



TRACES FOR NETWORK OPERATORS

ENSURING MISSION CRITICAL NETWORK COVERAGE

Giving you 24/7, real-time ability to monitor, evaluate and optimise your network performance

If you're operating a public safety TETRA network, your customers rely on you to provide optimum coverage and performance 24/7; as ultimately lives could depend on it. To do this effectively, you need to be confident you can see exactly what's happening across your network, every minute of every day.

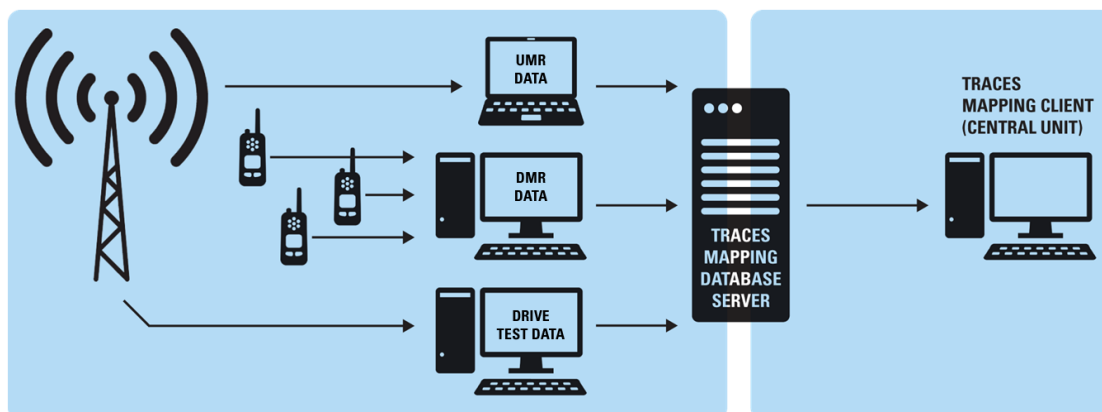
Using the traditional techniques available, it is challenging and resource intensive to gain an accurate view of coverage and usage patterns across your network. Having to rely on either measuring quality via customer feedback or painstakingly gathering and analysing drive-test data is a time-consuming, costly process; and it can only ever provide you with information on one particular area of the network, at one particular point in time, resulting in potentially out-of-date information.

TRACES (our TETRA RF Automated Coverage Evaluation Solution) is different. It builds a detailed picture of your entire network by automatically and continuously capturing network performance data from actual user devices and base stations. This means you get unprecedented 24/7 access to a real-time view of your network; delivering the information you need to analyse and fully understand network usage; enabling you to pinpoint and address any issues before they become critical - perhaps even before they are reported by your customers.

Significantly reducing your reliance on drive-testing, TRACES enables you to effectively track network performance SLAs and proactively resolve coverage issues. Quick to install, easy to use and with significant cost savings compared to traditional monitoring techniques, TRACES helps you deliver the reliability your customers need, when and where they need it.

Our unique solution gives you a comprehensive view of coverage from an end-user perspective, enabling you to proactively drive network coverage improvements for your customers.

TRACES - ELEMENTS OVERVIEW



FEATURE	BENEFIT
Available in three modules: UMR, DMR & Drive-Test	Customisable to your exact requirements; deploy and pay-for just what you need
Automated collection of network data from end-user terminals and base stations	Provides a real-time, continuous view of the network coverage and performance; Enables you to evaluate data from multiple sources and generate reports – ensuring network SLAs are met and performance is optimised Enables rapid feedback on the impact of any optimisation or configuration changes to the network
Automated analysis of drive test data	Eliminates the need for specialist resources to analyse drive test metrics; saving you time, money and giving you greater flexibility Ensures consistent analysis methodologies are deployed; enabling accurate historical trend analysis and comparisons
Central, easy to use, automated platform	Data combined from multiple sources; no data processing or mapping expertise required Imports and utilises previously collected data if required; simply upload onto TRACES server Enables easy historical coverage analysis by site, signal strength (RSSI), individual and talkgroup usage
Simple, intuitive user interface	Requires limited user training; quick to install, easy to use Fully compatible with industry standard mapping software (MapInfo)
Immediate access to the data you need	Easy to view RF data with rapid identification of failures, trouble spots and performance challenges Less out of service indications for end users More effective handovers between base stations Fewer dropped and busy calls

THE MOTOROLA DIFFERENCE

As the market leader in TETRA solutions and mission critical services, we understand the challenges you face in today's rapidly evolving communications environment. We offer a range of services across the solutions lifecycle – from initial concept design and implementation to on-going management and support for your TETRA network – including network performance and optimisation services, end-to-end network and applications integration and much more. From technical support to fully managed services, our experienced teams can help you analyse and utilise the data you have at your fingertips via TRACES, working with you to identify which steps to take to optimise your network and enhance performance.

For further information on TRACES (the TETRA RF Automated Coverage Evaluation Solution) or any of Motorola's Services, please contact your Motorola representative or visit www.motorola.com/TETRA

TAILORED TO YOUR NEEDS

TRACES is designed to be flexible, modular and customisable. Our experts can work with you to ensure TRACES is installed and configured in line with your unique requirements, including definition of parameters such as site lists, coverage predictions, geographical and user boundaries.

If you solely operate the network, then GPS data capture via Uplink Measurement Reports (UMR) is the option to choose; if you also manage your own devices, you can add the Downlink Measurement Report (DMR) module to capture device error-log downloads; plus there's a module which gives you the ability to upload, view and analyse drive-test data quickly and easily too.

HOW TRACES WORKS FOR YOU

UMR Module: Automatically and continuously collects detailed data from end-user devices via GPS, even when they're being used. This module provides you with real-time location, performance and usage data which is immediately available for viewing, analysis and reporting via the TRACES client interface. It will work with any TETRA terminal, regardless of vendor, which support ETSI GPS, but does require a Motorola Dimetra IP system.

DMR Module: As users go about their daily activities, their radios log any errors and loss of communication with the network. When the radio is docked for charging into Motorola's Integrated Terminal Management (iTM)* platform, network coverage issues are automatically visible via the TRACES client. The DMR module can be used on any TETRA network but requires Motorola's iTM 4.0 or later and Motorola TETRA terminals running 5.10 software or later.

DRIVE TESTING Module: If an issue is found, it may be necessary to undertake more detailed analysis via drive or walk testing. If so, the resulting RF survey files can be uploaded to the TRACES server where they are automatically available for analysis and reporting.

HELPING YOU TO OPTIMISE PERFORMANCE

To ensure you make the most of the data at hand, Motorola's services professionals can provide full optimisation services to ensure your network will operate more efficiently - providing significant, tangible operational benefits, ensuring essential calls get through first time, every time.