I Introduction

1. The intent of this briefing/exchange is to outline what is involved from the Canadian Forces (CF) point of view in adding a sensor package to an inventory aircraft. I will give a comprehensive overview of the engineering process involved to establish a sensor mission kit available for use during Open Skies operations.

2. I will first look at the step of evaluating the acquired sensors to determine if their performance, as measured under laboratory conditions, meet the established Requirements Specification. The next step involves looking at all the intricacies of introducing this new equipment into the CF in the form of a modification design and implementation plan. Finally, I will outline the installation and testing requirements of this modification process

II Aim

3. The aim of this discussion is to illustrate that the installation of a sensor suite onboard an aircraft is not a trivial matter.

III Sensor Evaluation

4. In order to add a new sensor or sensor suite to an aircraft, previously unfitted, much work is involved from the conception of the idea to the effective completion of a mission using this new equipment. Let's take an overview of the process required to decide upon and install a sensor suite while maintaining flight safety and airworthiness of the aircraft.

5. From the Open Skies negotiations, certain sensors comprising a surveillance package are agreed upon. Their operating capabilities and minimal imaging resolutions are defined. Such performance definitions constitute a preliminary Requirements Specification with which the various country's delegations take away and begin acquisition of the equipment. The sensors may have to be procured and introduced into that country's armed forces, or if they already exist in that country's inventory, reallocated to the Open Skies role. Either way, sensor performance must be verified as applicable to the Open Skies Treaty.