PROCITEC®

go2SIGNALS
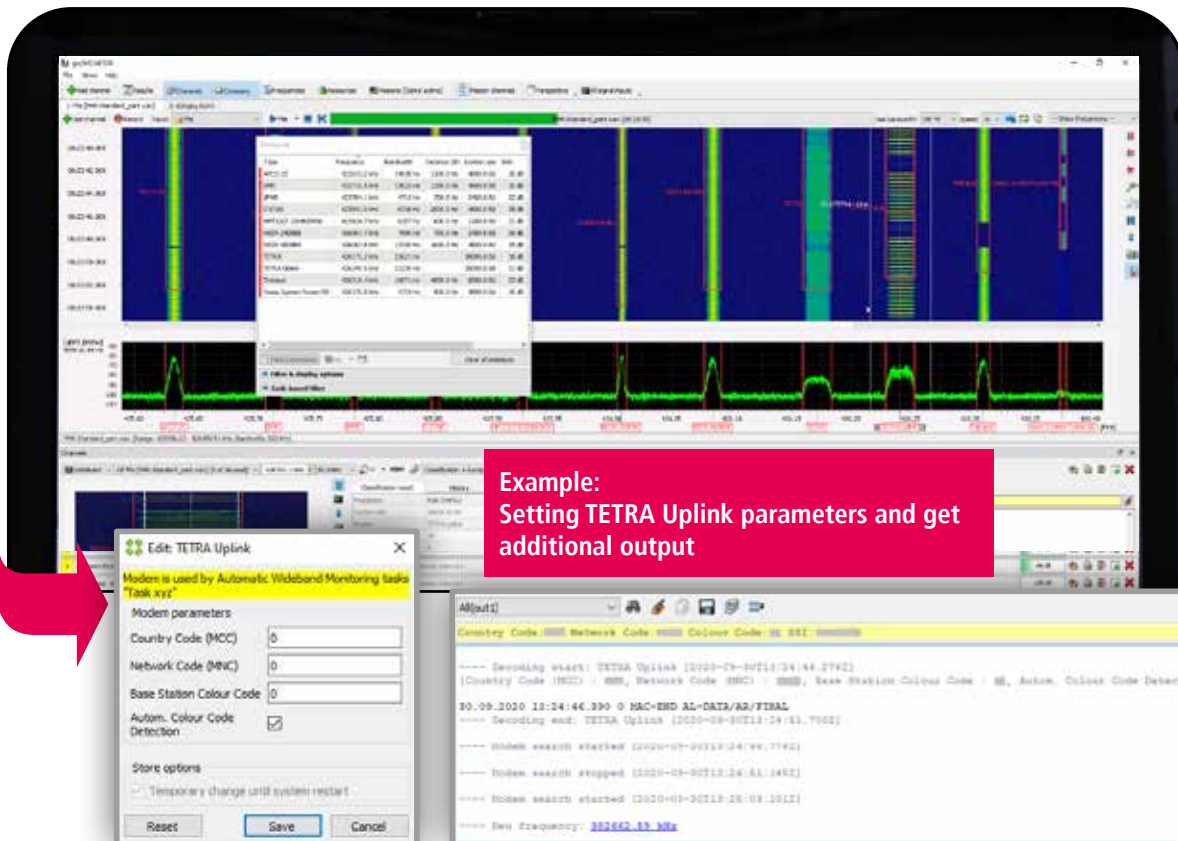PROCITEC® SOFTWARE

RELEASE NEWS Ver. 21.1

The latest release of go2SIGNALS 21.1 provides integrators and users a seamless link to current developments. Benefit from new features, numerous implemented customer requests and various detail improvements. Curious? Then discover the highlights!
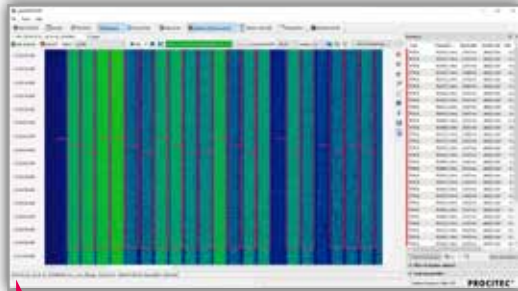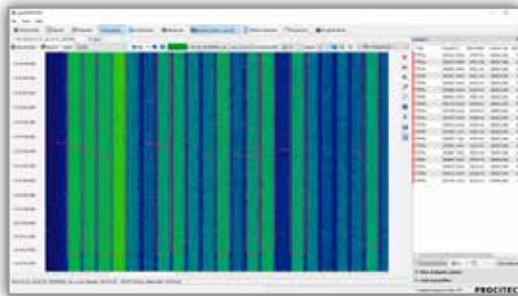
Decoder Parameter

Set decoder parameter - now available in go2MONITOR

With release 21.1 the well-known feature of setting additional decoder parameters in go2DECODE is now also available in go2MONITOR. This enables the output of additional decoder content running in different decoder modes, output decrypted content if keys are known or change the coding, alphabets, etc.

It is now possible to save changed decoder settings from default modem definition files and save them as new modem types for 'mission-specific use' (e.g. automatic searching and processing of signals with user defined decoder settings).

Example:
Setting TETRA Uplink parameters and get additional output
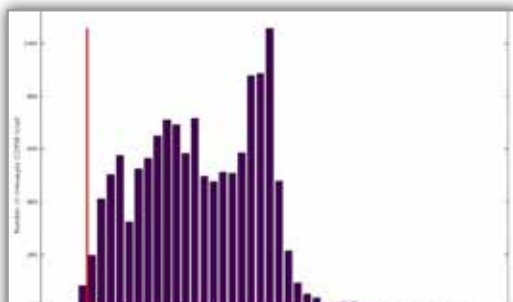
New Modes in Automatic Monitoring

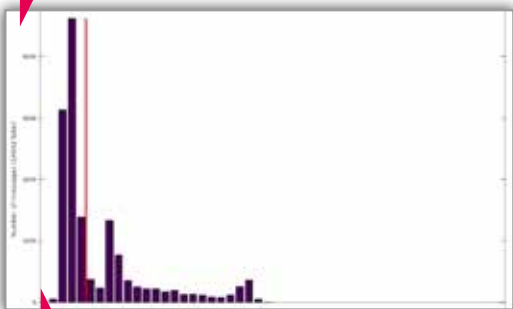**Enlarge sensitivity on heavily occupied bands using channel frequency information**

Fixed Frequency Modulation Classification Mode

The ability to automatically search, find and classify all signals in a complete frequency input band is an outstanding capability in go2MONITOR and the basis for the automatic signal processing.

The new mode "Fixed Frequency Classification" sets the search frequencies on fixed, known values to improve the selectivity, e.g. if frequency bands are heavily occupied, signal quality is low or strong distortions are on air. The result is more and better output even under bad conditions.

Speed up result time from wideband classifier

Use fast results for faster triggering in Automatic Monitoring and Tasking

"Fast Triggering" Mode

In some cases, the operator wants an early warning message if a special signal type is received. Therefore, we added for V/UHF signals a new mode in the wideband classifier to get both, a fast early classifier result and the default result examine more signal time for more statistical reliability.

Depending on the user's needs, it is now possible to choose between speed and reliability. For early warnings use speed mode, for automatic processing the reliability mode. Both modes can be run parallel using different tasks in Automatic Monitoring and Tasking.

Decoding

Enhance Meta Data extraction

Meta data decoded (e.g. identifiers for the emitter or recipient, decoding modes, etc.) is marked with special keys inside the coded text to simplify export and processing of the decoded output. With the release 21.1 we added:
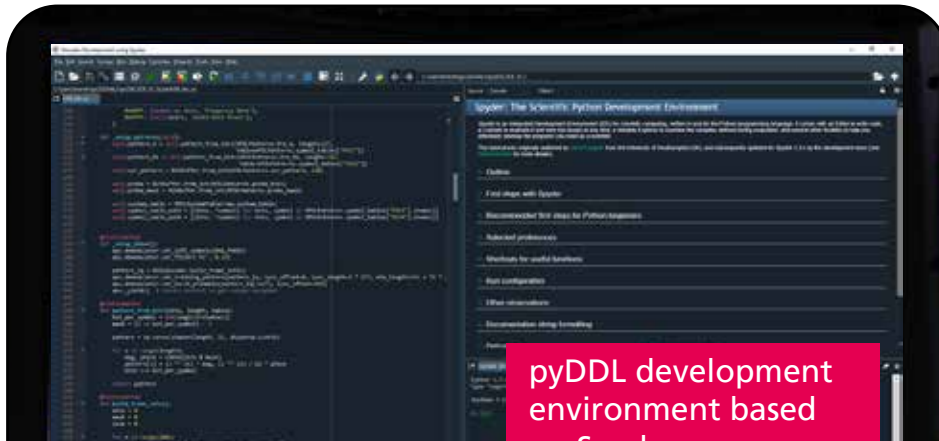
+ Extraction support for ALE-3G and APCO-25 Phase2

+ Extraction of Encryption property for DMR, DMR Continuous, NXDN 2400Bd, NXDN 4800Bd and APCO-25

+ Extraction for TETRA DMO, TETRA Uplink, TETRA Uplink (same functionality as for TETRA modem)

+ Extraction for DSC-HF 170Hz, DSC-HF 500Hz, DSC-VHF (same functionality as for DSC-HF modem)

Decoder and Demodulator enhancements

The signals world is constantly changing. To stay up-to-date, we added new decoder and demodulator functionalities to follow these changes. Following listed some major changes:

+ New demodulators:
    - Wideband HF (MIL110 App.D) for signals up to 24 kHz bandwidth

+ New decoders:
    - CHN MIL Hybrid 8FSK-PSK with output of raw transmission symbols

    - CIS Hybrid MFSK-68 PSK-9000 with output of raw transmission symbols

    - CIS Hybrid MFSK-80 PSK-250 with output of raw transmission symbols

+ Additional decoding features:
    - APCO25: output of encryption algorithm

    - DMR: decryption of ARC4 encrypted transmission with known key

    - EPIRB: decoding of emergency radio beacons

    - FT8FT4: full decoding of all burst types

    - MPT 1327: enhanced decoder output

    - POCSAG: output address in xml

    - Selcal ICAO: added status output

    - CODAN: Added binary output of channel decoded data to various decoders

pyDDL News

pyDDL development environment based on Spyder

With DDL goSIGNALS offers an easy way to adapt integrated or to add new decoders by the customer itself (customer adaptable tool). Starting with the previous release, DDL is going forward to support Python standard scripting language (pyDDL) as DDL language base.

Additional pyDDL features

- update to Python 3.8
- decoder can change demodulator parameters and rewind input signal
- general performance improvements employing better internal buffer processing
- implemented decoder timeout
- Viterbi algorithm: possibility to specify trellis with a table instead of polynomials
- throw exception when jumping to non-existent data position instead of returning new position
- added method from_str to BitBuffer
- new command mean_quality
- new command bit_correlation_and_maxima
- new command mirror_symbols for BitBuffer manipulation

Updated decoders to pyDDL

- ALE2G
- ALIS
- CODAN Selcal
- D-STAR
- DMR burst
- DMR continuous
- DPRK-PSK
- DSC Selcal
- HNG-FEC
- MPT 1327
- MT-63
- PSK10
- PSK31
- Sitor-A
- Sys3000
- Thuraya
- Voice Selcal
- ICAO
- voiceAirTraffic

Classifier Enhancements

New: Wideband classification of
UMTS/LTE emissions
(example LTE signal with 10 MHz)

Listing of the most important changes:

+ Detection and classification of
  UMTS/LTE mobile phone services

+ MIL-STD-188-110C App. D detection

+ CIS112-OFDM improved burst detection

+ OFDM classification improved

+ Significantly improvements on the
  detection of wideband signals

New: Wideband classification of
UMTS/LTE emissions
(example UMTS signal with 5 MHz)

Additional Receiver Support

As with every release, we enhanced the support of receiver hardware currently available on the market:

+ Added support for SignalHound SM200 A/B receivers

+ IZT R3xxx 20MHz configuration provides also an overview spectrum now

+ Added RF-Input choice for NARDA SignalShark

We support VITA 49 receiver interface

Noteworthy Changes

+ Added OFDM signal generation in SOMO

+ Added new Export format for INNO Metascope (CIM) in ResultViewer

+ Frequency spin boxes in NB-channels and WB-Input (Receiver-Frequency) now store the last used unit (kHz, MHz,…) and number of decimal places

+ Improved performance of the Mission Channels View

+ Keyboard shortcut for snapshot classification added (Ctrl+Alt+S)

+ Added blocked frequencies display in the wideband input spectrogram

+ Added new "System controller" node in Resource View to display various system parameters and performance information

+ Installation setup sets firewall rules and display resolution options on Windows

go2SIGNALS

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go2MONITOR

go2DECODE

go2ANALYSE

TÜV SÜD
ISO 9001

TÜV SÜD
ISO 9001
Management System
ISO 9001:2015