

**DEFENSE**

**Research and Development**

**Agreement Between the  
UNITED STATES OF AMERICA  
and CANADA**

**Amending the  
Memorandum of Understanding  
of March 9, 2007**

Signed at Washington and Ottawa  
April 30 and June 13, 2013



NOTE BY THE DEPARTMENT OF STATE

Pursuant to Public Law 89—497, approved July 8, 1966  
(80 Stat. 271; 1 U.S.C. 113)—

“ . . .the Treaties and Other International Acts Series issued under the authority of the Secretary of State shall be competent evidence . . . of the treaties, international agreements other than treaties, and proclamations by the President of such treaties and international agreements other than treaties, as the case may be, therein contained, in all the courts of law and equity and of maritime jurisdiction, and in all the tribunals and public offices of the United States, and of the several States, without any further proof or authentication thereof.”

**CANADA**

**Defense: Research and Development**

*Agreement amending the memorandum of understanding  
of March 9, 2007.*

*Signed at Washington and Ottawa*

*April 30 and June 13, 2013;*

*Entered into force June 13, 2013.*

AMENDMENT ONE TO THE  
MEMORANDUM OF UNDERSTANDING

BETWEEN

THE DEPARTMENT OF DEFENSE  
OF THE UNITED STATES OF AMERICA

AND

THE DEPARTMENT OF NATIONAL DEFENCE OF CANADA

CONCERNING

BATTLE CONTROL SYSTEM – FIXED (BCS-F)

MODERNIZATION

## INTRODUCTION

The Department of Defense of the United States of America (U.S. DoD) and the Department of National Defence of Canada (CAN DND), hereinafter referred to as the "Participants," entered into the Memorandum of Understanding concerning Battle Control System-Fixed (BCS-F) Modernization, which entered into effect March 9, 2007. The BCS-F Modernization MOU expires on March 9, 2017.

## OBJECTIVE

This Amendment One modifies language in the MOU to describe more accurately how the Participants will contribute uniquely to program modernization and improvement efforts.

## AMENDMENTS

1. Section I (Definitions), add the following definition after "Host Participant" and before "Participant":

"Increment            A discrete set of capabilities that includes requirements review, development, operational test, and fielding."

2. Section I (Definitions), Project Arrangement (PA), delete "on specific Spirals".

3. Section I (Definitions), add the following definition after "Spiral" and before "Third Party":

"Sustainment        The post-developmental phase where the system is maintained with periodic improvements."

4. Section I (Definitions), add the following note to the end of the definition of "Spiral."

"Note: Following Spiral 3, these sets are called 'Increments.'"

5. Section II (Objectives), delete paragraph 2.2 in its entirety and insert in its place the following:

"2.2 The major objectives of the BCS-F Modernization Project under this MOU are as follows:

2.2.1 Maintain robust interoperability between the U.S. and Canadian sectors as BCS-F capabilities are improved and modernized;

2.2.2 Replace the current closed architecture system with an open architecture (both equipment and computing environment (e.g., operating system, middleware, application computer programs)) system. This will facilitate integration of future capabilities by allowing the software to

become independent of the hardware platform;

- 2.2.3 Receive, correlate, and fuse data from air, land, and sea elements into a Single Integrated Air Picture (SIAP)/Common Tactical Picture (CTP) using the Integrated Architecture Behavior Model (IABM);
- 2.2.4 Provide the capability to interface with and fuse data from additional Sensors, including, but not limited, to all North Warning/Joint Surveillance System (JSS)/RAOC and Federal Aviation Agency-type sensors;
- 2.2.5 Increase the capacity to accept, process/fuse, store, and display sensor inputs, tracks, and flight plans;
- 2.2.6 Support a larger geographic area of interest to NORAD's Area of Operations (AOO);
- 2.2.7 Provide improved surveillance and control within NORAD's AOO, including counter-drug detection and monitoring operations;
- 2.2.8 Provide additional system interfaces to improve interoperability with other air defense Command, Control, and Communication (C3) systems; tactical forces, intelligence, and battle management systems; and other services and agencies. These should include, but are not limited to, other U.S. Joint C2 systems and standards, such as: current and future U.S. Tactical Digital Information Links (TDLs), e.g., Link 11 A/B, Link-16, Link-22, and the Global Command and Control System (GCCS);
- 2.2.9 Implement the interface control messages for the new TPS-75 interrogator Control computer, Mode 5 and Mode S. Currently the system has AN/FPS-117 Mode 4, not AN/TPS-75 Mode 4; and
- 2.2.10 Reduce the manpower required for operations and maintenance."

6. Section II (Objectives), in paragraph 2.3, delete "The Participants will enter into PAs under this MOU for each Spiral under the Project, beginning with Spiral 4", and insert the following in its place:

"The Participants may enter into PAs under this MOU for sustainment and improvement efforts beginning with Increment 3.2.1."

7. Annex A (Title Page), delete "Concerning Spiral (Insert Number) under" and insert in its place "Modernization Effort (Insert Number)".

8. Annex A (Introduction), delete "for Spiral (insert number)" and insert in its place "Modernization Effort (insert number)".

**ENTRY INTO EFFECT**

This Amendment One to the BCS-F Modernization MOU will enter into effect upon signature by both Participants. All other provisions of the MOU remain unchanged.

IN WITNESS WHEREOF, the undersigned, being duly authorized by their Governments, have signed this Amendment.

Amendment One to the BCS-F Modernization MOU

FOR THE DEPARTMENT OF DEFENSE OF THE UNITED STATES OF AMERICA



Signature

Gerald Hust

Name

Director of Policy

Title

8 0 APR 2013

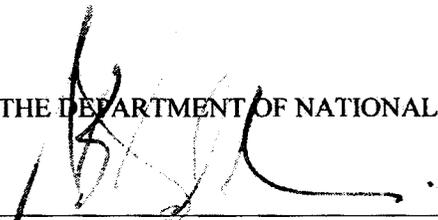
Date

Washington DC

Location

Amendment One to the BCS-F Modernization MOU

FOR THE DEPARTMENT OF NATIONAL DEFENCE OF CANADA



Signature

VADM A. B. DONALDSON  
Name

Vice Chief of the Defence Staff  
Title

13 June 2013  
Date

Ottawa, Canada  
Location