### 6.3 When is a wideband measurement enough, and when are selective measurements needed?

As long as the field is well below the limit value, a wideband measurement will usually be enough. Generally, wideband probes have a wider bandwidth than the antennas for selective measuring devices, so they will capture more services simultaneously. The result obtained is reliable, and if a shaped probe like the Narda ED5091 is used, it is given directly as a percentage of the limit value. It couldn't be quicker, or easier.

Selective measurement using the Narda SRM comes to the forefront when the measurement result is close to or even exceeds the limit value. The question then arises: which service is the primary cause of the value approaching or exceeding the limit?

On the other hand, if you want to measure very small field strengths, such as within a home or office environment, selective measurement is better than wideband because of its higher sensitivity.

Finally, when assessing mobile telecommunications equipment: Such installations change their output power levels according to system load, for example. This means that the result will depend on the time when it is made. Since measurements will usually be made without arranging specific times in advance with the network operator, in many countries the technique of extrapolation to maximum system load has proved useful. This technique looks at the worst-case scenario. If the limit value is not exceeded under these conditions, the base station can be approved. This is another area where selective measurement comes into its own: Only the SRM provides the possibility of demodulating UMTS and LTE signals. On this basis, the SRM can then extrapolate to the worst-case scenario, exactly as required. That gives peace of mind for residents, system operators, and—last but not least—the person producing the measurement report.

→ Our seminar **"Exposure measurements on radio frequency transmitters using the SRM-3006"** is aimed at beginners, more advanced and professional users of selective measuring devices. You can find details of our seminars here, or ask our local **sales partner** for individual arrangements.

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