CONCEPT OF OPERATION

F-16 Self-protection Suite for Terma A/S

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Date	Version	Description
06/02/2014	0.1	Initial Draft

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Acceptance

Date	Signature
DD/MM/YYYY	Terma A/S Customer, Stefan Hallerstede

Date	Signature
DD/MM/YYYY	Company A Project Manager, Boris Mihaylov

Company A

Table of Contents

1. Introduction

1.1. Purpose

This document provides a common ground for understanding the self-protection system proposed by Terma A/S.

1.2. Output

This document should facilitate generating a software requirement specification (SRS) and a time plan for the agreed system implementation.

1.3. Executive summary

This document gives an overview of Terma's needs, a description 'The Company's operations and support and a basic insight into the functionalities of the system.

2. Capability Need

2.1. Business Need

Modern times require fighter jets to be able to respond to increasingly sophisticated electronic warfare threats. Specifically the F-16 fighter jet has no means of protecting itself against possible threats such as missiles. Terma A/S has proposed a system for this purpose.

2.2. Business Need Capability Gap

A Self-protection Suite utilizing a Missile Warning System with dispensing of payloads for protection.

2.3. Current situation

Terma offers an electronic warfare management system that integrates any combination of electronic warfare subsystems on any type of military aircraft. This system includes thread display and 3-D audio warning.

3. Operations and Support Description

3.1. Mission

Primary objective is to develop a self-protection suite to be integrated with the F16 combat aircraft systems.

3.2. Users and Other Stakeholders

Users of the system include, but are not limited to:

- Fighter pilots;
- Military support-engineering personnel.

Stakeholders include, but are not limited to:

- Terma A/S represented by Stefan Hallerstede;
- Company A;
- Applicable governmental bodies.

3.3. Policies, Assumptions and Constraints

Assumptions:

- The Electronic Warfare Suite is a sub-component of the Intelligent Cockpit Control Unit, based on the second sentence in Section 5.2.3 of the SE Workbook Document (REF1);
- Providing hardware for Intercom and Aircraft Mission Computer systems will not be part of our scope;
- The Pod is the Dispensing System;
- USB port for uploading software will be part of the HID.

3.4. Operation Description

Company A:

- Shall deliver The System based on agreed price and date of delivery;
- Is located in Aarhus Denmark, on Finlandsgade 22;
- Is subject to Danish legislation;
- Is responsible for planning, managing and execution of system development, integration and operation regarding The System.

3.5. Product Support Description

Company A:

- Shall supply The System and spare parts for a duration of 20 years starting from Site Acceptance Test has been approved;
- Shall supply detailed documentation of The System for future production in case of bankruptcy.

3.6. Potential Impacts

To be determined.

3.7. Scenarios

Hardware Support

To be determined.

Software Support
To be determined.

Mechanical Support
To be determined.

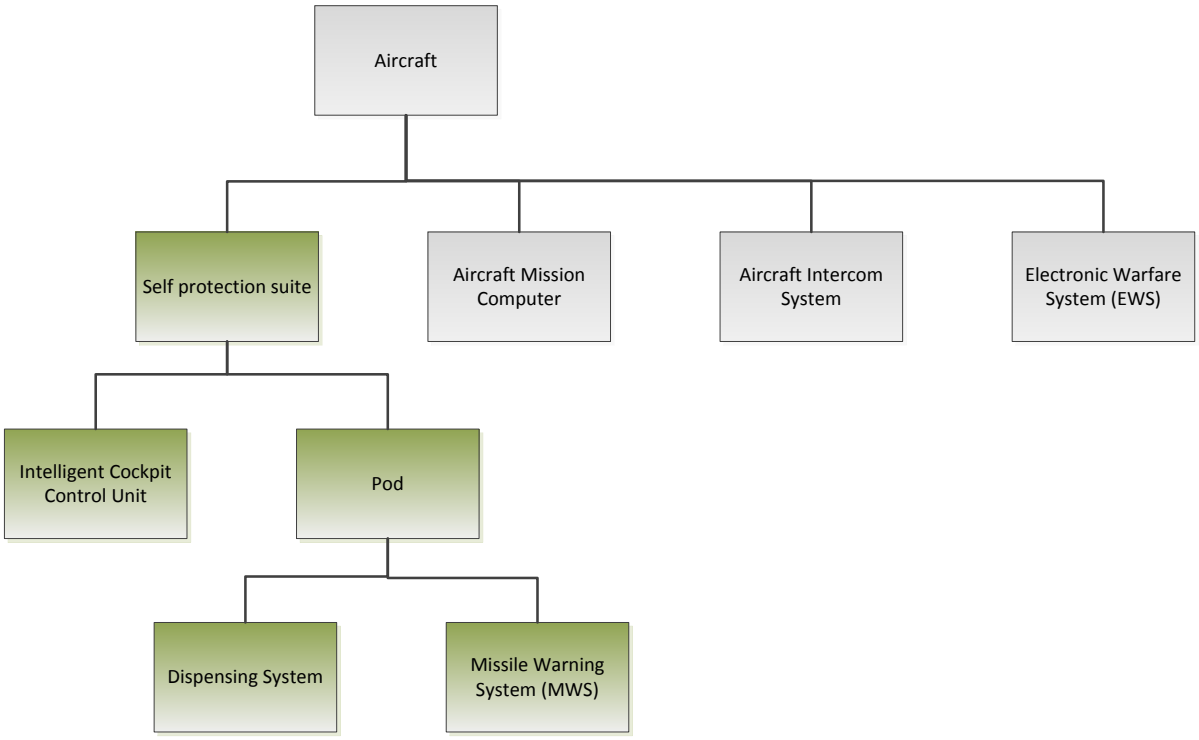
User Manual
To be determined.

Training
To be determined.

4. Functional Capabilities

4.1. Operations

The System incorporates a pod and an intelligent cockpit control unit for controlling the electronic warfare suite. The pod will be dispensing payloads (chaffs and flares) and hosting the Missile Warning System. The solution shall provide warning upon detection of missile threats and be able to automatically dispense payloads in response.



4.2. Support

To be determined.

5. CONOPS Development Team

Company A members:

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6. Additional Information

6.1. Analysis reports

To be determined.

6.2. Glossary

AIS	Aircraft Intercom System
AMC	Aircraft Mission Computer
EWS	Electronic Warfare Suite
HID	Human Interface Device
ICCU	Intelligent Cockpit Control Unit
MWS	Missile Warning System
REF	Reference
SAT	Site Acceptance Test
SpS	F-16 Self-protection Suite
TBD	To be determined
The Company	Company A
The Customer	Terma A/S
The System	F-16 Self-protection Suite

6.3. References

Reference ID	Document Name
REF1	Jacobsen, R.H. (2014). *Systems Engineering Exercises and Teaching Materials*. Aarhus University – School of Engineering. TISYE1-10-003. V1.4.