

Tactical CEMA CAPDEV – Quick-Reaction Signal Recognizers

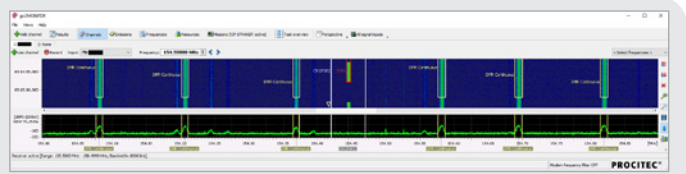
The go2signals software suite equips Tactical CEMA Teams with intuitive & adaptable capabilities to enhance the Team's signals exploitation effectiveness. For example, user-groups can develop their own target-specific detectors, recognizers & decoders to suit developing operational needs.

Using their integrated go2signals capabilities, deployed CEMA Teams can create signal recognizers to automatically detect & report new, previously unidentified Line-Of-Sight V/UHF signal activations,

such as new signals found by the CEMA Team's Direction-Finding & Geolocation assets to be emanating from known, potentially adversarial telecommunications assets.

The following operational scenario explains how, using rapid reprogramming techniques, deployed Teams can develop these user-defined recognizers to include a Signal-Of-Interest's demodulated content, thereby increasing the effectiveness & reliability of the recognizer beyond simple analysis & reporting of the signal's modulation parameters.

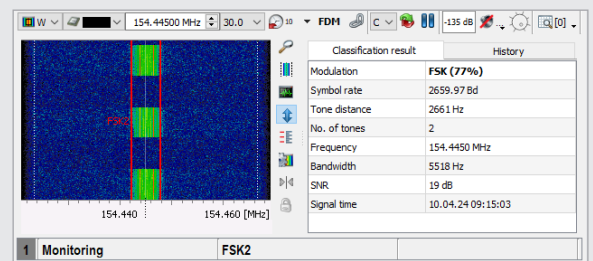
New, unrecognized VHF digital-emission detected active on 154.4450 MHz. Position-Fix solution identifies new emission is emanating from potential adversary's known location. go2signals Monitoring Suite's auto-classifier analyzes & reports SOI's Symbol Rate & Modulation Mode. However, the signal's protocol & content are not automatically recognized by the go2signals Production channel (therefore suggesting a new signal type).



go2signals Monitoring Suite's Wideband Displays (zoomed) showing Auto-Classification of a DMR Trunked Network & a new U/I Emission on 154.445



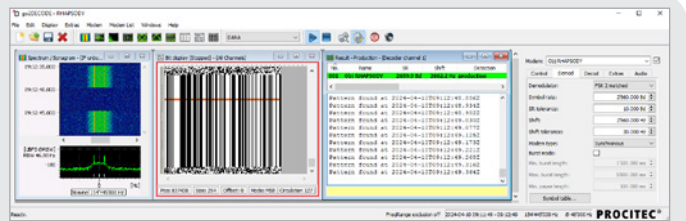
CEMA Operator invokes a Narrowband IQ recording for urgent export to local in-theatre Analysis Cell to enable quick real-time investigation by a suitable skilled Signals Analyst.



Production Channel's auto-classification of new U/I Emission's signaling parameters



Using go2signals Analysis Suite, Analysis Cell demodulates recorded SOI's bitstream, revealing content & structure. A repetitive pattern with a frame-width of 127 bits is noted in this example.

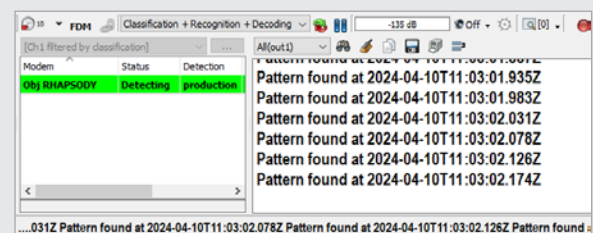


Analysis Cell extracts Bitstream then tests the new MDF Recognizer

New SOI designated 'Objective RHAPSODY'. New Modem Descriptor File (MDF) Recognizer created & tested by Analysis Cell, then exported from Analysis Cell to all deployed CEMA Teams, who import the new MDF into their go2signals Monitoring Suites for rapid reprogramming purposes.



Any further activation on the same or different frequencies will automatically detect, recognize & report, in real-time, all activations which match the 'Objective RHAPSODY' MDF, enabling audio-visual alerting & cross-cue to other deployed Intelligence, Surveillance & Reconnaissance (ISR) assets.



Subsequent 'Objective RHAPSODY' Activations Auto-Recognized & Reported in Real-Time by the CEMA Teams' integrated go2signals capabilities

PROCITEC's go2signals products are compatible and adaptable to changing signal scenarios. By using the go2signals Analysis Suite, the monitoring solution can be expanded for automatic processing of new radio signals. Interested? Visit the House of Signals

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