Focus on CSIR

Fynmeet – Dynamic RCS Measurement Facility

- RCS and Electronic Counter Measure (ECM) measurement and evaluation
- High range resolution radar and target feature measurement

Usage

Fynmeet can be utilised for:

- RCS management by performing high range resolution target measurements
- Evaluation of Electronic Counter Measure (ECM) effectiveness
- Training by emulating threat radar systems
- Acceptance testing and evaluation of electronic attack and platform protection systems
- Operational decision support

Features

- Frequency range of 6.5 to 18 GHz (expandable)
- Polarization: HH, HV, VV, VH
- Programmable waveforms:
  - Wide band chirp: 600 MHz bandwidth (25 cm resolution) possible using Dechirp on receive Optional: upgrade Dechirp on receive mode to 1 GHz bandwidth (15 cm resolution)
  - Stepped frequency: Stepped pulsed CW over at least 1 GHz (15 cm resolution)
  - Stepped chirp: 40 MHz chirp stepped over at least 1 GHz (15 cm resolution)
  - HPRF (≥ 60kHz): 100 kHz – higher PRF do place limits on pulse width, and thus on effective bandwidth when using de-chirp on receive

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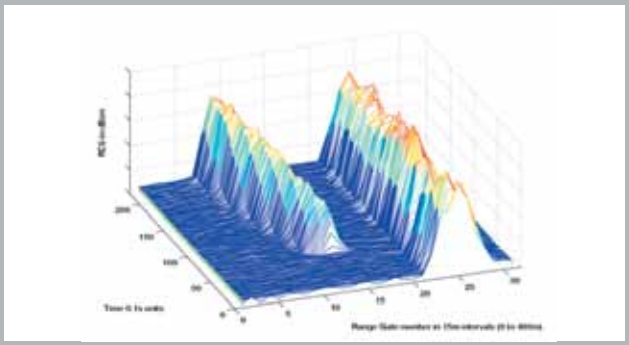

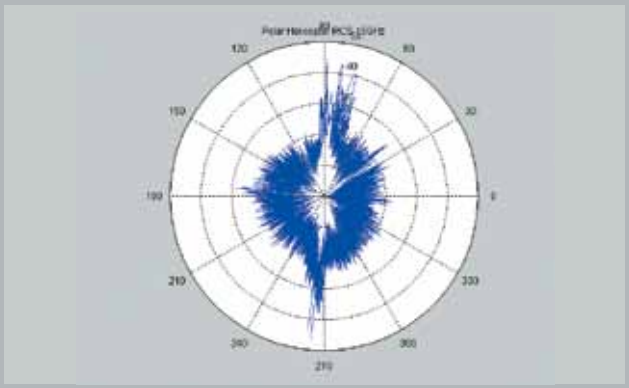

- Integrated Optical tracking and radar range tracking capability (can be interfaced to external tracking facilities)
- Number of Range Gates:
  - Up to 32 for 100 kHz PRF
  - Up to 255 at lower PRF
- Relative spacing of the range gates is user defined
- Pulse Repetition Frequency (PRF) is fully programmable
- Semi-mobile: installed inside ISO footprint shelters which are transportable by aircraft, sea, rail and road
- Typical RCS range: 0.1 to 100 000 m^2

Operation

Fynmeet can perform operational measurements of aircraft, ships, decoys and emitters. This enables the measurement, during realistic system deployment, of:

- Platform RCS
- Flight profiles
- ECM techniques (chaff, jamming power, etc.)
- Target feature measurements (Jet Engine Modulation (JEM), high resolution imaging, etc.)

User specific outputs can be generated off-line using Matlab® or similar software expanding the applications of the system. Fynmeet is an essential tool for any platform developer and for ECM research and doctrine development.

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