

# Automatic monitoring

of emission parameters of registered broadcasting transmitters

## MONITORING

Regulators in all countries are responsible for continuously monitoring the correct use of allocated frequencies and the emission parameters of registered (broadcasting) transmitters. Also, any illegal use of additional frequencies must be detected.

The task is to automatically monitor the frequencies in question, quickly detect noncompliant operation, serious problems and misuse of frequencies and forward an alarm to a monitoring control center (MCC), where operators can decide

what further steps to take. The monitoring units used must meet several requirements:

- ◆ Wide frequency range
- ◆ Fast and simple installation
- ◆ Small outdoor units that do not require a special room
- ◆ Different types and ranges of power supply (AC/DC)
- ◆ Easy network integration (wireless, phone lines, etc)
- ◆ Automatic operation and alarm signaling
- ◆ Cost effective

### Monitoring solution



The compact R&S®UMS100 outdoor monitoring system is the optimal solution for automatically monitoring all frequency ranges and all transmitters of interest if it is placed within the coverage area. The topography and topology of the area to be monitored and the operating RF power of the devices whose signals are to be received determine the number of R&S®UMS100 systems necessary and where they need to be located.

All R&S®UMS100 systems are remote-controlled and administered from an MCC. The R&S®UMS100 can be linked to the MCC via a LAN/WAN or via a wireless connection using mobile phone data services based on standards such as GSM or CDMA.

In the automatic mode, the R&S®UMS100 immediately compares the live measurements with user-defined reference spectra. If one of the alarm criteria is met, an alarm message is automatically generated and forwarded to the MCC. Furthermore, audio recording can be initiated.

