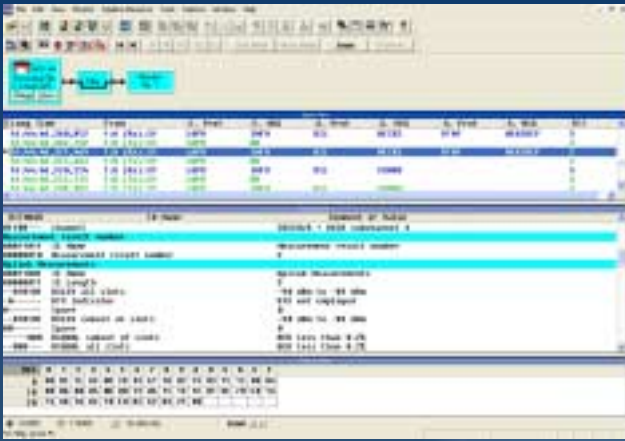**Explore INACON**

Tackle Your Network Issues in a

Bootcamp

U_m & A_{bis} Signaling Analysis and Radio Optimization

Unrivalled practical learning...

Knowing the difference...

Objectives

At the end of the Bootcamp you will:

- Increase your job efficiency
- Have the ability to trouble shoot Air interface problems
- Become expert of your trace equipment
- Be able to analyze A_{bis} and U_m Measurements
- Determine the cause of various Call Drop scenarios
- Be able to distinguish DTX and Non-DTX
- Improve Power Control performance
- Be able to evaluate CCCH Utilization for LA Planning
- Know the Key Parameter for Radio Optimization
- Master drive-test problems in TEMS
- Learn how to analyze K12xx Abis log-files

Who should attend:

- GSM Field Technicians and Engineers
- Radio Optimization personnel

Pre-requisites:

This course requires participants to have a good knowledge of the GSM/GPRS network as well an electronic or computer background

Key Topics

- Call Trace on A_{bis} Interface
- Meaning of System Information Broadcast
- Filtering Call Drops and other important events
- Root cause of Connection Failure and Error Indication
- 480msec SACCH Signaling
- Layer 1 Information on U_m and A_{bis}
- RXQUAL and RXLEV in combination with DTX
- Handover Signaling and Failure
- Radio Performance Optimization of Power Control, HO and Call Setup
- Paging and Location Area Planning

Delivery:

- Notebooks with pre-installed Protocol Tracer
- Instructor led lecturing with Real Life Trace Analysis
- Practical Hands-on exercises with solutions

Duration: 3 Days

Course Contents

Subject	Practice
MS idle Mode behavior • System Info Parameters and Periodicity • The Cell Selection C1 Criteria • Cell Reselection behavior – C2 **Insight TEMS** • Call Setup Analysis: RACH until ALERT • Handover Functionality • RXLEV &. RXQUAL combined with DTX • Power Control functionality in UL and DL • SACCH Info and Measurement Report **Typical Failure Cases logged** • Radio Link Timeout • Blocked Call • Ping Pong Handover • Bad Speech Quality • Dragging Handover • Intra-& Inter Cell Quality HO problems **Abis Messages and Reports** • Uplink and Downlink DTX with Power Control • Drops: Connection Failure and Error Indication • Details of Abis Measurement Report • Call Setup investigation and the Parameters behind **Radio Performance Optimization** • Parameter Tuning for: improved Call Setup, Handover and Power Control Performance • Location Area and Paging Capacity Planning	*Cell Reselection check System Info reading* *TEMS Setup –important Windows and configs* *Examine Radio Resource, Call Control and Mobility Management Messages* *Layer 1 Information TA & MS Power Control* *Impact of DTX on Measurement Reporting* *Handover parameter settings and their impact* *Root cause determination:* • *Ping Pong HO* • *Dragging HO* • *Drop Call* *Power Control Performance evaluation based on A_{bis} Measurement Reports*

Related Courses:

Introduction to GSM

Signal & Protocol Analysis in GSM (RAN and MS)

Signal & Protocol Analysis in GSM (The Core Network)