

## BRIEFING NOTE FOR THE CDS AND DM

### COMMAND AND CONTROL DEVELOPMENT OF CYBER OPERATIONS

#### ISSUE

1. The DND/CAF needs to improve its postured to better anticipate, plan and conduct Cyber Operations. This briefing note is intended to inform and to seek your concurrence to engage Level 1 stakeholders to assist in developing proposals for appropriate CAF Command and Control (C2) structures to effectively conduct Cyber Operations.

#### BACKGROUND

2. Cyber has traditionally been viewed as a technical concern, with the DND/CAF postured principally to provide cyber security in accordance with Financial Administration Act requirements. Given the evolution of cyber in the operational environment, including its growing use by potential adversaries, the 2009 Integrated Capstone Concept recognised cyber as a new warfighting domain.

#### DISCUSSION / CONSIDERATIONS

3. As part of the overall CFD Cyber Force Development, preliminary discussions with key stakeholders occurred in Spring 2014 where comments and dialogue identified many elements of the complex problem space which required detailed analysis. A mission analysis was subsequently conducted. The analysis revealed that:

- a. The Authority - Responsibility - Accountability (ARA) matrix in regards to cyber operations is very complex, has seams and has overlapping elements;
- b. Cyber operations are currently not command driven; and
- c. There is insufficient clarity in how the functions of Force Employment (FE), Force Generation (FG), Force Development (FD), Force Management (FM) Operational and Technical Authorities (OA and TA), and Human Resources (HR) management are coordinated and executed.

4. Resolution of the above is complicated by a number of factors including:

- a. Actions in the cyber domain taken at the Strategic and Operational levels have impacts at the Tactical level, and vice-versa;
- b. Cyber Operations, Cyber Support Operations, and Cyber Security are very interdependent - cyber is an environment within which cyber operations are conducted and other environmental operations depend on the confident and uncontested use of the cyber environment;

- c. Cyber Operations are critically reliant on Intelligence;
- d. CAF Information Technology Systems (ITS) are owned and operated by multiple LIs, Shared Service Canada and contracted partners;
- e. CAF relies on non-CAF ITS assets - including non-Canadian industry capabilities - to link CAF nodes; and
- f. Coordination of Cyber Operations with Allies and partners is important and complex.

5. An initial consideration of the problem has identified that establishing effective C2 to allow the CAF to properly conduct Cyber Operations may require some resource investment, realignment of current ARA beyond the existing organizations conducting Cyber Operations (e.g. Cyber support activities under the responsibilities of different LIs), reorganization and/or the creation of new organisations within the DND/CAF.

## RECOMMENDATION

6. The CAF needs to conduct command-led and intelligence-informed Cyber Operations integrated with those of our partners and Allies. To enable such operations, the CAF must ensure that clear, agreed, well understood and accepted ARA of key cyber functions are in place to ensure freedom of action in the cyber domain for other joint operations.

7. It is recommended that a Senior Operational Planning Group (SOPG) with representation from all affected Level 1 organizations be convened to develop courses of action to develop the proper Cyber Operations C2 Structure that will address all aspects of FE/FG/FD/FM/TA/OA/HR.

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**Reviewed by:** P.C. Sabourin, Col, D Cyber FD, 947-9498

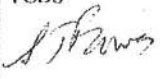
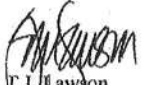
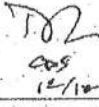
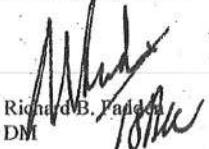
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**Date Prepared:** 17 Nov 14

TRANSMITTAL SHEET/BORDEREAU D'ENVOI

Subject/Objet: BRIEFING NOTE FOR THE CDS AND DM: COMMAND AND CONTROL  
 DEVELOPMENT OF CYBER OPERATIONS

To	Remarks
VCDS  S.J. Bowes MGen CFD (613) 995-5542 Date: 28 Nov 14	Recommended Sir we would like to move forward with establishment of SOF6 to evaluate options for an effective C2 structure. Take Transition to R1. AT
CDS Guy R. Thibault LGen VCDS (613) 992-6052 Date: 16/12/14	Chief / Dtl This is a timely issue to start shaping way ahead for C2 and structures. Would ask for your agreement to move in this direction and any initial guidance you might wish to provide at the start. AT
DM  F.J. Lawson Gen CDS Date: 12/12	Full endorsement!  F.J. 12/12
 Richard B. Fadden DM Date: DEC 18 2014	