Appendix A

FUNCTIONAL AREA TEMPLATE FOR ESAMS

RF SENSOR

- 1.0 TARGET CHARACTERISITICS
  - 1.1 Flight Path
  - 1.2 Signature
    - 1.2.1 RCS
      - 1.2.1.1 Static
      - 1.2.1.2 Dynamic
    - 1.2.2 Fluctucations
  - 1.3 ECM
    - 1.3.1 Noise
      - 1.3.1.1 On-Board
      - 1.3.1.2 Off-Board
    - 1.3.2 Deceptive
      - 1.3.2.1 On-Board
      - 1.3.2.2 Off-Board
- 2.0 PROPAGATION
  - 2.1 Masking
  - 2.2 Clutter
- 3.0 TRANSMITTER
  - 3.1 Waveform Generator
- 4.0 RECEIVER
  - 4.1 Thermal Noise
  - 4.2 AGC
  - 4.3 Detector
  - 4.4 Blanking
- 5.0 ANTENNA
  - 5.1 Gain
  - 5.2 Antenna Scan
- 6.0 SIGNAL PROCESSING
  - 6.1 Clutter Rejection
    - 6.1.1 MTI
    - 6.1.2 Doppler Filters
  - 6.2 Integration
  - 6.3 Threshold
  - 6.4 Pulse Compression
- 7.0 TARGET TRACKING
  - 7.1 Angle
  - 7.2 Range
  - 7.3 Doppler

MISSILE FLYOUT

- 8.0 COMPUTER
  - 8.1 Launch
  - 8.2 Guidance
    - 8.2.1 Proportional Navigation
    - 8.2.2 Command
- 9.0 POWER PLANT
  - 9.1 Boost
  - 9.2 Cruise
    - 9.2.1 Rocket
    - 9.2.2 Ramjet
- 10.0 FLIGHT CONTROL
  - 10.1 Uplink Receiver
  - 10.2 Beacon Transmitter
  - 10.3 Autopilot
    - 10.3.1 Lateral
    - 10.3.2 Roll
- 11.0 AERODYNAMICS
  - 11.1 Force and Moment Generation
  - 11.2 Missile Movement

END GAME

- 12.0 FUZE
  - 12.1 Sensor
  - 12.2 Processing
  - 12.3 Detonation
- 13.0 WARHEAD
  - 13.1 Blast/Pressure
  - 13.2 Frag Distr/Density
- 14.0 TARGET VULNERABILITY
  - 14.1 Component P d/h
  - 14.2 Fault Tree

FIGURE A-1. Functional Area Template for *ESAMS*.