 Identify the connections between GEM and GDM magazines
 - 3.3 Integrate the Hardware and Interfaces of the BSC using MML commands and parameters



- 4 Distinguish the Abis over IP feature and its concepts according to the IP RAN R5 solution**
 - 4.1 Determine the IP architecture in RAN
 - 4.2 List the Site Integration Unit functions
 - 4.3 Distinguish the Abis Optimization feature
 - 4.4 Verify the Abis Local Connectivity feature

- 5 Describe the RAN interfaces used in GSM, differentiate the different RBS 2000 family members and configure the internal connections of the RBSs**
 - 5.1 Verify the A, A-ter and Abis interfaces
 - 5.2 Differentiate the different RBSs from the 2000 family
 - 5.3 Configure the RBS 2000 equipment in the BSC using MML commands

- 6 Configure the Radio Network and define Cell Data knowing the main parameters and procedures to execute them**
 - 6.1 Explain the purpose of basic BSC Cell parameters and the effects they have on the GSM Radio Access Network
 - 6.2 Configure the basic radio network in the BSC using MML commands and parameters

- 7 Execute performance measurement and supervision features that are available in BSS using appropriate command and WinFio**
 - 7.1 Define supervision and recording processes in the BSC

- 8 Operate and supervise the BSC using the pre-defined routines and supervision command and tools analysis of the OSS**
 - 8.1 Handle practical fault-finding on BSC hardware using On-line documentation

- 9 Identify how to maintain BSC/TRC and BTS using the main maintenance procedures described in the documentation**
 - 9.1 Recognize the RBS Alarm Information displayed in the BSC
 - 9.2 Execute BTS maintenance based on node diagnosis of fault conditions using the on-line documentation and maintenance procedures

- 10 Describe the following features from the GSM BSS G10 release**
 - 10.1 A interface over IP
 - 10.2 Time Slot Power Savings
 - 10.3 Multiple CCCH
 - 10.4 Abis Opt and Abis over IP support for mixed RBS configurations



Target audience

The target audience for this course is: System Engineers and Service Engineers.

Prerequisites

Successful completion of the following course:

GSM AXE Operation

LZU 108 5024/2

Duration and class size

The length of the course is 5 days and the maximum number of participants is 8.

Learning situation

The course is based on theoretical and practical instructor-led lessons given in both classroom and a technical environment using equipment and tools, which can be accessed remotely.