

Communication Intelligence (COMINT) Technical Analysis Course



Who should attend?

Military and government civilian Electromagnetic Warfare (EW) practitioners engaged in the technical analysis of COMINT data. Ideally suited for experienced COMINT technical data analysts.

Key Organisations

Ministry of Defence

**HQ Joint, Army, Navy and Air Force
COMINT operators/Analysts**

All Government agencies, industries and organisations interested in operational and technical aspects COMINT.

Introduction

This course addresses key elements of COMINT Technical Analysis and will provide delegates with a sound operational understanding and appreciation of the complexities of technical signals analysis and its value within modern warfare. The course will be delivered with a blend of theory and progressive practical lessons to consolidate knowledge, skills and experience in the configuration and application of the PROCITEC Go2 Monitoring and analysis tools against pre-recorded or live Signals of Interest (SOIs).

What you will learn:

- Basic Communications Theory Consolidation
- The Fundamentals of Radio Data Transmissions
 - Telegraph Speed, Bit Rate, Baud Rate Symbol Rates
 - Formatting and Source Coding
 - Encryption
 - Modulation
 - ASK (Amplitude Shift Keying)
 - FSK (Frequency Shift Keying)
 - PSK (Phase Shift Keying)
 - OFDM (Orthogonal Frequency Division Modulation)
 - Bandwidth-efficient Modulation
 - Indirect Frequency Modulation (FM) & Amplitude Modulation (AM)
- Introduction to Common Transmission Modes and their composition
- Classifier and Automatic Code Check usage
- Introduction to PROCITEC go2Signals Monitoring and Analysis Tools
 - Fast Fourier Transform (FFT) and Sonogram analysis mode
 - Waterfall
 - Oscilloscope
 - Frequency Shift Keying (FSK) Analysis
 - FSK Code Check
 - Phase Shift Keying (PSK) Symbol Rate, Phase Plane and Code Check
 - Multiple Frequency Shift Keying (MFSK) Analysis and Code Check
 - Auto Correlation & Identification
 - Bit Correlation and Bit Length Analysis
- Practical Signals Collection Principles in a Live and simulated environment
- Digital Mobile Radio (DMR) & Terrestrial Trunked Radio (TETRA) Interception
- Remote Keyless Entry (RKE) Theory & Practical manipulation
- Wideband Monitoring and Analysis (Export Control Licence Dependant)
 - TETRA & MPT 1327 practical band search and Interception
 - Frequency Hopper Theory with practical collection and Interception techniques
- HF Military Signals Applications (Export Control Licence Dependant).

Course Duration
2 Weeks

Location
Mercury EW Ltd – Training Facility