

# CRIME SCENE INVESTIGATION WITH CELLULAR NETWORK ANALYSIS

R&S®NESTOR cellular network analysis software supports law enforcement agencies (LEA) in forensics activities and crime scene investigations (CSI) by gathering information through analysis of surrounding mobile networks. R&S®NESTOR increases public safety by reducing crime scene investigation time by up to 50%.



## Your task

As the world becomes more connected via mobile networks, and with the continuous emergence of new technologies, gaining a full situational picture through forensics activities is getting ever more difficult. Investigating a typical crime scene can involve hundreds of base stations (BTS) using different technologies and frequency bands. Finding the right base station, and then identifying the right subscriber as quickly as possible is crucial.

Considering the difficulty of this task, law enforcement personnel need efficient investigative solutions that deliver reliable information for efficient targeted prosecutions. When analyzing mobile networks, law enforcement agencies face some key challenges that they need to overcome fast. The cellular network analysis (CNA) solution they use must be capable of:

- ▶ Quick and efficient determination of available base stations and cells in areas of interest
- ▶ Generating a list of base stations and cells of interest for further investigation
- ▶ Contacting network operators for a list of subscribers whose mobile phones were connected to the base stations at the time of the crime

## Rohde & Schwarz solution

R&S®NESTOR cellular network analysis software meets these requirements. R&S®NESTOR offers more than conventional mobile network analysis tools. Conventional tools deployed for network operators or service providers offer only RF measurements and system information message content. While the collected data is identical, the key difference is that R&S®NESTOR also provides automated dedicated analysis and a specific focus on law enforcement activities.

With R&S®NESTOR, users spend far less time with system configuration and measurements, and can easily operate the system without a lot of technical knowledge. This makes investigations much faster and more efficient.

Application Card | Version 01.00

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# WHY R&S® NESTOR?

## Intuitive configuration

From areas of interest to analysis parameters and viewing content, users can easily custom configure their work environment. An overview showing how data is analyzed and displayed can be saved for each crime scene or modified during measurement and postprocessing.

## Easy measurement

A quick overview of the measurement process is provided. This is particularly interesting for non-expert users. They can start the system automatically with a predefined environment. The user can also go to the area of interest, start the system, gather evidence and provide the resulting measurements to an expert for postprocessing and analysis. Analysis can also be done during measurement. Experts simultaneously operate in the field and analyze specific parts of the area of interest on site.

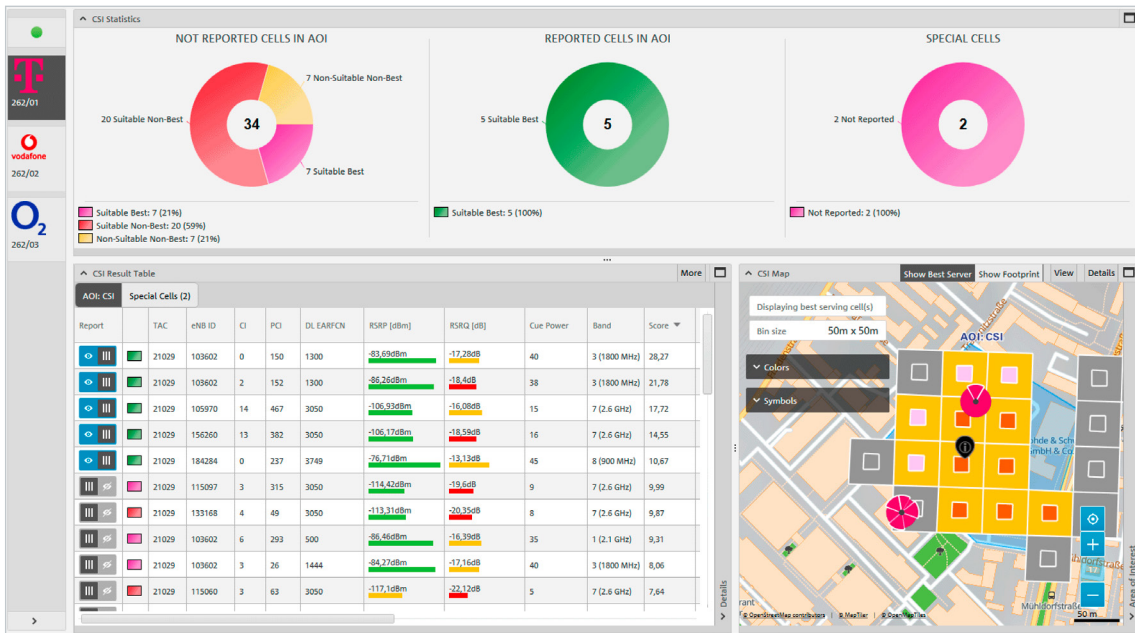
## Automated analysis

Automated analysis with dedicated algorithms can be carried out in real time during measurement or later during postprocessing. Once the user has an overview of the analysis results, they can narrow down which cells are of the most interest and export a list of the selected cells. This list can then be provided to network providers to request a list of subscribers connected to the base stations at the time of the crime.

## Software and analysis

To eliminate errors due to changes in the configuration of the network environment and ensure the best possible evaluation of the network, the criminal investigation should be carried out as close to the time of the crime as possible. Time saving system configuration is key to CSI. With R&S® NESTOR, users can manage the configuration during live measurements and through the workspace with just a couple of clicks, saving valuable time.

Thanks to the software's intuitive design and the easily configurable steps mentioned above, users can adapt the content of the export passed to network providers for more economically efficient operations (e.g. by avoiding the high cost of gathering network provider information) and reduce investigation time.



R&S® NESTOR crime scene investigation results overview

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