

TRACES

ENSURE NETWORK COVERAGE AND PERFORMANCE IN MISSION CRITICAL SITUATIONS

Motorola Solutions TRACES, the TERRESTIAL RF Automated Coverage Evaluation Solution, is an innovative application designed to empower you, the network administrator, with immediate and ongoing access to network coverage data – that was previously challenging and costly to obtain. By collecting network data generated in the field, TRACES enables you to monitor and evaluate network performance – providing both a high level view and the capability to drill down into detailed analysis of individual elements.

Your workforce depends on mission critical networks to communicate on a day-to-day basis. Ultimately, people's lives may depend on the availability and reliability of these networks. That is why you need to ensure the best network coverage and performance possible for your users – at all times. To help users get the most from your TETRA network, Motorola has developed a cutting-edge service: TRACES. This solution helps you visualise network issues and enables you to rapidly identify failures, trouble spots and performance challenges. It brings significant cost savings, a cost effective way for you to track network performance SLAs and enables quicker resolution of coverage issues reported by end users.

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you with information on one particular area of the network, at one particular point in time, resulting in potentially out-of-date information.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 TERRESTIAL 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 and enabling you to pinpoint and address any issues before they become critical - perhaps even before they are reported by your customers.

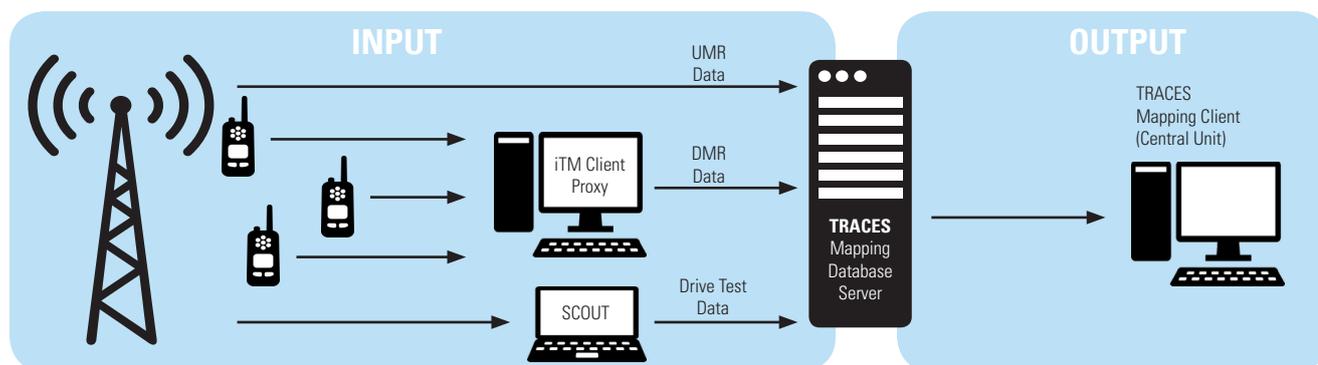
Significantly reducing your reliance on drive-testing, TRACES enables you to effectively track network performance SLAs and proactively resolve coverage issues. Quick to install, easy to use and with significant cost savings compared to traditional monitoring techniques, TRACES helps you deliver the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

Our unique solution consolidates network data from multiple sources into a single view and provides extensive visibility into network coverage and performance.

SPECIFICATION SHEET

TRACES - TERRESTRIAL RF AUTOMATED COVERAGE AND EVALUATION SOLUTION

TRACES - ELEMENTS OVERVIEW



FEATURES

Available in three modules: UMR, DMR & Drive-Testing

Automated collection of network data from end-user terminals and base stations

Automated analysis of drive-test data

Automated collection of network data from Motorola TETRA terminals using Motorola iTM R 4.0

Can be utilised on TETRA network infrastructure equipment supplied by various vendors

Central consolidated platform with easy-to-use interface

Immediate access to the data you need

Simple, intuitive user interface

BENEFITS

Customisable to your exact requirements; deploy and pay-for just what you need

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

Provides a clear grid of coverage signal strengths based on real time information

Allows network administrators to check on the root causes of poor signal coverage issues

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

Rapidly pinpoints network issues and enables report generation, avoiding the lengthy, manual issue-logging processes

Provides a clear picture of trouble spots based on real-world data from the workforce

No additional traffic on the network as data is backhauled independently of the TETRA network via iTM – also avoids need to gain operator permission

Allows visibility into network coverage and performance; arms you to use this insight to generate reports and verify that network operator SLAs are being met; ultimately helps you look at ways to optimise performance in collaboration with your operator

No re-investment required to utilise TRACES – use Motorola terminals and iTM to collect data on multi-vendor network infrastructure

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 (failure location by grid square, failure by cause, serving cell received signal strength indication (RSSI))

Significantly lowers administration effort

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

Requires limited user training; quick to install, easy to use

Fully compatible with industry standard mapping software (GIS)

Enables import of existing data e.g. definition of boundaries, maps, etc

GIVING YOU 24/7, REAL-TIME ABILITY TO MONITOR, EVALUATE AND OPTIMISE YOUR NETWORK PERFORMANCE

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. As a result, you can rest assured that your customers are getting the coverage they need, when and where they need it.

HOW TRACES WORKS FOR YOU?

TRACES combines data from many sources, in a single, easy to use interface, to provide an accurate visualisation of your network's coverage and performance.

UMR Module: Automatically and continuously collects detailed data via GPS messages from radios being used on the network. 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 radios, 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 SCOUT RF survey files can be uploaded to the TRACES server where they are automatically available for analysis and reporting.

MORE POWER TO YOU

TRACES provides an automated, quick and simple method for you to collect and analyse data, and generate your own reports. The application provides enhanced reporting and analysis capability, enabling you to filter data as required, including: by site; failure cause; location and user. As a result, you have greater and more up to date insight into your network performance and can verify whether your TETRA network service provider is meeting service levels and other KPIs.

TAILORED TO YOUR NEEDS

TRACES is designed to be flexible, modular and customisable. TRACES is available on a per-user licence basis and setting up the solution is quick and easy. Working with Motorola experts, it is installed and configured in line with your unique requirements. Customisation includes definition of parameters such as site lists, coverage predictions, geographical and user boundaries. This ensures that TRACES meets your specific mission critical network evaluation and reporting needs – and helps you leverage the solution to its full potential.

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.



* iTM (Integrated Terminal Management System) is Motorola's efficient TETRA radio management solution for centralised and automated radio programming, software maintenance and upgrade. To implement TRACES, customers must have drive test data available and/or have Motorola iTM release 4.0 or later and subscriber software MR 5.10 or later.

HELPING YOU TO OPTIMISE PERFORMANCE

To ensure you make the most of the data at hand, Motorola Solutions 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.

THE MOTOROLA SOLUTIONS DIFFERENCE

As the market leader in network 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 ongoing management and support of your solution 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 define and deploy the ideal solution for your organisation.



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

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