Expanded recording length for vector signal analysis

Firmware version 3.45 for the Signal Analyzer R&S®FSQ significantly increases the maximum data recording length possible with the option Vector Signal Analysis R&S®FSQ-K70. The new memory management mechanism now allows up to 16 Msamples of measurement data to be recorded with only one trigger event.

The primary advantage of the additional memory is that 15.4 seconds of a GSM or EDGE signal can now be stored without interruption. This considerably simplifies the detection and evaluation of signal transients, especially when no trigger signal is available at the time of interference.

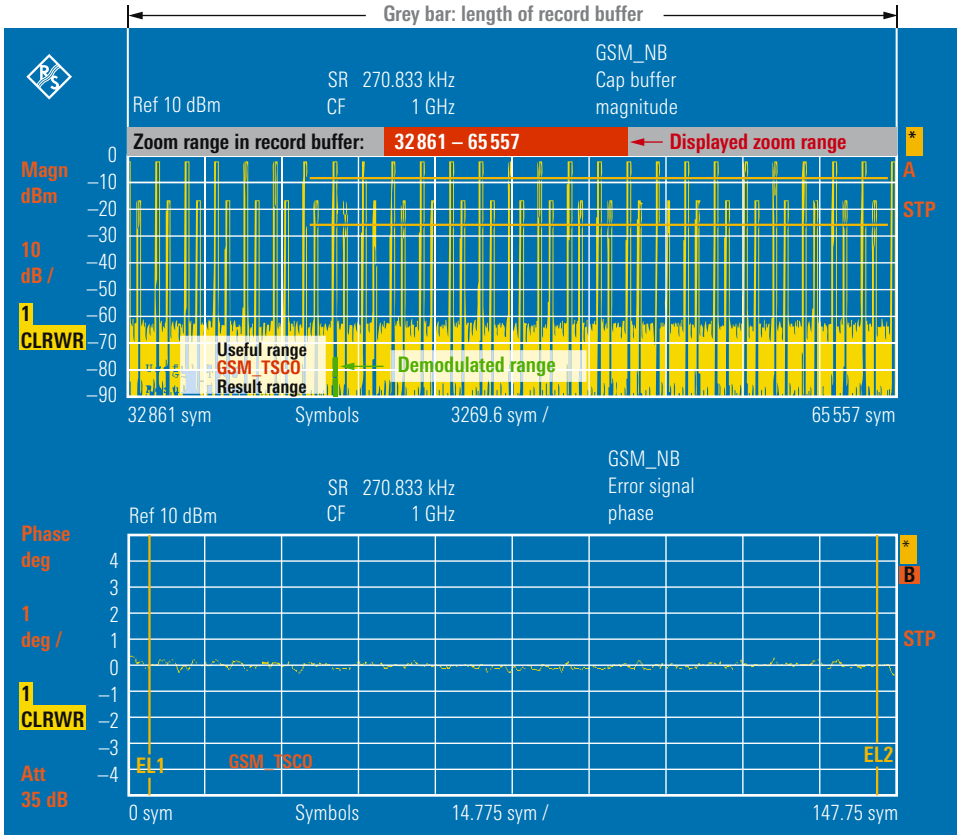
After data is recorded, you can select the memory areas to be demodulated by the analyzer. Likewise, you can repeat the demodulation of a recorded signal either with modified demodulation parameters or result displays. Thus, you can change parameters such as result lengths or synchronization patterns or adapt thresholds used to search for bursts. The expanded memory is, of course, useful not only for burst signals. Continuous signals can also be processed.

The R&S®FSQ marks the position of the displayed section of the record memory (max. 32 ksamples) with a red bar at the top edge of the diagram. The upper measurement window (figure) shows the memory area evaluated by the analyzer. In this example, the memory area contains a series of GSM bursts. The area demodulated by the R&S®FSQ is marked with a green bar. The lower measurement window shows the phase error.

The enhanced recording capability opens up new applications not only in development labs but in radiomonitoring as well. In production, a DUT no longer needs to be connected during the entire evaluation of the measurement data. Instead, it can be moved immediately after the data is recorded, and contact with a new DUT can be set up. This saves process time and increases the throughput of the automatic measuring system.

The new functions are available in the Signal Analyzer R&S®FSQ as of firmware version 3.45.

Hagen Eckert



The R&S®FSQ marks the displayed section of the record memory and the demodulated area in different colours.