

Memorandum of Understanding

Among

The Department of National Defence of Canada,

The Minister of Defence of the French Republic,

The Federal Ministry of Defence of the  
Federal Republic of Germany,

The Ministry of Defence of the Italian Republic,

The Secretary of State for Defence of the United Kingdom of  
Great Britain and Northern Ireland

and

The Secretary of Defense on behalf of the Department of  
Defense of the United States of America

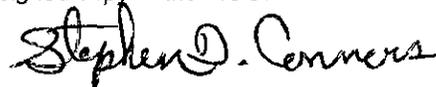
Concerning

The Multilateral Interoperability Program  
(MIP)

CERTIFICATION OF AUTHENTICITY

I hereby certify this to be a true copy of the Memorandum of Understanding Among the Department of National Defence of Canada, the Minister of Defence of the French Republic, the Federal Ministry of Defence of the Federal Republic of Germany, the Ministry of Defence of the Italian Republic, the Secretary of State for Defence of the United Kingdom of Great Britain and Northern Ireland and the Secretary of Defense on behalf of the Department of Defense of the United States of America Concerning The Multilateral Interoperability Program (MIP).

The Office of the Deputy Assistant Secretary of the Army for Defense Exports and Cooperation, Armaments Cooperation Division, maintains custody of a signed copy of the MOU.



STEPHEN D. CONNORS  
INTERNATIONAL AGREEMENTS  
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## INTRODUCTION

The Department of National Defence of Canada, the Minister of Defence of the French Republic, the Federal Ministry of Defence of the Federal Republic of Germany, the Ministry of Defence of the Italian Republic, the Secretary of State for Defence of the United Kingdom of Great Britain and Northern Ireland, and the Secretary of Defense on behalf of the Department of Defense of the United States of America, hereinafter referred to as the "Participants"

Having a common interest in defense

Having noted that:

In future operations, the effective level of command is likely to be national brigades within multinational divisions or national divisions within a multinational corps. For certain missions limited in time and space, there may be a requirement to subordinate national units to multinational brigades but this will be the exception rather than the rule. In Operations Other Than War (OOTW), a mix of sub-units may be frequent. As a general rule however, it should be assumed that the lowest level of subordination would be national units within a multinational brigade. The Multilateral Interoperability Program (MIP) is the vehicle to define interoperability among the Command and Control Information Systems (C2IS) of the armies of the Participants at corps through battalion or lowest appropriate echelon. Implementation of the specifications generated under MIP in the C2IS of the Participants will ensure interoperability of those systems and satisfy the operational requirements for war and OOTW.

The Participants have therefore reached the following understandings.

## SECTION I

### DEFINITIONS

The Participants have decided upon the following definitions for terms used in this Memorandum of Understanding (MOU).

APP-9	Serial number of the NATO Document entitled "A Compendium of Allied Land Force Messages"
Background Information	Information not generated in the performance of work under this MOU.
Classified Information	Official information that requires protection in the interest of national security and is so designated by the application of a security classification marking.
Command and Control Information Systems (C2IS)	Information systems which provide authorities with support for command and control purposes.
Contract	Any mutually binding legal relationship which obligates a Contractor to furnish supplies or services, and obligates a Participant to pay for them.
Contracting	<i>The obtaining of supplies or services by Contract from sources outside the government organizations of the Participants. Contracting includes description (but not technical selection) of supplies and services required, solicitation and selection of sources, and preparation and award of Contracts, and all phases of Contract administration.</i>
Contractor	Any entity undertaking work under a Contract for the performance of this MOU.
Controlled Unclassified Information	Unclassified Information to which access or distribution limitations have been applied in accordance with applicable national laws or regulations. Whether the Information is provided or generated under this MOU, the Information will be marked to identify its "in confidence" nature. It may include Information which has been declassified, but remains controlled.
Defense Purposes	Manufacture or other use in any part of the world by or for the armed forces of any Participant. This does not include sales or transfers of Information to Third Parties.
Designated Security Authority (DSA)	The security office approved by national authorities to be responsible for the security aspects of this MOU.
Foreground Information	Information generated in the performance of work under this MOU.

Information	Recorded or document data, regardless of format or other documentary characteristics, including experimental and test data, specifications, design processes, inventions or discoveries whether or not patentable, technical writings, sound recordings, pictorial reproductions, drawings or other graphic representations, magnetic records, computer software documentation, computer memory printouts or data retained in computer memory, works of a technical nature, semiconductor topography/mask works and any other relevant technical data in whatever form presented, whether or not copyrighted or otherwise subject to legal protection. Information includes both technical and manufacturing data packages, designs, know how, trade secrets and industrial techniques.
Invention	Any invention or discovery formulated or made (conceived or first actually reduced to practice) in the course of work performed under this MOU. The term "first actually reduced to practice" means the first demonstration, sufficient to establish to one skilled in the art to which the invention pertains, of the operability of an invention for its intended purpose and in its intended environment.
Material	Any item, component, piece of equipment or substance from which Information can be derived.
Patent	Legal protection of the right to exclude others from making, using, or selling an invention. The term refers to any and all patents as defined by national laws or regulations.
Third Party	For the purposes of this MOU, any person or other entity whose Government or entity thereof is not a Participant to this MOU.

## SECTION II

### OBJECTIVES

2.1 In MIP, the Participants wish to produce a solution that satisfies army C2IS interoperability requirements at all levels from corps to battalion (or lowest appropriate level) in order to support multinational, combined and joint operations, both in OOTW and in war. To do so they recognize the following specific operational, procedural and technical objectives.

2.1.1 Operational. To specify the detailed operational requirements, including the operational and employment concepts and the Information Exchange Requirements (IERs) and to provide operational interfaces in a fieldable form to enable the C2IS of the Participants to interoperate at and between those levels of command endorsed by NATO Land Group 1. In principle, the implementation of the MIP solution will make it possible to process information up to and including NATO Secret.

2.1.2 Procedural.

2.1.2.1 To implement those IERs relevant to and supporting the above operational goals, ensuring maximum commonality at formation and unit command levels.

2.1.2.2 To support those IERs in each and every interoperability solution devised under this MOU.

2.1.2.3 To provide guidance to the APP-9 Panel on the implications of implementing APP-9 IERs on automated systems.

2.1.2.4 To develop a common set of MIP messages which supports the IERs identified in sub-para 2.1.1, and is based upon an agreed common message capability.

2.1.2.5 To define a data exchange mechanism and a data exchange model (i.e. to expand the Land C2 information exchange data model) which support vertical and horizontal interoperability and which can also work with the agreed common message capability.

2.1.3 Technical.

2.1.3.1 To expand the information exchange capabilities of the former Battlefield Interoperability Program for Low Level Echelon Command and Control Systems (BIP) and the former Quadrilateral Interoperability Program (QIP).

2.1.3.2 To implement those messages supporting the IERs as identified in sub-para 2.1.2.4 above.

2.1.3.3 To examine communications solutions identified by other fora for exchanging data at all agreed levels.

2.1.3.4 To define, develop, test and demonstrate an automated data exchange capability that supports vertical and horizontal interoperability. This capability could be based on developed Army Tactical Command and Control Information System (ATCCIS) specifications.

## SECTION III

### SCOPE OF WORK

3.1 The scope of work for this MOU will encompass co-operative activities whose maturation will lead to an increase in interoperability between allied army C2IS. Such co-operative activities will be achieved by one or more of the following means:

3.1.1 the exchange of Information on national defense research and development activities relating to the MIP;

3.1.2 the joint definition of operational, procedural and technical interoperability capabilities;

3.1.3 the testing, validation, and demonstration of interoperability capabilities; and

3.1.4 the loan of hardware and software for evaluation as required.

#### 3.2 Operational Background.

3.2.1 To ensure effective command and control, a high degree of operational Information exchange is required between an increasing number of official agencies, including components of the armed services of the Participants.

3.2.2 Vertical and horizontal Information flows are required, vertical flows within discrete command structures and horizontal flows to ensure synchronization with flanking units or formations. Operational requirements will dictate the Information to be exchanged vertically and horizontally and at what frequency the exchanges will occur.

3.3 Information Exchange Between Levels of Command. The following levels of command will need to exchange Information in multinational operations.

#### 3.3.1 Vertical. Between:

3.3.1.1 corps headquarters (HQ) and subordinate divisions (of whatever nation) and any assets (of whatever nation) deployed in support of that corps;

3.3.1.2 division HQ and subordinate brigades (of whatever nation) and any assets (of whatever nation) deployed in support of that division;

3.3.1.3 brigade HQ and subordinate units (of whatever nation) and any assets (of whatever nation) deployed in support of that brigade; and

3.3.1.4 unit HQ and sub-units (of whatever nation).

3.3.2 Horizontal. Between flanking HQs and formations/units at all levels of command from corps to company, either within a multinational formation or between units sharing a common boundary and between formation and specialist assets of different nations (such as land and air defense artillery, engineers, army aviation, Electronic Warfare (EW), Psychological Operations (Psy Ops) and Nuclear, Biological and Chemical (NBC elements)) including OOTW.

## SECTION IV

### PROGRAM OF WORK

4.1 The Participants will jointly:

4.1.1 Exchange Information required to achieve interoperability between their respective C2IS. This Information will include:

4.1.1.1 interoperability concepts of operations;

4.1.1.2 joint military user-based IER analysis studies;

4.1.1.3 IERs;

4.1.1.4 lists of implemented hardware and software standards in national experimental systems/demonstrators used in the joint field experiment; and

4.1.1.5 required technical specifications in order to exchange tactical Information between the C2IS.

4.1.2 Perform the work specified in Section III (Scope of Work) to achieve the objectives detailed in Section II (Objectives).

4.1.3 Participate in validation experiments, demonstrations, and combined field demonstrations of the achieved interoperability between national C2IS at brigade level and lower echelon command and control systems.

4.2 Schedule of Work. The MIP will achieve its objectives in two distinct phases.

4.2.1 Phase 1. To define and develop an improved fieldable formatted message (ADatP-3) capability supporting vertical and horizontal interoperability by 2002.

4.2.2 Phase 2. To define and develop a fieldable automated data capability that supports vertical and horizontal interoperability by 2005.

## SECTION V

### MANAGEMENT (ORGANIZATION AND RESPONSIBILITY)

5.1 A Multilateral Interoperability Program Management Group (MMG) is to be implemented to which each Participant will appoint a representative to be known as the Head of Delegation (HOD). The MMG will be jointly responsible for:

- 5.1.1 implementing this MOU;
- 5.1.2 coordinating the national scopes of work, in particular for establishing the time schedule in a Multilateral Interoperability Program Management Plan (MPMP) which will be updated annually;
- 5.1.3 exercising executive-level oversight of the program and co-ordination of Working Groups;
- 5.1.4 developing a description of the desired MIP capability based on Section II (Objectives), Section III (Scope of Work), and Section IV (Program of Work);
- 5.1.5 monitoring overall use and effectiveness of this MOU; and
- 5.1.6 recommending amendments to this MOU.

5.2 Each Participant will appoint a representative to each Working Group (WG) which will be responsible for jointly executing specific elements of the work program, as directed by the MMG. Each Participant's representative on the WGs will be responsible for:

- 5.2.1 managing and directing their national contribution to a WG with a view to meeting the technical and work performance requirements of a WG as laid down by the MMG;
- 5.2.2 jointly co-ordinating the activities of the WG;
- 5.2.3 jointly preparing reports for the MMG on the progress achieved in their WG as directed by the MMG;
- 5.2.4 ensuring that exchange of Information occurs on an equitable basis; and
- 5.2.5 jointly referring to the MMG any issues (including disputes) that cannot be resolved within the WG level of the program.

5.3 Six WGs will be set up initially:

- Configuration Control Working Group (CCWG);
- Operational Working Group (OWG);
- Procedural Working Group (PWG);
- Technical Working Group (TWG);

Exercise and Demonstration Working Group (EDWG); and

Program Co-ordination Working Group (PCWG).

5.4 The MMG will provide direction and guidance to each WG on activities to be undertaken. Each will have a standing chairman appointed by the Participant designated to provide the chair for that WG.

5.5 Further WGs may be established by the MMG for specific tasks on a specific timescale, provided that the activities of those WGs fall within the Scope of Work of this MOU. The MMG will suggest suitable candidates for fulfilling the roles of Participant's representatives and standing chairmen.

5.6 The MMG will meet as required, but as a minimum on a semi-annual basis, while the WGs will meet as directed by the MMG, but as a minimum on a quarterly basis, with each Participant taking its turn to act as host on an alphabetical basis. The Chairman for each MMG meeting will be determined by the host Participant. During such meetings, all decisions will be made on the basis of unanimity. Participants' representatives and standing chairmen may be accompanied to such meetings by as many advisers as they deem necessary.

5.7 The working language of activities conducted pursuant to this MOU will be English.

## SECTION VI

### FINANCIAL ARRANGEMENTS

6.1 Each Participant will bear the financial costs it incurs in performing, managing, and administering its activities under this MOU. These costs will include, but not necessarily be limited to, salaries, travel and per diem for its Program personnel, as well as the costs of any Contracts incurred. The costs will vary among the Participants according to personnel involved, subsistence rates, and Contractors engaged.

6.2 The Participants will perform, or have performed, the work specified in Section III (Scope of Work) and Section IV (Program of Work) and will fulfill their responsibilities under this MOU on an equitable and mutually determined basis.

6.3 There will be no joint funding of any activity under this MOU.

6.4 If a Participant becomes unable to fulfill the provisions of this MOU, it will promptly notify the other Participants. The Participants will promptly consult with a view to *continuation on a changed or reduced basis. If this is not acceptable to the other Participants,* then the provisions of Section XVIII (Amendment, Withdrawal and Termination) will apply.

## SECTION VII

### CONTRACTUAL ARRANGEMENTS

7.1 There will be no jointly managed Contract placed to accomplish the work specified in Section III (Scope of Work) and Section IV (Program of Work) of this MOU.

7.2 If a Participant determines that Contracting is necessary to fulfill that Participant's responsibilities in a WG, that Participant will contract in accordance with its respective national laws, regulations, procedures and the provisions of this MOU. Each Participant will be solely responsible for its own Contracting, and the other Participants will not be subject to any liability arising from such Contracts without their prior written consent.

7.3 Each Participant will insert into its Contracts, terms which will satisfy the requirements of this MOU.

## SECTION VIII

### DISCLOSURE AND USE OF INFORMATION

8.1 General. The Participants recognize that successful collaboration depends on full and prompt exchange of Information necessary to carry out the work detailed in Section III (Scope of Work) and Section IV (Program of Work) of this MOU. The Participants intend to provide to each other sufficient Information, together with the necessary rights of use, to achieve the objective of this MOU.

#### 8.2 Background Information

8.2.1 Disclosure. To the extent that it is entitled to do so without incurring liabilities to holders of proprietary rights, and, subject to the provisions of Section XII (Third Party Sales and Transfers), each Participant will provide to the other Participants, without charge, all Background Information which is necessary to or useful in the performance of this MOU. However, the Participant in possession of the Background Information will have the privilege:

8.2.1.1 to determine whether it is "necessary to" or "useful in" the performance of this MOU; and

8.2.1.2 to withhold any Background Information where the provision of the Background Information to any of the other Participants would be contrary to the providing Participant's national disclosure rules and regulations.

8.2.2 Use. Subject to any right of holders of proprietary rights, each Participant may use or have used, without charge, Background Information provided under Paragraph 8.2.1 above for the purposes of this MOU.

#### 8.3 Foreground Information

8.3.1 Disclosure. Each Participant will, without charge, and, subject to the provisions of Section XII (Third Party Sales and Transfers), provide to the other Participants, any Foreground Information requested.

8.3.2 Use. Each Participant may, without charge, use or have used Foreground Information received under Paragraph 8.3.1 above for their Defense Purposes.

8.4 Jointly Generated Foreground Information. Each Participant will have the right to use, or have used, without charge for its Defense Purposes any Foreground Information generated jointly by the Participants in the performance of this MOU.

8.5 Use of Information for Interoperability. Each Participant may use or have used, for its Defense Purposes, any Foreground Information, including jointly generated Foreground Information and, subject to the rights of holders of proprietary rights, any Background Information which is essential for the implementation of any interoperability arrangements resulting from work under this MOU. The Participants recognize that any interface specification arising from the MIP, may in the future become the basis for a NATO Standardization Agreement (STANAG).

8.6 Information subject to proprietary rights.

8.6.1 All unclassified Information subject to proprietary rights will be identified, marked and handled as Controlled Unclassified Information. All Classified Information subject to proprietary rights will be so identified and marked.

8.6.2 The provisions of the NATO Agreement on the Communication of Technical Information for Defence Purposes of 19 October 1970, and its Implementing Procedures of 1 January 1971, will apply to this MOU.

8.7 Patents. It is not anticipated that work undertaken under this MOU will result in an invention. Should a patentable invention be jointly generated by the Participants under this MOU, the Participants will consult, each with the others, to establish mutually acceptable arrangements to share the benefits and costs.

8.8 Alternative Uses of Program Information

8.8.1 The prior written consent of each Participant will be required for the use of *Foreground Information for purposes other than those provided for in this MOU.*

8.8.2 Any Background Information provided by a Participant will be used by the other Participant(s) only for the purposes set forth in this MOU, unless otherwise consented to in writing by the providing Participant.

**SECTION IX**  
**VISITS TO ESTABLISHMENTS**

9.1 Each Participant will permit visits to its Government establishments, agencies and laboratories, and Contractor industrial facilities by employees of the other Participants or by employees of the other Participants' Contractor(s) provided that the visit is authorized by the respective Participant and the employees have appropriate security clearances and a need-to-know.

9.2 All visiting personnel will be required to comply with security regulations of the host Participant. Any Information disclosed or made available to visitors will be treated as if supplied to the Participant sponsoring the visiting personnel, and will be subject to the provisions of this MOU.

9.3 Requests for visits by personnel of one Participant to a facility of the other Participant will be co-ordinated through official channels, and will conform with the established visit procedures of the host Participant. Requests for visits will cite this MOU as the basis for the request.

9.4 Lists of personnel of the Participants required to visit, on a continuing basis, facilities of the other Participants will be submitted through official channels in accordance with agreed recurring international visit procedures.

## SECTION X

### CONTROLLED UNCLASSIFIED INFORMATION

10.1 Except as otherwise provided in this MOU or as authorized in writing by the originating Participant, Controlled Unclassified Information provided or generated pursuant to this MOU will be controlled as follows:

10.1.1 Such Information will be used only for the purposes authorized for use of Program Information as specified in Section VIII (Disclosure and Use of Information).

10.1.2 Access to such Information will be limited to personnel whose access is necessary for the permitted use under subparagraph 10.1.1 and will be subject to the provisions of Section XII (Third Party Sales and Transfers).

10.1.3 Each Participant will take all lawful steps, which may include national classification, available to it to keep such Information free from further disclosure (including requests under any legislative provisions), except as provided in subparagraph 10.1.2., unless the originating Participant consents to such disclosure. In the event of unauthorized disclosure, or if it becomes probable that the Information may have to be further disclosed under any legislative provision, immediate notification will be given to the originating Participant.

10.2 To assist in providing the appropriate controls, the originating Participant will ensure that Controlled Unclassified Information is appropriately marked. The Participants will decide, in advance and in writing, on the markings to be placed on the Controlled Unclassified Information. The appropriate markings will be defined in the Program Security Instruction.

10.3 Controlled Unclassified Information provided or generated pursuant to this MOU will be handled in a manner that ensures control as provided for in paragraph 10.1.

10.4 Prior to authorizing the release of Controlled Unclassified Information to Contractors, the Participants will ensure the Contractors are legally bound to control such Information in accordance with the provisions of this Section.