
NATO, TBMD, SIRIUS and APAR

After at least ten years of intense, behind-the-scenes preparatory meetings and, more importantly, a series of very expensive, multi-government R&D programs to actually design, build and test various key components for use within U.S. “missile defense” systems, NATO finally went public. On March 11, 2005, NATO publicly admitted that it was building a “missile defense” system. Spokesmen for the military alliance announced a 650 million-euro spending spree to produce “a deployable theatre missile defense capability to give protection to troops against incoming missiles.”¹

This NATO proclamation came about two weeks after Canada’s Liberal government loudly pretended to “say no to missile defense.” NATO’s plans, and Canada’s long-standing involvement in them, went by almost completely unnoticed by the media.

By 2000, the Canadian government and military reps were already meeting four times per year with counterparts from the U.S., Germany, the Netherlands and Italy to begin “defining requirements for a TBMD [Theater Ballistic Missile Defence] capability.”¹²

Besides these five NATO governments, called the “Maritime TBMD Forum,” Japan was also preparing for a joint “TBMD capability” with the US. It had come onboard in 1999 by joining U.S. efforts to develop the Standard Missile-3, the weapon of choice for AEGIS, the U.S. Navy’s TBMD system.³

For many years, the U.S. had pushed hard within NATO “to attract international partners” to establish

“a cooperative programme for the development, production and support of a future Maritime Theater Ballistic Missile Defence capability.”⁴

But, not surprising, they didn’t have to push too hard. By 2000, the U.S. was also seeing Spain and Norway as potential “missile defense” collaborators because they had purchased

“AEGIS combat systems and associated AN/SPY-1 radar technology that could form the basis of a TBMD capability.”⁵

Canada’s role in the project began even earlier. The joint work of Canada and the Netherlands on the



About two weeks after Canada’s Liberal government pretended to “say no” to “ballistic missile defense” (BMD), NATO publicly admitted its plans for a Theater BMD system to protect troops while deployed in faraway wars. This news went unnoticed in Canada, as had 10 years of NATO planning, and a series of expensive multi-governmental R&D programs (in which Canada gladly took part) that designed, built and tested various key TBMD weapons systems.

SIRIUS sensor, which began in 1995, was a valuable contribution to NATO’s TBMD weapons system.

To understand how SIRIUS fits into NATO’s plans to use “missile defense” weaponry, it is necessary to know that SIRIUS works in concert with another Thales-built sensor system

called APAR, or Active Phased Array Radar. APAR “provides air and surface search and weapon fire control.”⁶

In other words, APAR uses radio waves to scan for incoming surface and air targets, to track them, and then to control the firing of a ship’s missiles.

SIRIUS is said to complement

APAR “under conditions unfavorable for radar alone.”⁷ Because SIRIUS uses infrared frequencies, rather than radio waves, it is considered a

“complementary sensor to radar... [and] ensures an effective capability against all threats, especially under restricted EMCON circumstances.”⁸ (Emphasis added) (“EMCON,” or “Emission Control,” refers to “the management and control of electronic emissions to maintain stealth and avoid detection.”⁹)

The Function of “Theater Missile Defense”

Because SIRIUS doesn’t use radar waves, warships using this technology cannot be detected or targeted by enemies with radar-seeking missiles. Therefore, warships with SIRIUS can safely target their weapons, even when deployed in hostile territory where the enemy has radar-seeking technology.

This exemplifies the fact that “theater missile defense” weaponry is *not* for protecting the “homeland.” Rather, its function is simply to protect weapons and troops that are waging wars abroad.

The idea that “missile defense” technology is supposed to act as a shield to defend North America from attack is merely a clever ruse designed to build public support for this massive, multi-billion dollar scheme. It is all big lie, a pretext invented to deceive taxpayers into agreeing to open the public purse to military contractors. If people knew that the main function of “missile defense” is really to protect military forces and their weapons systems while they are waging wars far from home, they would be far less likely to support funding such a wildly expensive weapons program.

Clearly, the reality that “missile defense” technology is meant to pro-

tect forward-deployed warships, is exactly what Canadian military officials and politicians have had in mind, over the years, when they approved the multibillion-dollar design, development, testing, production and acquisition of “missile defense”-compatible weapons systems for Canada’s Navy. Christopher R. Bullock has explained this concept very well in an essay called “Canadian Ballistic Missile Defence from the Sea: Interoperability and Sea-Based BMD.” In speaking of the “need for the U.S. and Canada to deploy” their military forces abroad, Bullock notes that such deployment

“requires a capacity to protect their forces from asymmetrical weapons. Given that the majority of armed conflicts or humanitarian interventions will take place within the 300 miles of the coast, a warship’s versatility and flexibility makes them the ideal platforms for defence against ballistic

The Sword and the Shield

“Shields may be protective, but linked to swords, they are part of an offensive and provocative system.”¹

To understand the idea that a military’s most effective offensive posture absolutely requires a good defensive shield, we would do well to consider a metaphor. Picture a mediaeval crusader. Such warriors would never dream of entering the fray without a shield. To do so might be suicidal, no matter how deadly the sword in hand.

Throughout history, war strategists have known it is just as important to equip troops with defensive weapons as it is to ensure that they have their hands on latest implements of death and destruction.

France’s president, Jacques Chirac, has said:

“If you look at world history, ever since men began waging war, you will see that there’s a permanent race between sword and shield. The sword always wins. The more improvements that are made to the shield, the more improvements are made to the sword.”²

However, as Martin Broek and Frank Slijper have pointed out in their excellent paper, “Theatre Missile Defence [TMD]: First steps towards global missile defence,” what Chirac neglected to mention was that “the person carrying the most lethal sword is usually the one carrying the best shield as well.” They go on to explain TMD’s “primary task”:



“To win the war, you must have not only the best offensive systems, but also the best defensive ones. This has become even more true given that body-bags are not acceptable to public opinion. TMD will become an essential part of a rapid reaction force in regions where a threat of ballistic missiles exist.”³

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missiles. If Canada maintains its shift towards expeditionary forces and a defence policy of preserving international stability alongside its allies, *the government must be willing to deploy its forces to theatres threatened by ballistic missiles, cruise missiles and weapons of mass destruction.*"¹⁰ (Emphasis added)

Bullock concludes that there are "significant advantages inherent" for Canada in

"developing future BMD capabilities

on proven U.S. systems, including increases in the potential level of interoperability. While there is no silver bullet in missile defence, a sea-based BMD capability for Canada's navy will enable the deployment of Canadian and U.S. forces with increased protection from this growing asymmetrical threat."¹¹

Bullock's paper, which answers the question: "How can the Canadian Forces best prepare themselves for interoperability with Canada's allies,

especially the United States?"", was written while he was an MA student affiliated with the University of Calgary's Centre for Military and Strategic Studies (CMSS).

This think tank, is home to Professor James Fergusson, a "defense analyst" who is possibly Canada's foremost, academic proponent of "missile defense." Often turned to by the corporate media as an "objective" authority on the so-called "missile defense shield," Fergusson has been referred

U.S. using AEGIS to draw Allied Navies into BMD

The AEGIS weapons system is at the cutting edge of the U.S. navy's "missile defense" scheme. For decades, U.S. war planners have been dreaming of the day when allied forces will wage foreign wars under the protective cover of a single, multinational "missile defense shield." This goal is now being achieved in a stealthy, step-by-step fashion with the U.S. influencing the selection of new military technologies being purchased by allied nations.

The integration of allied forces is called "interoperability." The goal is to build a cohesive military team, equipped with compatible weapons technology, that can work together as one closely-knit unit. This is part of larger plans for the "deep integration" of allied forces so they can operate with the greatest possible efficiency under the ultimate command and control of U.S. forces.

To achieve this interoperability in the use of "missile defense" weapons systems, the U.S. and its allies are preparing a technological groundwork using the AEGIS weapons system. So far, it is being put in place by five nations: Norway, Spain, Japan, South Korea and the U.S.

"The Navy's Aegis program provides a gateway for the U.S. to collaborate with allies on sea-based missile defense, especially as the Missile Defense Agency ramps up efforts to integrate missile defenses with allies and friends, according to J.D. Crouch, assistant secretary of defense for international security policy."¹

The importance of AEGIS interoperability is widely recognised. For instance, Frank Gaffney, the president of America's most aggressively pro-"missile defense" lobby group, the Center for Security Policy, has said in his *Washington Times** column, that to realise the full potential of its sea-based "missile defense" program, the U.S. must

"maximize the interoperability of U.S. sea-based missile defenses with the AEGIS ships of allied fleets—including those of Japan, Australia, Spain, Norway and South Korea. Doing so can complement America's efforts to provide truly global protection against ballistic missile attack to our own forces, people and interests, while helping to defray the costs of such protection."²

The future of U.S. naval warfare will rely upon an

* The *Washington Times* is owned by a fascist named Sun Myung Moon. This self-proclaimed messiah is the South Korean founder of a world-wide cult called The Unification Church, whose adherents are known as Moonies.



Raytheon's official brand for Standard Missile depicts a Trident, the mythic weapon of choice used by Poseidon, the ancient Greek god of the sea.

AEGIS-equipped fleet to "shield" a blatantly aggressive, new warship called the DD(X). The U.S. navy describes it as:

"the centerpiece of a Family of Ships that will...deliver a vast range of war fighting capabilities that will maximize and revolutionize the combat capability of the Fleet."³

This destroyer, to be ready for battle by 2013⁴, is described in *C/ISR* ("The Journal of Net-Centric Warfare"), as "optimized for projecting long-range firepower over land to support Army and Marine Corps forces ashore. Its armament will feature automated 155mm Advanced Gun Systems with a range of 100 nautical miles and a high volume of fire; Tactical Tomahawk land-attack cruise missiles with a range exceeding 1,000 nautical miles; and surface-to-air defensive weapons such as Standard Missile-2 and the Evolved SeaSparrow."⁵

This summer, the "Projection Forces" subcommittee of the House of Representatives Armed Services Committee, heard from Fred Moosally, president of the Lockheed Martin's Maritime Systems & Sensors, a top supplier of "missile defense" weapons and the prime contractor for AEGIS. He looked longingly forward to the future, saying:

"As I look ahead 20 years to 2025, our nation will be defended by a family of surface ships with complementary capabilities to counter all potential threats. In addition to the highly capable DD(X) ships, more than 80 percent of

to as a “shill” for “missile defense” by the New Democratic Party. The CMSS, like many other military front organisations based on Canadian campuses, receives generous funding from DND.¹²

It is perhaps no wonder, then, that Bullock’s paper, which advocated the most robust possible Canadian integration into the U.S. Navy’s AEGIS “missile defense” system, won the “Graduate Student Paper Competition” of the CMSS and Canadian Defence and Foreign Affairs Institute in 2003.¹³

the Navy’s multi-mission surface combatants will be AEGIS-equipped ships. Additionally, our friends and allies—Japan, Spain, Norway, Korea and, potentially Australia and others—will be fighting side by side with us in their AEGIS-equipped ships.”⁶

Canada’s military also shares this vision and has long been working behind the scenes to become a part of that reality. When asked by a Parliamentary Committee to compare the “capabilities intended” for the DD(X) with “current Canadian capabilities,” Vice Admiral Ron Buck, Chief of the Maritime Staff, replied that Canada’s “concern would be to ensure capability between wherever the U.S. might go and wherever we might go.”⁷

Buck noted that Canada uses Standard Missiles and that the “Americans continue to evolve the [SM] system, and ultimately there is the potential [for Canada] to move forward with later variants.”⁸ These “later variants,” Raytheon’s SM-3s, are the missile component of AEGIS sea-based “missile defense.” By upgrading to SM-3s, Canada would become fully AEGIS compatible. Such upgrades are on the table according to quotes from C.R.Bullock’s paper in the *Journal of Military and Strategic Studies*:

- ◆ “Canadian Warships are already Integrated into the Aegis-based Missile Defence.”
- ◆ “Sea-based Missile Defence to be a part of any Destroyer Replacement Vessels.”
- ◆ “[A]ny new Canadian AAW [Anti-Air Warfare] replace-

APAR, DND and “Trilateral Frigate Cooperation”

APAR was developed through a collaborative effort of the Canadian, German and Dutch governments. The prime contractor for APAR is Thales Nederland. The origins of this combined effort can be found in November 1995, when these three governments signed “an MoU [Memorandum of Understanding] for APAR development, and Thales Nederland was awarded

a US\$125 million contract.”¹⁴

This MOU was part of the “Trilateral Frigate Cooperation” program started by these three governments. By March 31, 1998, DND had already spent about \$39.5 million on the APAR project. In its 1998-1999 “Report on Plans and Priorities (RPP),” DND estimated that its total bill for APAR would be about \$50 million.¹⁵ A few years later, in its 2004-2005 RPP, DND said the project could be “closed out,” and that the total spent would be \$53 million.¹⁶

ment vessel for the Iroquois-class [Destroyer] will likely be inherently BMD-capable.”⁹

Vice Admiral Buck’s testimony also mentioned Canada’s acquisition of SIRIUS sensor technology.¹⁰ This would allow Canadian warships to feed missile-tracking/targeting data into the AEGIS weapons systems aboard U.S. ships. (See “DRS Technologies Canada,” pp. 5-11, and “Billions More for New Canadian Warships,” p. 10.)

The U.S. navy now has greater interoperability with Canada’s ships than with those any other nation. (See “Canadian Frigate Operates with a U.S. Aircraft Carrier,” p. 27.)

And, Canada is helping to facilitate the integration of other navies into the AEGIS family by providing VISTA training systems. All AEGIS-equipped navies use this Canadian product to prepare their forces to use AEGIS weapons weapons. (See “Lockheed Martin Canada Ltd.” pp. 22-28.)

Canada’s stealthy progression toward interoperability with the U.S. on “missile defense” weapons systems is going on below the radar of Canadian public awareness. Thanks in no small part to its longstanding participation in bilateral Canada-US military training exercises, NATO naval exercises, and R&D programs that have created “Theater Ballistic Missile Defence”

technologies, like SIRIUS, the Canadian navy is already capable of playing a significant role “fighting side by side” with its closest friend, business partner, scientific colleague and military ally, the United States.



The SM-3 logo also uses Poseidon's Trident.

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After all that expense developing APAR radar for “missile defense” weapons systems, DND decided not to use it! However, DND still claimed the APAR project as a “success.” This supposed “Success in International Cooperation” was cited in DND’s “Defence Management System” Manual, in a section called “Defence Industry and International Materiel Cooperation.” It states that although the term “success” is usually refers to a “cost reduction” for the government, sometimes “success” means that “Canadian industry wins an international project.” In the case of APAR, DND’s manual specifically states that “success in international cooperation” can also be assessed because of the

“royalties paid to the DND/CF [Canadian Forces] on the sale of items

to third parties (e.g. Advanced Phased Array Radar project).”¹⁷

Canada’s partners in the APAR project however *did* take advantage of the resources they spent on this system. As a result, APAR is now deployed aboard Dutch¹⁸ and German warships.¹⁹

According to Thales:

“The definition, development, production and integration of the [APAR] system took several years during which Thales Nederland worked in close cooperation with the Royal Netherlands Navy, the German Navy and the Canadian Navy, and with EADS [European Aeronautic Defense and Space company] in Germany and Raytheon in the U.S.”²⁰

It was certainly important to work closely with Raytheon, especially if one aims to join the “missile defense”

club. This U.S. mega-corporation is, after all, the prime contractor for AEGIS. And, it is overseeing production of all three types of missiles controlled by APAR and SIRIUS:

- ◆ Standard Missile-2 (SM-2),²¹
- ◆ Evolved Sea Sparrow Missile (ESSM) (a collaborative effort of 12 participating NATO governments, including Canada)²²
- ◆ Rolling Airframe Missile (RAM) (in collaboration with Germany’s RAM Systems GmbH)²³

Rejecting APAR, Embracing Raytheon

The reason that Canada’s military snubbed the APAR system was not, as peace activists might dare to hope, because it wanted to shun the possible use of Canadian warships in future

The Myth of Canada's Military Tragicomedy

The above photo and joke, help to perpetuate the myth that Canada’s military is either nonexistent or totally useless. This humour typifies the self-image that Canadians now take for granted. Such jokes both reflect and strengthen the prevailing belief that Canada is a peaceful nation totally uninvolved in preparations for war, let alone in actually waging war. Both examples are from the “Largest Source of Internet Humour!” <www.joe-ks.com>

Canadian comedians often poke fun at the supposedly-shameful state of Canada’s military. This sends the not-so-subtle message that Canadians should never criticise their government for military spending sprees, or for subsidising Canada’s military-industrial complex. In fact, such humour tells Canadians that they should proudly cheer whenever their government hands out a few extra (billion) tax dollars for new, high-tech weapons systems, like Canada’s frigates.

Canada Helps War on Terrorism

The Good News: Canada offered to help the U.S. in the war on terrorism! They've pledged 2 battleships, 6000 troops and 10 fighter jets.

The Bad News: With the current exchange rate, that comes out to 2 canoes, a Mountie and a couple of flying squirrels.

“Frigate: Canada Prepares for War”



“missile defense” operations. Unfortunately, the opposite is more likely. Thales’ APAR radar is in competition with a Raytheon-built radar system. U.S. warships equipped with AEGIS “missile defense” weapons all use a Raytheon-built radar (SPS-49) to do the job that APAR does. Although APAR may actually be better for the job, DND chose Raytheon’s product because it makes the navy even more compatible/interoperable with Raytheon’s AEGIS “missile defense” system.

Stephen Priestley, a researcher with the *Canadian American Strategic Review*, explains that even though APAR is “a potentially stealthier arrangement than the existing Raytheon SPS-49,” Canada’s military

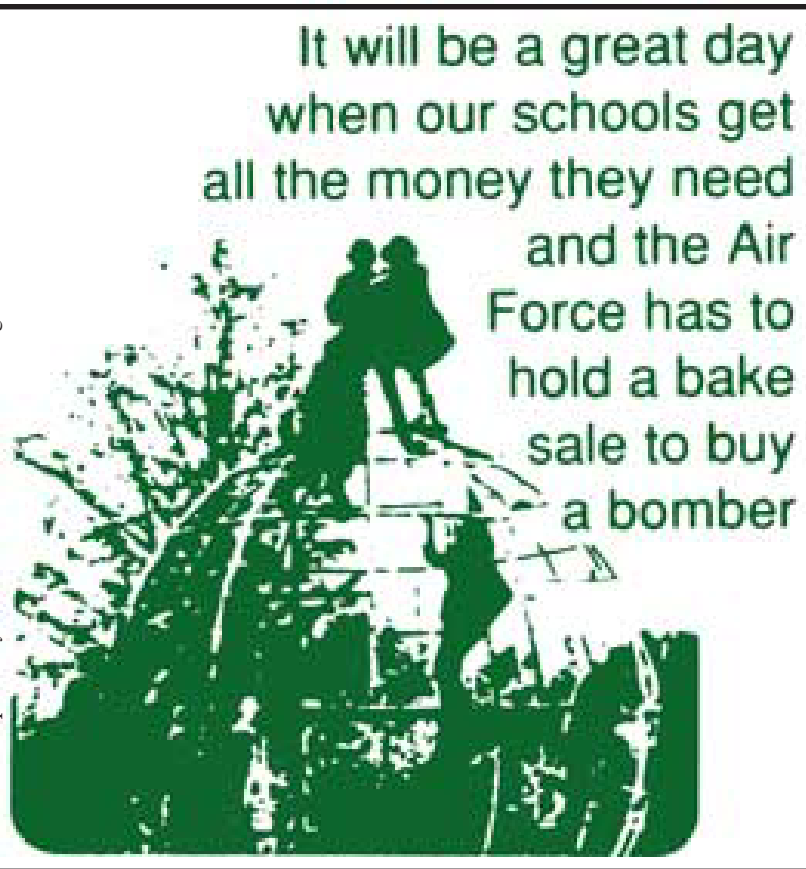
“has now opted for an upgraded version of the existing radar, likely the U.S. Navy AEGIS-compatible SPS-49(V)8 model.”²⁴

Naval Technology (“The website for the defence industries”), confirms that Canada’s Halifax Frigates use AEGIS-compatible “Raytheon SPS-49(V)5 long-range active air search radar.”²⁵ The SPS-49 radar series “is complementary to the AN/SPY-1 radar”²⁶ which is Raytheon’s answer to the “missile defense” needs of the U.S. and its allies, because it was designed to be used with Raytheon’s AEGIS systems, including its “Standard Missiles.”

This raises another example in which Canada collaborated with NATO countries (besides the U.S.) to develop an elaborate weapons system but then deciding not to use it. After sharing the costs of developing the ESSM missile, DND removed it from the wishlist for Canada’s Tribal class destroyers and replaced it with Raytheon’s SM-2s. This again will bring Canada’s navy further under the “missile defense” umbrella by making its hardware more suitable to operating hand in glove with AEGIS.

In a presentation on “What Role for Canada in a ‘Transformational’ World?,” Dr. Paul T. Mitchell, director of Academics at the Canadian Forces College in Toronto, discussed the potential “missile defense” role for Canadian warships. He spoke of Canada’s Tribal Class destroyers and how they “currently employ the Standard Missile (SM) in an air defence role; the same class of missile used by U.S.

Classic 1970s poster by the Women’s International League for Peace and Freedom.



Many Canadians believe that their supposedly-deprived military should be the country’s biggest, charitable group.

AEGIS Class cruisers and destroyers, which will also be designated for ballistic missile defence with the acquisition of the SM-3, in addition to upgraded radars and a command and control system. Thus, modifications to the Tribal Class could permit them to undertake a missile defence role.”²⁷

Stephen Priestley, of *Canadian American Strategic Review*, notes that: “To make full use of their SM-2s, the Tribals must operate alongside U.S. Navy AEGIS Weapon System-equipped ships.... Its radar- or contact- detonated 40kg warhead makes it effective against surface vessels as well as aircraft and missiles.”

He then asks a pointed question: “Will SM-2s be the Canadian component of sea-based ballistic missile defence?”²⁸

The answer, as far as Canada’s military is concerned, seems to be yes.

Canadian Navy is “Ready-Aye-Ready”

Despite the Canadian government’s very public “no” to joining the U.S. “missile defense” weapons program, for more than a decade, DND had already been financing and acquiring technology designed to give Canada a foot in the door of America’s “missile defense” program. So, whether or not Canadian politicians have *officially* endorsed Canada’s role in “missile defense,” and even if the public knows nothing about it, DND has strategically positioned itself to eventually take part in “missile defense” roles. This is especially true of Canadian efforts to build and upgrade multibillion dollar warships for “interoperability” with U.S. forces.



To get more bang for its buck, will Canada upgrade its SM-2s to SM-3s?

SM-2



SM-3



In the not too distant future, when the America navy “projects” its firepower into hostile waters far from home, AEGIS “missile defense” weapons will simply be par for the course, and Canada’s warships will be ready and willing to play their part on the team.

DND’s decisions to opt for Raytheon radar and Standard Missiles, illustrate that Canada has been taking stealthy, incremental steps toward joining the “missile defense” club. As Stephen Priestley pointedly asks regarding sea-based BMD: “Will Canadian Warships automatically become Part of the ‘System’?”: “Canadian Warships are already Integrated into the AEGIS-based Missile Defence.”²⁹

By hook and by crook, Canada’s military has quietly made its way forward, step by step, into the wings of



By hook and by crook, Canada’s military has quietly made its way forward, step by step, into the wings of the U.S.-led “missile defense” club. If, eventually, Canadians *do* somehow find out about this little secret, it may be too late to stop it.

the “missile defense” club. If, eventually, Canadians *do* somehow find out about this dirty little secret, it may be

far too late to stop it.

Canada’s *de facto* participation may become a *fait accompli* because, now that NATO has taken on the “missile defense” goal, the use of such systems will eventually be seen as a “normal” part of US, and allied, warfare. In this milieu, with a Canadian navy that is gradually becoming more *technically* capable of fulfilling “missile defense” roles, it will be increasingly difficult to stop them from eventually doing so.

The trickiest part of the operation for the Liberal government, will continue to be juggling its totally contradictory personas. While letting DND move closer to a “missile defense” role, they must publicly pretend to oppose the program. To do so they will

have to keep the military’s increasingly complex technical capabilities a secret from the public. *Thanks Canada.*

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