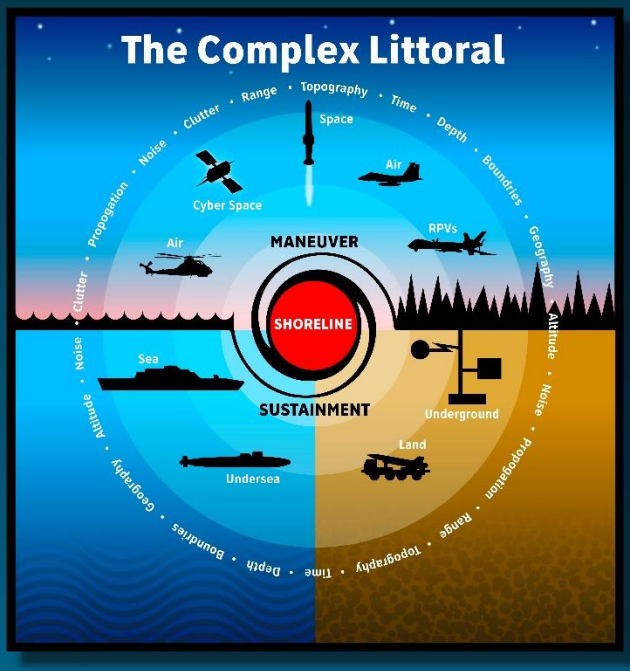

LITTORAL OPTECH-*NORTH*

"The Colder Littorals"

October 16TH-18TH, 2018

Halifax, Canada

The fourth in a series of regionally focused Littoral Operations and Technology Workshops

OPERATIONAL PERSPECTIVE | **TECHNOLOGY DEVELOPMENT**

Royal Canadian Navy | Naval Postgraduate School Littoral Operations Center

The Littoral OpTech Workshop series gathers defence leaders, scientists, analysts and experts from Government, Academia and Industry to explore the unique operational and technological challenges in and along the littoral waters of the globe

Supported by:

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SAAB TECHNOLOGIES

Workshop Theme: The Colder Littorals

For working purposes, a militarily useful definition of the littoral is the near shore area where complexity and risk rapidly expand within all domains Cyber, Land, Air, Maritime and Space (CLAMS). In this area one confronts high clutter and anti-access strategies across manifold, overlapping boundaries that generate area specific operating conditions and the need for tailored operations with advanced technologies.

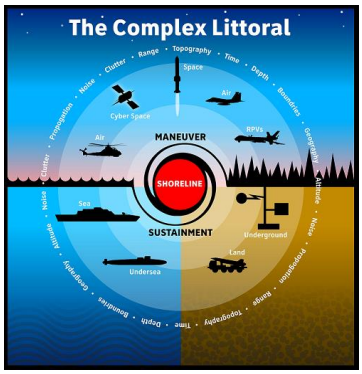
The littoral boundaries are geo-physical in nature, coupled to anomalous phenomenology set in manmade political, juridical or commercial constructs, all complicating military operations and the application of military technologies. Adding to the complexity is a stubborn, structural component of the littorals which is instability. Increasingly competitive and interconnected no nation escapes the effects.

In this environment, operations must be viewed alongside technology and with the research (public and private) necessary to ensure that the challenges of the complex littorals can be met together with allies and partners.

In the littoral, operations and technologies act at the grand convergence of activity that makes the littorals the dominant geographic feature in the modern world. The transactions and flows of humanity join there with all military domains while imposing a culminating line (shore line) that impacts the trade space between offensive and defensive actions and reactions. **The colder littorals of the high north, subpolar regions are markedly different from the littorals examined in the previous three Littoral OpTech Workshops.** The colder littorals are prickly hosts to an inexorable rise in transnational activities within unique, austere and often severe environments and newly exposed geographies. International naval forces, and coast guards are awakening to the emerging security issues.

Previous OpTech Workshops

- OpTech-WEST, Baltics
- OpTech-EAST, China Seas
- OpTech-SOUTH, Caribbean Basin



These OpTech workshops foster close collaboration with allies and partners across governments, academia and industry and they expand operational perspectives and the awareness of advanced technology solutions. Only through collaboration can international problems be addressed effectively. We will aim to gain perspective and explore solutions to operational and technical challenges.

In the wake of the success at the Littoral OpTech-WEST Workshop in Stockholm, Sweden Sep 2014, Littoral OpTech-EAST Workshop in Tokyo, Japan Oct 2015 and Littoral OpTech-SOUTH in Cartagena, Colombia April 2017, the Littoral OpTech-NORTH Workshop will take on the challenges in the colder littorals to include a Full Spectrum Deterrence Simulation integrated with the workshop agenda as shown below, provided by the New Generation Warfare Centre.

Littoral OpTech-NORTH Workshop: Preliminary Agenda

15 Oct PM	Activities	Comments
5:30-7:30	Ice Breaker Social	**Halifax Marriott Harbourfront Hotel** 1919 Upper Water Street, Halifax
16 Oct AM	**Activities**	**Comments**
7:15	Bus transportation	Halifax Marriott Harbourfront Hotel to Nova Scotia Community College
7:20-7:50	Registration	Nova Scotia Community College (NSCC) Ivany Campus, Dartmouth
8:00-8:10	Welcome, Admin & Introduction of Keynote Speaker	Workshop Leader **CAPT Bo Wallander RSwN (Ret'd)** Senior Technical Advisor Saab
8:10-8:30	Opening Remarks Keynote Speaker	**RADM Casper Donovan RCN** Director General Future Ship Capabilities Canadian Armed Forces
8:30	Introduction of Keynote Speaker	**Dr. Wayne Porter CAPT USN (Ret'd)** Director, Littoral Operations Center U.S. Naval Postgraduate School
8:30-9:00	Keynote Speaker	**RADM David Hahn** Chief of Naval Research Director of Innovation, Technology Requirements and Test & Evaluation (OPNAV N94)
9:00-9:30	Keynote Speaker	**Dr. Wayne Porter CAPT USN (Ret'd)** Director, Littoral Operations Center U.S. Naval Postgraduate School
9:30-9:45	Keynote Video Address	**Prof Wayne Hughes** Dean Emeritus, U.S. Naval Postgraduate School
9:45-10:15	***Full Spectrum Deterrence Simulation***: "Contest in the High North" Scenario Build 1: Indications & Warnings	**Mr. Greg Melcher** **Dr. Phillip Petersen** **CDR Bob Nugent USN (Ret'd)** New Generation Warfare Centre
10:15-10:45	Break	
10:45-12:00	**Panel One:** Expanding Transnational Activity *Policies, Practices and Friction* **Moderator:** **Mr. Magnus Nordenman** Director, Transatlantic Security Initiative Atlantic Council	Panelists: - **VADM Brian Salerno USCG (Ret'd)** Vice President, Maritime Policy Cruise Line International Association - **Mr. Tero Vauraste** President and Chief Executive Officer Arctia Ltd. - **Dr. Lawson Brigham USCG (Ret'd)** Distinguished Fellow & Faculty University of Alaska Fairbanks - **Ms. Rachel Gosnell** Associate Professor of Political Science United States Naval Academy - **Dr. Szymon Hatlas** Senior Researcher War Studies University, Poland
12:00-1:00	Lunch	

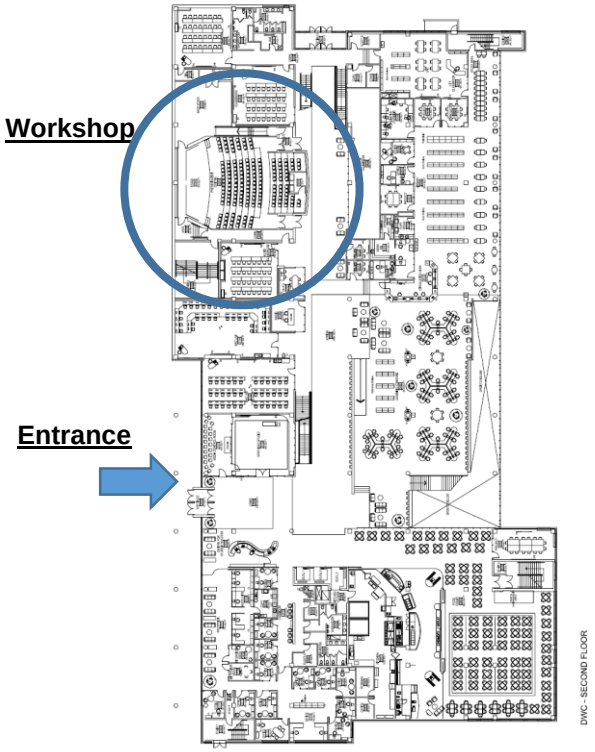
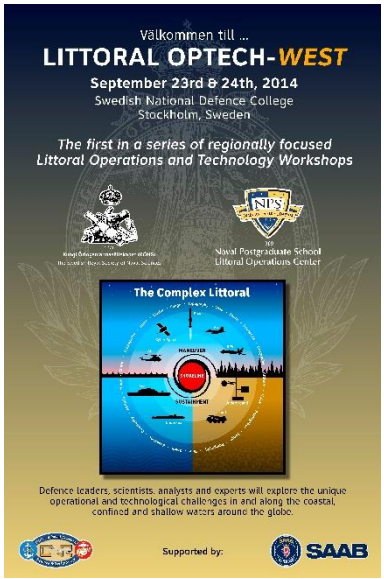
16 Oct PM	Activities	Comments
1:00-2:30	**Panel Two**: The Maritime Domain in the High North *Cooperation and Contest* **Moderator:** **Capt Edward Lundquist USN (Ret'd)** Chief Engagement Officer Echo Bridge LLC	Panelists: - **RADM Odd Werin** Head of Naval Systems Department Swedish Defence Materiel Administration (FMV) **CDR Jussi Jamsen** Assistant Military, Naval and Air Attache Embassy of Finland, Wash, DC - **CAPT John Branch USCG** USCG Liaison Officer US Fleet Forces Command/USNAVNORTH - **Mr. Carmen Farro** Senior International Cooperation Analyst/Engineer E3R Inc. - **Mr. Ian Sage** Director, Maritime Operations Centre for Maritime Research and Experimentation - **Dr. Hal Moore** Chief Technology Officer NORAD USNORTHCOM J8 S&T
	Break	
3:00-4:45	**Panel Three:** On and Above the Surface: *Platforms and Systems in a Cold, Rough and Austere Environment* **Moderator:** **CAPT James McCarthy USN (Ret'd)** Vice President, Naval Programs Cypress International	Panelists: - **CDR Corey Gleason RCN. MMM, CD** Commanding Officer (Desig) HMS HARRY DEWOLF Department of National Defence, Canada - **CAPT Glen Sears USN (Ret'd)** Senior Strategy Analyst Lockheed Martin Rotary and Mission Systems - **Mr. John Waterston** Program Manager, Strategic Technology Office Defense Advanced Research Projects Office - **Mr. Steven Murphy** Product manager, Airborne Surveillance Systems Saab Surveillance - **CAPT Dave Forster USN (Ret'd),** Director, Strategy and Business Development, Maritime and Strategic Systems, General Dynamics Mission Systems
4:45-5:15	***Full Spectrum Deterrence Simulation***: Scenario Build 2: Escalating Tensions & Hybrid Operations	**Mr. Greg Melcher** **Dr. Phillip Petersen** **CDR Bob Nugent USN (Ret'd)** New Generation Warfare Centre
5:30	Bus Transportation	NSCC to Halifax Marriott Harbourfront Hotel

17 Oct AM	Activities	Comments
7:15	Bus transportation	Halifax Marriott Harbourfront Hotel to NSCC
7:20-7:50	Registration	Nova Scotia Community College
8:00-8:30	Keynote Speaker	**CDRE Hans Helseth RNON** Special Advisor COM Joint Warfare Centre, Stavanger
8:30-10:00	**Panel Four:** Below the Surface: *The Under Water and Under Ice Challenges* **Moderator:** **Dr Jeff Taylor** Associate Vice President Applied Research an Innovation Nova Scotia Community College	Panelists: - **SCPO Brad West USN** MS Candidate, Defense Analysis U.S. Naval Postgraduate School - **Mr. Scott Shipman** President B.B. Hoss LLC - **Mr. Adam Comeau** GLIDER Team Manager Dalhousie University - **Mr. Chris Malzone** General Manager Quality Positioning Services Inc. - **Dr. Craig Brown** NSERC Industrial Research Chair, Integrated Seafloor Mapping Nova Scotia Community College
10:00-10:30	Break	
10:30-12:00	**Panel Five:** Across the Shore: *Advanced Operations and Technology in Contested Littorals* **Moderator:** **Ms Shala Malone** Senior National Representative OPNAV N94	Panelists: - **CDR Scott Craig RAN** Assistant Naval Attaché Embassy of Australia, Wash, DC - **LtCol Ron Poetiray RNLMC** Special Advisor Directorate of Plans, Ministry of Defense, Netherlands - **LtCol John Berry USMC (Ret'd)** Director, Concepts Branch Marine Corps Warfighting Lab - **Marius Thrormodsen RNON** - **Mr. Craig Bleile** Science Advisor Naval Warfare Development Command SPAWAR Systems Center Pacific - **LCDR Hal Shiels** Targeting: Joint Effects Canadian Forces, Maritime Warfare Center
12:00-1:00	Lunch	Nova Scotia Community College

17 Oct PM	Activities	Comments
1:00-3:00	**Panel Six:** C4ISR, Networks and Space: *Maritime Domain Awareness* **Moderator:** **RADM Paul Becker USN (Ret'd)** President and CEO The Becker T3 Group LLC	Panelists: - **RADM Victor See USN (Ret'd)** Lehigh University Senior Lecturer - **Mr. Guy Thomas** President C-SIGMA Space LLC - **Mr. Joakim Ekblad** Head, Machine Learning, Cyber and Space Saab Surveillance - **Dr. Alex Bordetsky** Director, Center for Network Innovation & Experimentation U.S. Naval Postgraduate School - **Lt Beverly Crawford/Lt Inna Stukova** Thesis: Self-moving Littoral Mesh Networks U.S. Naval Postgraduate School
3:00-3:30	Break	
3:30-5:00	**Panel Seven:** Covering the Vast High North *Unmanned and Autonomous Systems* **Moderator:** **CDRE Patrick Tyrrell RN OBE (Ret'd)**	Panelists: - **Dr. Mae L. Seto, Ph.D., P.Emg., SMIEEE** Associate Professor, Intelligent Systems Laboratory Dalhousie University - **Ms. Caroline Wilcox** Director Science and Technology – Navy Department of National Defense - **Dr. Tal Pavel** Head of Cyber Security Studies. Information Systems Program The Academic College of Tel-Aviv Yaffo - **WASP TBD** - **Mr. Karl Kenny** President and CEO Kraken Robotics
5:00-5:30	***Full Spectrum Deterrence Simulation***: Scenario Build 3: Action and Reaction	**Mr. Greg Melcher** **Dr. Phillip Petersen** **CDR Bob Nugent USN (Ret'd)** New Generation Warfare Centre
5:40	Bus Transportation	NSCC to Halifax Marriott Harbourfront Hotel

18 Oct AM	Activities	Comments
7:30	Bus Transport	**Halifax Marriott Harbourfront to Centre for Ocean Ventures & Entrepreneurship** 27 Parker Street, Dartmouth, Nova Scotia
8:00-8:10	Admin and Intro	**Capt Bo Wallander RSwN (Ret'd)** Senior Advisor Saab Surveillance
8:10-8:30	Key Note Address	**Maj Gen Randy "Church" Kee USAF (Ret)** Executive Director Arctic Domain Awareness Center University of Alaska
8:30- 9:00	Wargame Scenario: Escalating Tensions GI/UK Gap and North Cape: Counteraction	**Mr. Greg Melcher** **Dr. Phillip Petersen** **CDR Bob Nugent USN (Ret'd)** NGW CENTRE New Generation Warfare Centre
9:00-10:00	Breakout Groups: • Policy • Operations • Technology	- **Mentor: Mr. Magnus Nordenman** Dir, Transatlantic Security Initiative - **Mentor: RADM Paul Becker USN (Ret'd)** Pres & CEO The Becker T3 Group LLC - **Mentor: CDRE Patrick Tyrrell RN OBE (Ret'd)**
10:00 – 11:15	Plenary Session: Group Summaries	Prioritized Capability Gaps
11:15 – 12:15	Lunch	**Centre for Ocean Ventures & Entrepreneurship**
12:15	Bus Transportation	**Centre for Ocean Ventures & Entrepreneurship to Halifax Marriott Harbourfront**

Nova Scotia Community College, Ivany Campus: 16 – 17 Oct



Littoral OpTech Workshops
The Global Littorals In Focus