



# ariesoGEO User UMTS

(ARI0012)

## Course Outline

## ariesoGEO User - UMTS

### Detailed Course Outline

This two day course enables engineers, who are responsible for the activities related to UMTS planning, optimization or monitoring, to get familiar with the ariesoGEO interface and its key features. It includes interactive demonstrations, as well as multiple student activities which allow the attendee to explore ariesoGEO. The course is designed to run on your live UMTS ariesoGEO system. In so doing, individual students gain experience of the ariesoGEO product, as well as specific knowledge of how it operates on their system.

### Pre-requisites:

This two day class is aimed at network engineers who work on optimizing and troubleshooting UMTS networks. Knowledge of UMTS networks, optimization and troubleshooting is pre-requisite knowledge for attending this course.

### **Section 1: ariesoGEO Capabilities**

- Overview of Arieso Platform – insight, performance, analytics and SON
- What information radio planners and optimizers need
- How ariesoGEO captures data and what information is available to end user
- How GEO analyses and displays data
- How GEO can analyze handset model penetration and performance
- How GEO geographically positions users, including use of devices with GPS

### **Section 2: Product Architecture and Operation**

- GEO platform architecture
- Local GEO support available to users
- Introduction to the GEO user interface
- Demonstration of GEO's core functions
- Introduction to filtering, and the importance of, for obtaining the required results
- Defining geographical areas using bounding box and polygons
- Overview of analyses categories

### **Section 3: Network Topology and System Pre-Checks**

- Investigating Data Loading
- Investigation of Loading Errors

### **Section 4: Correlation Module**

- Network Alarm Monitoring and Investigation
- Network Configuration Checking
- Cell Performance Monitoring, Macro and Femto

### **Section 5: RF Analysis – Network and Cell**

- Discuss common RF issues affecting UMTS networks
- Strongest and Best server analyses and differences between them
- How to check coverage and monitor RSCP and Ec/Io values
- Analysis of RF KPIs statistics
- Run through of a generic RF Optimization Process
- Footprint analyses based on individual cells
- Investigation and explanation of Pilot Pollution
- Simulating RF Optimization of cell sites
- Graphical representation of Scrambling code collisions

### **Section 6: Voice Call Analysis**

- Service Group definitions within GEO
- Plotting UMTS blocked, dropped and call locations
- Detailed explanation of Spider and Layer 3 drill-down analyses
- Filtering calls by specific Layer 3 Messages
- How to analyze call usage on all and individual users
- Call failure reason investigation for individuals and geographical areas
- Mobility classification and identifying indoor and outdoor users

### **Section 7: Analyzing Data Throughput Performance**

- How to identify the busy hour
- Analysis of what end-user experience KPIs can be extracted to identify which cells need attention
- How to analyze Cell performance and monitor KPIs
- How to benchmark the performance of individual or groups of devices
- Detailed analysis of individual subscribers and their experience of the network

### **Section 8: Subscriber and Device Group Analysis**

- How custom lists of subscribers or devices can be created
- How to utilize custom lists in analyses
- Device performance investigation
- Analyzing individual Subscribers performance

### **Section 9: Scrambling Code Tuning**

- Explain the features of the Scrambling Code Tuning analyses
- Run through examples of how to utilize GEO to suggest Scrambling Code changes

### **Section 10: Grid Calculator**

- Demonstrate how ariesoGEO can be used to create complex performance KPIs analysis
- Make use of the Grid Calculator to locate and optimize RF problem areas
- Measure the impact of the optimization plans in RF and footprint performance KPI
- Measure the impact of 4G deployment on the data rates of existing 3G systems

### **Section 11: Creating Reports and Exports**

- We introduce templates and report facilities and when these are used
- Discussion of benefits and interworking with MapInfo and Google Earth
- How to create one off and scheduled reports
- Use of GeoWeb for report viewing and VIP monitoring
- Exporting analyses results to other formats

### **Section 12: Changing and Applying Colour Schemes**

- Changing the Colour Schemes used in ariesoGEO
- Applying colour to Tables
- Applying specific colours to Points Analysis



