WSA Software Release Notes - v20260427

Purpose

This version adds the following features:

1. Narrow-band operation for span below 100 kHz and RBW as fine as 5 Hz.
2. Easy switch between the normal power (dBm) display and E-field strength display (dBuV/m).
3. Easy application of arbitrary spectral mask and mask file importing and exporting.
4. Under 4G/5G test in time-domain power display mode, permits time-domain power mask application for incoming signal's down-link to uplink switching verifications, and also adds such time-domain power mask file importing and exporting.
5. L3-boot control and server configuration are now directly accessible under the Multi-channel Spectral Recording test.

Narrow-band, Normal wide-band, and Sweeping mode switching

Under "Real time SA" function, after pressing the right 2 "Span" button, you'll be prompted with the following new selection:

Figure 1 - New span dialog adds the "Narrow band mode" selection

Once inside the narrow-band mode, pressing the “Span” button again, you’ll see similar selection allowing you to go back to the “Normal wide operation mode”.

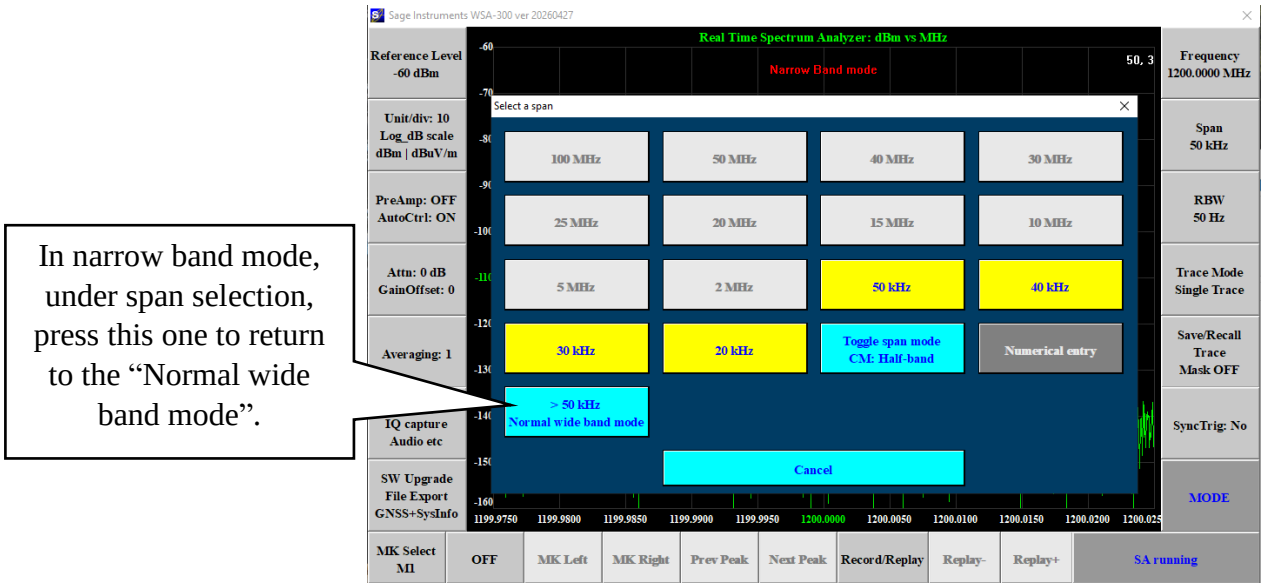

Figure 2 - Span selection in narrow band mode allowing users to return to normal mode

Although the wide and narrow band mode switches are added inside the “Span” selection, the main switching access inside the “Mode-menu” then “Reset ADC clock” is still kept, as shown below, as the continuous IQ capturing function under low ADC sampling rate is still accessed via this path.

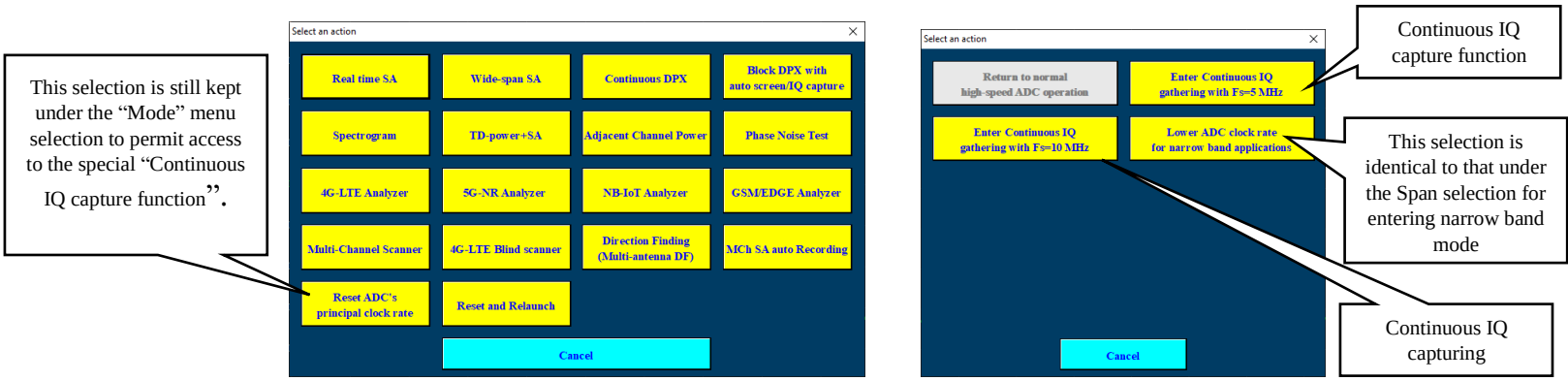

Figure 3 - The “Reset ADC’s principal clock rate” selection is still kept as the main narrow and wide band mode selections and accesses to continuous IQ capturing

Switching between dBm and dBuV/m

By convention, our spectral display shows power in dBm for the Y-axis, however, there are applications dictating the display of E-field strength in unit of “dBuV/m”. With this new software, you can easily switch between the two by pressing the left 2 button and then entering the AF (Antenna Factor) number in dB (such as 30 dB). For more details, see the companion document named “WSA_dBm_vs_dBuV_m.pdf”.

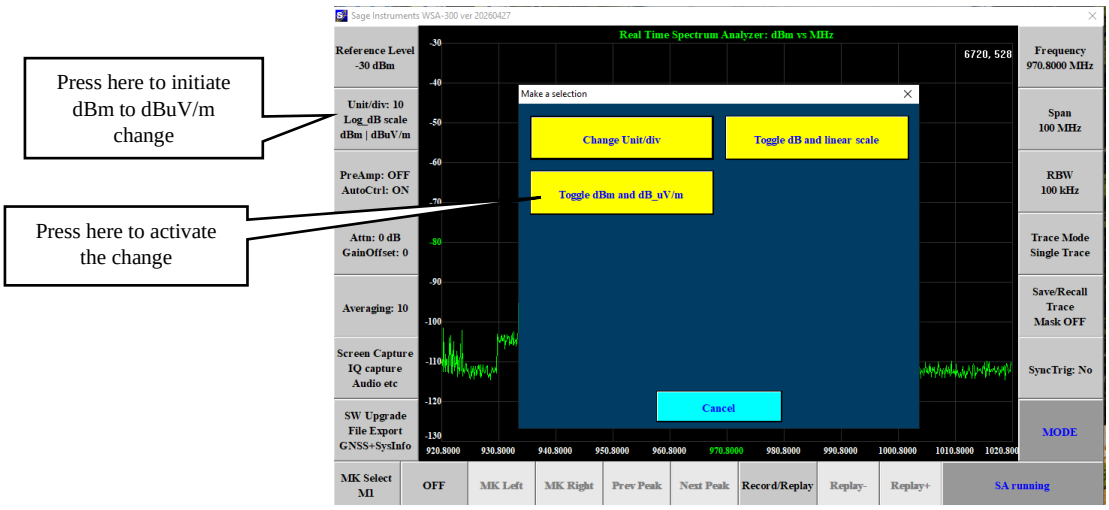

Figure 4 - Steps to take to initiate the dBm to dBuV/m change

4G/5G TDD time-domain power mask

Under 4G and 5G analysis features, once “TD-power” display mode is entered, the right 4 “Mask” button will be activated. This allows one to apply a mask to verify the downlink to uplink switching accuracy.

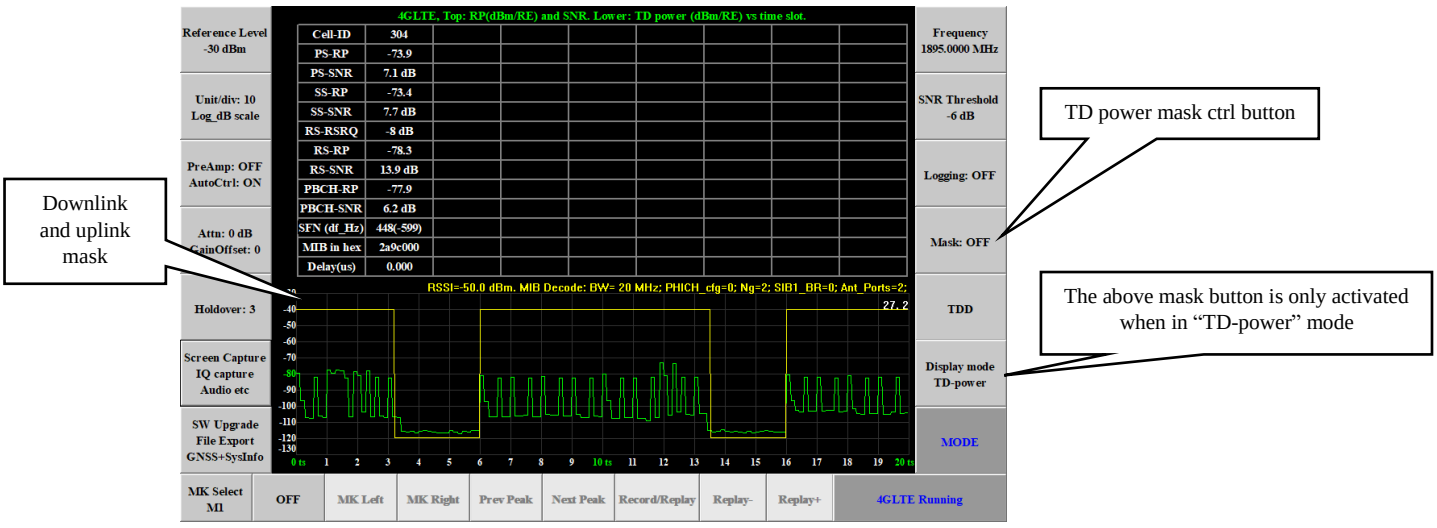

Figure 5 - TD-power downlink and uplink mask

Added file type handling

Under the “File management” function, more file types are added as shown below:

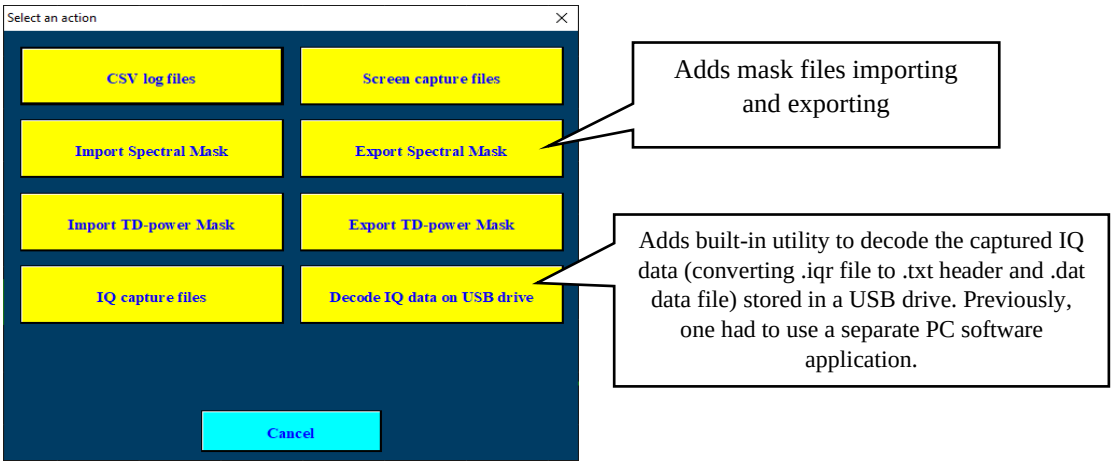

Figure 6 - Expanded file type handling

Detailed instructions on handling these files will be covered in a separate document. For instructions on how to create the spectral mask and TD-power mask, please read the companion documents named “How to create and apply an arbitrary spectral mask” and “WSA test functions designed for TDD”.

Improvements for “Multi-channel SA recording” test

This test permits burning-in the test and configuration inside the internal flash memory and later auto-booted into the pre-configured test (L3-boot). This is only implemented for WSA-208/308 platforms, and not appropriate for WSA-408 as the screen will go blank.

Figure 7 - Added functions inside the Multi-channel SA recording test