PROCITEC®

go2SIGNALS
PROCITEC® SOFTWARE

RELEASE NEWS Ver. 20.1

go2MONITOR and go2DECODE are packed with new features such as: Memory Scan and Memory Step to observe wide frequency ranges easier than ever, Hopper Detection, new Decoders, extended Decoder Modes and Functions and Classifier improvements, which will better assist operators and signals analysts in identifying Signals of Interest easier and faster.
Read on for more details!

Interested in an update ?
Please contact sales@procitec.com
for more information.

# Monitoring wide Frequency Ranges - Easier than ever

Monitoring, searching and processing signals in wide frequency ranges is one of the main tasks using go2SIGNALS software. Memory Step and Memory Scan are two new functions in go2MONITOR enabling this functionality even on small hardware like laptops. This saves money and facilitates mobile use.

In combination with the Option "Automatic Monitoring and Tasking" frequency bands of several hundreds of megahertz can be monitored.

## Memory Scan: Combining receiver modes scan and fixed frequency
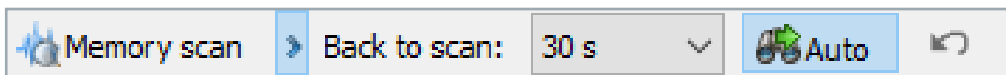
Memory Scan combines fast scanning detection with signal processing in just one receiver. If in scan mode signal activity is detected, the receiver is stopped and set to fix frequency mode (staring) to process the detected signal. After processing scan mode is restarted.

Memory Scan Workflow

Memory step > Dwell time: 30 s ∨ Fast ▶ Next
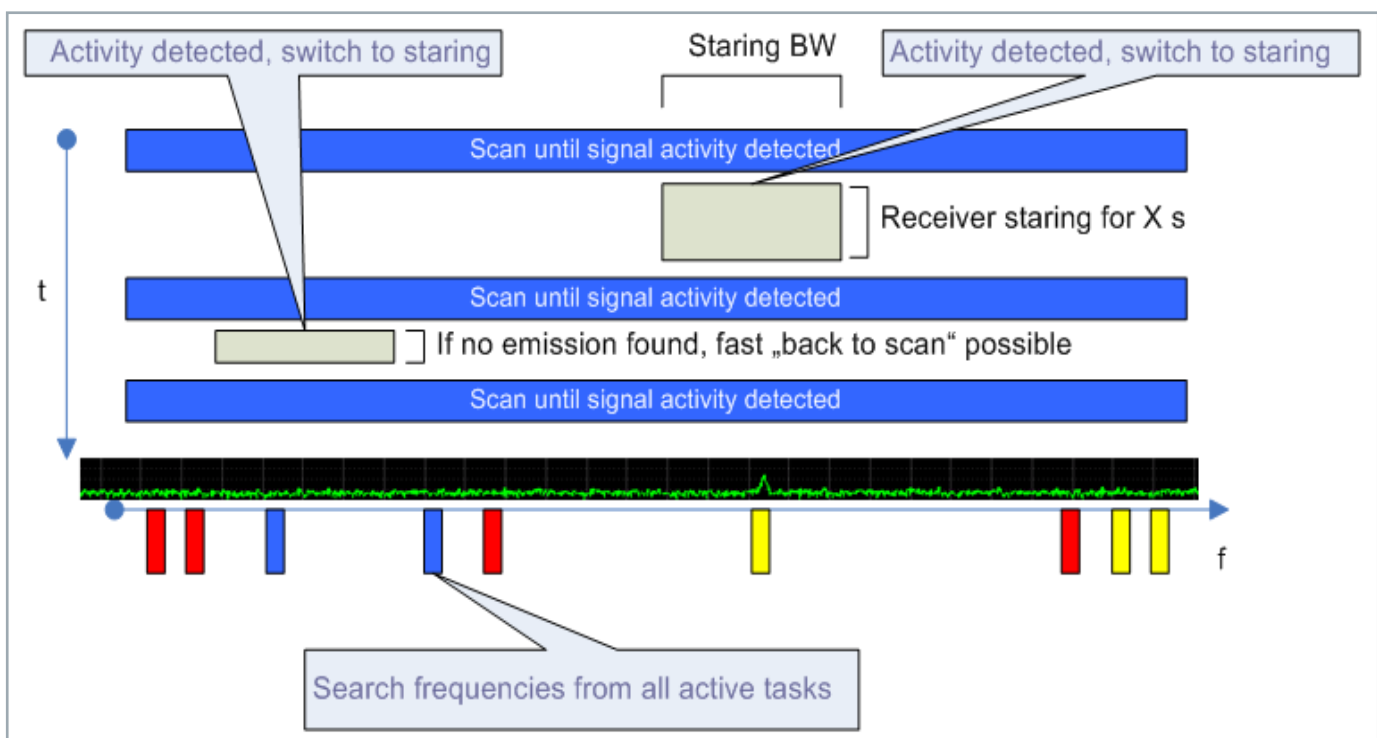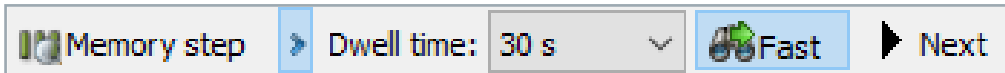
Running automatic monitoring in go2MONITOR, requences and frequency ranges to observeare defined. The software automatically optimizes the frequency steps to the lowest number to get the maximum speed in signal search.
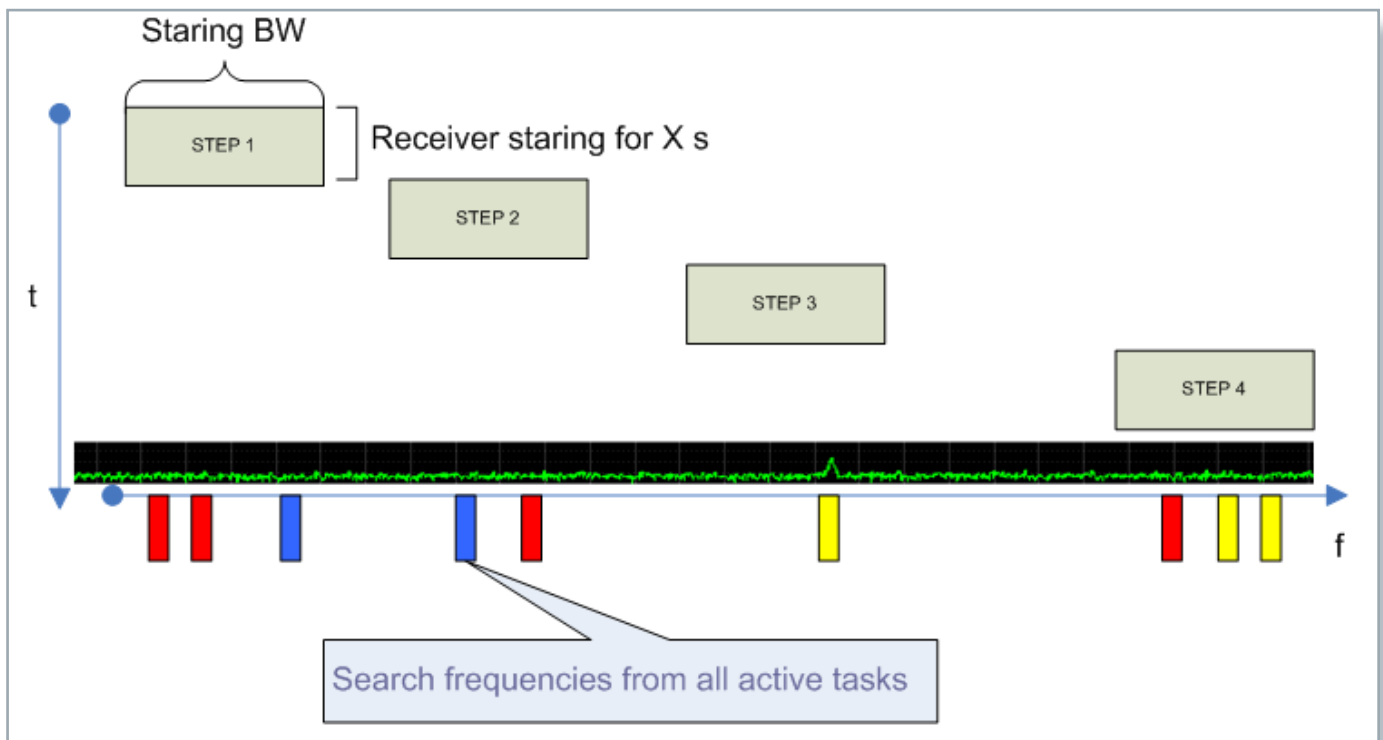

Memory Step Workfow

New Option available: Hopper Detection

FHSS (Frequency Hopping Spread Spectrum) emissions in HF and V/UHF frequency ranges.
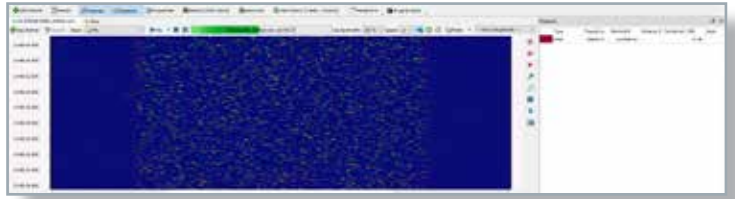
New Option in go2MONITOR: FHSS Detection

go2MONITOR now has a new option to detect these signals when active in its wide-band input, measuring hopping parameters and tasks automatic signal processing (Auto-Mon, recording, trigger/alerting, …).
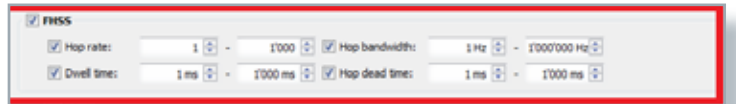
FHSS Triggering Options in the AutoMon Task Wizard

Enhance Automatic Monitoring (AutoMon) Performance

Detection of short-duration or sporadic signals, processing of wide frequency ranges, full autonomous processing, better and more results, etc. – these are the main benefits of option AutoMon in go2MONITOR. Now we added some new enhancements:

- Easy definiton of channel raster and bandwidth for frequency ranges
- Improved performance by processing of short-duration signals faster than real-time

Receiver Support Enhancements

New receiver support in go2SIGNALS with this release:

- Support for SignalHound BB60C receiver (including receiver control)
- Support for CommsAudit CA7852 receiver IQ data
- Support for R&S EM100 older firmware versions (< v5.0)
- NARDA SignalShark also available for Linux
- Improved time synchronization for receivers which do not deliver their own timestamp

Decoder and Demodulator Improvements

As with every release we added new decoders and decoder functions in go2MONITOR and go2DECODE to enhance our excellent signal decoding coverage.

Modem
PMR (Professional Mobile Radio) package (optional)
APCO-25
DMR
DMR Continuous
dPMR
D-STAR
Motorola SmartNet 4kHz
Motorola SmartNet 6kHz
MPT1327 1200Bd MSK
NXDN 2400Bd
NXDN 4800Bd
Tetra
Tetra DMO
Tetra Uplink
Tetrapol
Yaesu System Fusion
Yaesu System Fusion N

Modem
SAT decoders package (optional, included in PMR package)
INMARSAT AERO-C 8.4kbps
INMARSAT AERO-C 10.5kbps
INMARSAT AERO-C 21.0kbps
INMARSAT AERO-P 0.6kbps
INMARSAT AERO-P 1.2kbps
INMARSAT AERO-P 2.4kbps
INMARSAT AERO-P 4.8kbps
INMARSAT AERO-P 10.5kbps
INMARSAT AERO-R 0.6kbps
INMARSAT AERO-R 1.2kbps
INMARSAT AERO-R 2.4kbps
INMARSAT AERO-R 10.5kbps
INMARSAT AERO-T 0.6kbps
INMARSAT AERO-T 1.2kbps
INMARSAT AERO-T 2.4kbps
INMARSAT AERO-T 10.5kbps
INMARSAT-C TDM
INMARSAT-C TDMA
IsatPhone Uplink
Iridium Uplink
Thuraya Uplink

New Decoders Included:

- Robust Packet
  - full decoding
- LINK-22
  - detector
- Thuraya satphone uplink
  - full decoding of RACH bursts
  - including phone number and GPS position

Extended Decoder Modes and Functions:

- Tetrapol
  - Full voice decoding
- APCO25 Phase 2 Downlink
  - Full decoding (including voice)
- ALE 3G
  - Full decoding of BW7 bursts
- Improved decoder performance
  - APCO 25
  - DMR
  - dPMR
  - NXDN scramble mode
- STANAG 4285
  - Automatic mode search improved

- Tetra
  - Reduced search time
- FSK
  - Soft symbols introduced
- Improved nominal frequency offset of several modems
  - Olivia & 500 Hz
  - Contestia & 500 Hz
  - MFSK & 500 Hz
  - MT63 & 500 Hz
  - CIS-112 & 350 Hz
  - CIS-45 & 300 Hz
  - CHN MIL 4FSK 400Hz & 1500 Hz
  - CHN MIL 4FSK 500Hz & 1250 Hz

Classifier Improvements

go2MONITOR's modulation classifier has excellent modulation type coverage and, unlike others, it also includes a modem classifier. Modems are recognized, even within wide basebands containing different modulation and modem types.

Modem classifier *		
HF/VUHF	**PMR + SAT**	**MIL**
ACARS-VHF	APCO-25	ALE 3G
CODAN 3212 16 Channel PSK	APCO-25 Phase 2 Downlink	CHN4+4
CODAN 3012 16 Channel PSK	DMR	CIS-45 (33 / 45 Bd)
GSM (<3G)	DMR Continuous	CIS-60
HFDL	dPMR	CIS-93
PACTOR (I, II, II FEC, III, 4)	D-STAR	CIS-112
VDL2	Inmarsat IsatPhone Uplink	CIS-128
	Iridium satphone Uplink	LINK11 (CLEW)
	MPT1327 1200Bd MSK	LINK11 (SLEW)
	NXDN 2400 Bd	MIL-STD-188-110A Serial (single-tone) mode (a.k.a. STANAG 4539)
	NXDN 4800 Bd	MIL-STD-188-110B/C App. C (a.k.a. STANAG 4539 HDR)
	TETRA Downlink	STANAG 4285/4481 (PSK)
	TETRA Uplink	STANAG 4529
	TETRAPOL	STANAG 4539
	Thuraya satphone Uplink	
	Yaesu System Fusion	

* The modem classification uses the Modem Descriptor Files of the decoders. The list of the modems classified depends on the decoder options purchased.

Modem classifier list

Additional Modem Classification

The modem classification feature now supports the following additional modems:
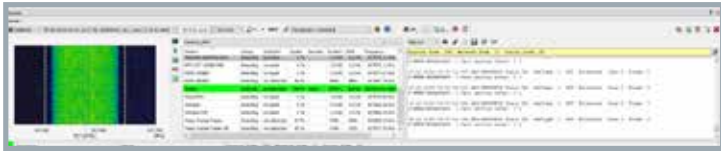
- Inmarsat Satphone uplinks
- Iridium Satphone uplinks
- CHN 4+4
- VDL2

Improved Classification Functionality

- PSK Classifier improved
- Increased frequency range for TETRAPOL detection

User Interface Enhancements

New Features for Narrowband Channels:

Decoder Channel Release 20.1

- Define, save and load channel configurations in each channel
- Redesigned status bar to display information in a more structured way
- Decoder result
  - New widget for status from decoder
  - Hex values
  - New Decoder result display type: Notifications, Hex, All

New Features for Frequency List:
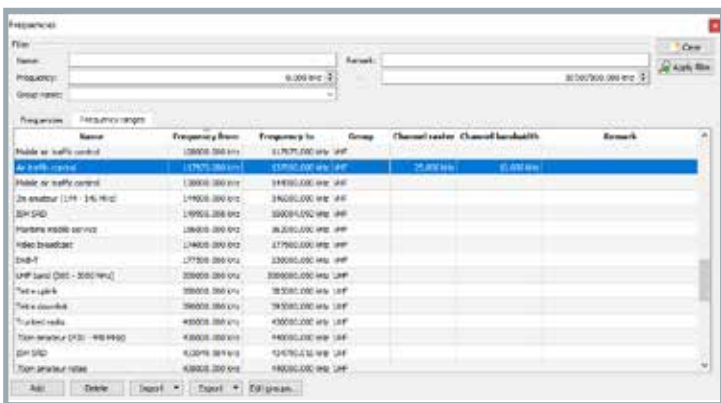
Frequency List Control Release 20.1

- Channel raster / bandwidth
- Import of incomplete data sets
- Improved editing frequencies and moving through table in Frequencies / Blocked Frequencies / Task Wizard

Additional New Features

- Overview spectrum in receiver view can now display search / blocked frequencies and spectrum activity information
- Blocked frequencies can be added directly from the overview spectrum in Receiver View

- Added columns with detailed modem information in Modem List Editor
- Resizing all GUI elements - changed to fit GUI better with small screen resolutions (<=1024px width)

Enhace Software Performance

- Reduce transfer data by change of wide band signal streaming protocol from TCP to UDP
- Better use of processor architecture by updating to Intel® Integrated Performance

Primitives IPP 2019
- Reduction in necessary computing time by use of pre-calculated FFTs from Wideband Classifier

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go2DECODE

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TÜV
SÜD
ISO 9001

Management System
ISO 9001:2015