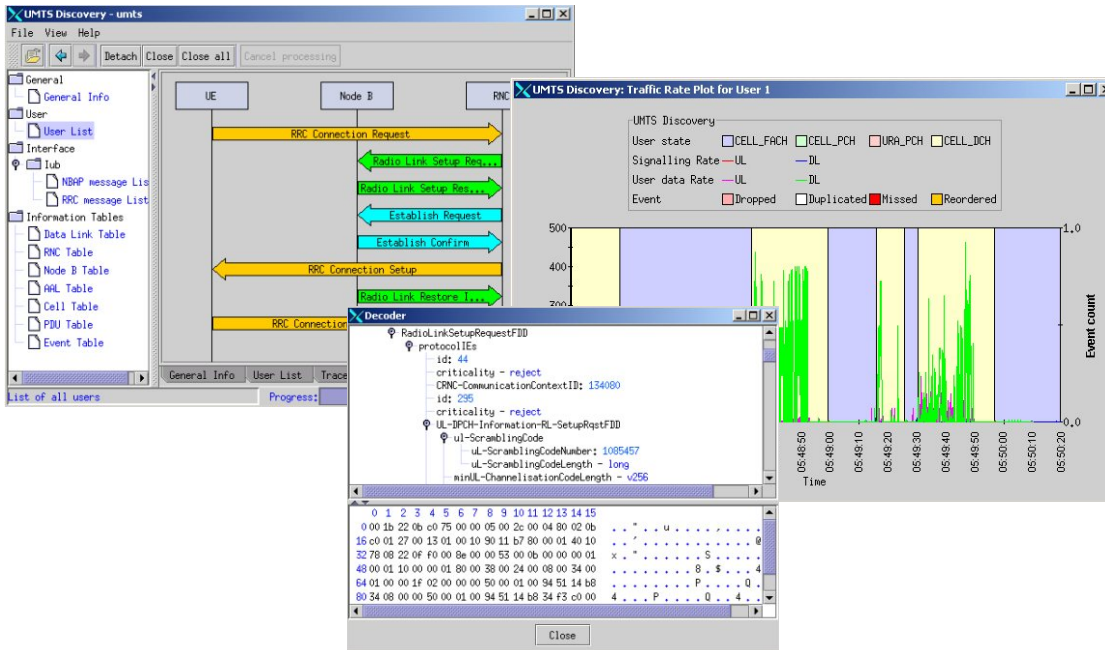




# UMTS Discovery

## UMTS Analysis Made Simple



Intuitive representation of signaling flows allows users to view mobile activity across multiple interfaces simultaneously.

Graphical display of user signaling and data traffic, combined with mobile state information makes data come alive.

### Industry Overview

UMTS networks consist of many interfaces containing complex, interrelated protocols. Analyzing the intricate signaling and user traffic from these interfaces with traditional network analyzer tools is very difficult due to the relationship between signaling for access stratum, non-access stratum, transport and control signaling. Understanding whether or not the network is making the correct decisions with respect to handovers, and ensuring that network components are interacting in an efficient manner presents a significant challenge to UMTS labs.

In addition, user data channels in the UMTS UTRAN contain invaluable information that help explain the behavior and performance of mobiles in the network. Understanding the complex interaction of all of these networking planes is essential to troubleshooting implementation problems, as well as evaluating and enhancing the performance of network components.

### Product Overview

UMTS Discovery provides detailed analysis of interactions between network components in UMTS networks and provides concise summaries of events to users.

Navtel's InterWatch test platform allows Discovery to capture control protocols in UMTS networks along with data belonging to individual mobiles and turn it into a useful performance overview.

Complex configuration by the user is unnecessary with Discovery's ability to automatically determine the configuration of the UTRAN.

Discovery provides an intuitive view of individual signaling sessions, turning the complex interaction of different protocols on separate channels and interfaces into simple call message flows like those seen in InterWatch test suites and 3GPP protocol specifications.

### KEY FEATURES:

- Message sequencing for individual sessions
- Logging of important events
- User traffic analysis
- Performance measurements through passive analysis
- Radio link quality based on Iub analysis
- Automated Iub configuration from raw data



## UMTS Discovery Specification

**Supported UMTS Protocols**  
UMTS Discovery supports processing and detailed decodes for these protocols:

Iub R99

- FP (3GPP 25.427, 25.435)
- MAC (3GPP 25.321)
- RLC (3GPP 25.322)
- RRC (3GPP 25.331)
- GMM/SM/MM/CC (3GPP 24.008)
- ALCAP (ITU Q.2630.1)
- NBAP (3GPP 25.433)

### Logged Events

Discovery automatically logs these events:

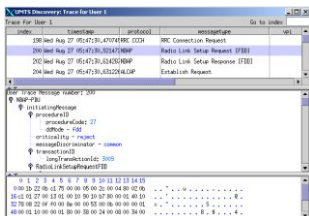
Iub

- Dropped or retransmitted RLC PDUs
- CRC errored transfer blocks (FP)
- RRC Procedure timeouts

### Trace Modes

The user can choose between two trace views:

- Message Sequence Chart
- Sortable Text Table

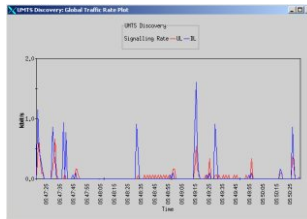


### Graphs

Iub

#### Global Traffic Rate Plot

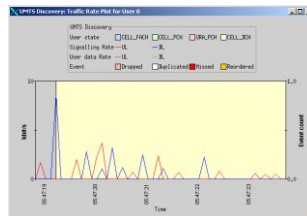
Discovery provides a graphical summary of all signaling and user data.



#### User Traffic Rate Plot

Graphs allow the user to clearly see the following things:

- Signaling Rates
- User Data Rates
- Mobile Mode (Cell FACH, Cell DCH, Cell PCH, or URA PCH)
- Dropped or retransmitted RLC PDUs



### Graph Features

Graphs in Discovery have many standard navigation features, plus the ability to click in the graph and be automatically brought to the signaling trace message closest to the selected point.

- Zoom
- Scroll
- Find in User Trace

### Cell Information Table

Information is provided to the user for each cell that is discovered:

- RNC Name
- RNC Data Link Information
- RNS Cell ID
- UL ARFCN
- DL ARFCN
- Scrambling Code

### UMTS Monitor Integration

UMTS Discovery can analyze data from InterWatch's UMTS Monitor

### Part Numbers

01C5781XXX UMTS Discovery

01-104901B DS1/E1 ATM Module  
01-104597B OC3/STM-1MM ATM Module  
01-104596B OC3/STM-1SM ATM Module  
01-105091B DS3/E3 ATM Module  
01-105463A Dual Port Gigabit Ethernet/Fast Ethernet Card

01C5550XXX UMTS Protocol Decodes

01-102400E InterWatch 95000 Portable Platform  
01-104300B InterWatch 96000 Rackmount Platform



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Navtel's solutions ensure manufacturers and service providers get a comprehensive analysis of the equipment, technology and services under evaluation. This includes functional, conformance, interoperability, performance and scalability testing.

Navtel is a strong advocate of and contributor to standards throughout the world. We value our membership in the following forums and standards organizations: ETSI, MSF Multiservices Switched Forum, MPLS Forum, ATM Forum and the International Packet Communications Consortium.

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