

TOP SECRET

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**SCIENTIFIC AND
TECHNICAL SERVICES (STS) BRANCH
(SIRC STUDY 2008-03)**

**Security Intelligence Review Committee
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1 INTRODUCTION

The use of science and technology (S&T) to advance intelligence operations has been a staple of the intelligence world since World War II.¹ For CSIS, the use of S&T is a vital aspect of the organization's intelligence collection and analysis capabilities. The Service's Scientific and Technical Services Branch (STS or the Branch) is responsible for advancing these operational needs through the identification, development and deployment of scientific and technological intelligence collection strategies.

STS works closely with the Service's different regions to determine the appropriate technological methods of intelligence collection.³

The Branch employs a range of experts,

In recent years a number of factors have converged to make STS's work increasingly complex. For example, the proliferation of new technologies has made it easier for terrorist groups to use these innovations to carry out their threat-related activities. In response, the Branch has been forced to quickly identify, analyse and exploit the use of these new technologies.

Adding to these complexities is the absence of lawful access legislation requiring telecommunication service providers (TSPs) to design their products with intercept capabilities built-in.

¹ Reginald Victor Jones, "The Scientific Intelligencer," *Research*, Vol.9, September, 1956, p.39.

³ This includes the use of open, human or technical sources.

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2 OBJECTIVE AND SCOPE

This review examines the STS Branch, with particular focus on three objectives: first, to understand the role of STS; second, to explore how the Branch cooperates with various partners; and, third, to examine the key challenges that STS faces in carrying out its work, including the strategies used in response to these issues.

This is SIRC's first review of the STS Branch. Because of the breadth of the Branch's work, research focussed on ways in which the Branch identifies technological gaps.

The review period for this study was from January 1, 2006 to January 31, 2008.

3 METHODOLOGY

In addition to reviewing a broad cross-section of the Branch's documentation, a series of written questions were submitted and several briefings were held to gain a better understanding of the context within which STS carries out its work.

4 OPERATIONAL TECHNOLOGICAL REQUIREMENTS

This section examines the most common methods used by STS to develop scientific and technological solutions to advance CSIS's operational goals.

The Branch uses a formal planning process to identify key collection gaps and ensure that they are being adequately addressed. Referred to as the Operational Technological Requirements (OTR) cycle, this year-long process includes a series of meetings between STS and the operational branches to identify technological needs and develop projects that will be resourced for the upcoming year. This process establishes priorities, and the time and financial resources required for various STS initiatives.⁴

4.1 Solving Technological Gaps

Once a need has been identified, the Branch must choose the most appropriate engineering solution, generally choosing one of four options.

⁴ STS maintains an evolving list of OTRs which are a category of demands associated with a particular capability.

4.2 Successes and Challenges

Despite these successes, STS faces number of challenges in its work. For example, in today's rapidly changing technological landscape, STS has had to deal with the issue of rapid obsolescence.

A second challenge for the Branch includes working with industry partners to develop engineering support.

A third challenge faced by STS is the disconnect between the Branch's planning process and the occasional urgency of the Service's technological needs. Part of this

problem is that the planning cycle is tied to the government's fiscal calendar, while operational realities are neither static nor predictable.

SIRC found that the Branch has taken a number of steps to reduce the challenges associated with the planning cycle. For example, STS has attempted to decrease the strain on the planning process by creating templates to help the regions translate their ideas more easily for the Branch's consideration.¹⁴ Other initiatives have focussed on refining the prioritization of key technological requirements and manage them in smaller groups,¹⁵ as well as assessing resource options

These challenges associated with the Branch's planning process are not unique to CSIS. The Office of the Auditor General of Canada made similar observations pertaining to the Canadian Department of National Defence (DND), an organization which must also contend with government regulations while attempting to introduce

¹⁴ CSIS Document, "STS Strategic Priorities," 2007, p.1-2, and CSIS Document, "OTR Process," April 21, 2008, Appendix A and B.

¹⁵ CSIS Memo to SIRC, "Study 2008-03," September 9, 2008, p.4.

timely new innovations.¹⁸ Additionally, after procurement problems became increasingly apparent for the

Both examples speak to the inherent challenges of identifying and developing technological solutions in today's rapidly changing and resource limited S&T environment.

¹⁸ The OAG stated that DND's acquisition cycle suffered from the burden of its own weight, a process which was layered with reviews and approvals – some of which did not appear to advance decision making. See: Office of the Auditor General of Canada Document, "Auditor General of Canada – Opening Statement to the Standing Committee on National Security," March 1, 2007, http://www.oag-bvg.gc.ca/internet/English/osh_20070301_e_23486.html.

5 LIAISON WITH PARTNERS

In addition to the processes identified in the previous section, the Branch gains access to scientific and technological solutions through cooperation with foreign and domestic intelligence partners. This includes bilateral (agency to agency) partnerships and multilateral (multiple agency) forums. The following section examines these relationships.

5.1 Foreign and Domestic Liaison

Past SIRC reviews have raised questions about CSIS's reliance on foreign allies for intelligence collection.²⁰

Several examples underscore the Branch's efforts to liaise with its foreign and domestic partners.

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May 5, 2008, p.31.

SIRC Study 2007-07, "Review Of

Despite the benefits of multilateral liaison, it also has its challenges.

Overall, despite these challenges, multilateral forums offer STS with access to new perspectives and ideas on a host of issues associated with the Branch's work. **SIRC found that STS maintained robust foreign and domestic liaison in order to develop scientific and technological solutions for CSIS operations.**

6 **LAWFUL ACCESS**

As the previous sections of this report have illustrated, the Branch has developed several strategies to identify and develop technologies in support of the Service's intelligence operations. However, despite these efforts, **SIRC found that the Branch's decisions, resources and CSIS's technical operations were significantly hindered by the absence of lawful access legislation. The Committee believes that this situation will persist until the government enacts lawful access legislation.**

Following years of consultation with stakeholders, the federal government tabled lawful access legislation in the House of Commons in 2005. The *Modernization of Investigative Techniques Act* was introduced to compel TSPs to create and maintain interception-capable networks, and to provide law enforcement and security agencies with access to basic subscriber information, including a person's name, address, telephone number, e-mail address and Internet Protocol (IP) address. However, this legislation died on the order table, and since that time the government has yet to re-introduce lawful access legislation.

⁴³ CSIS Memo to SIRC, "Study 2008-03," September 12, 2008, p.4.

A number of concerns have been raised by opponents to lawful access legislation, ranging from questioning the appropriateness of compelling TSPs to create intercept solutions, to the scope of information obtained, how it is to be used and what restrictions and oversight would exist to prevent abuse.⁴⁵ The Privacy Commissioner of Canada has argued against the various iterations of the proposed legislation, most recently stating that "lawful access raises fundamental issues for rights such as privacy and the ability to communicate freely."⁴⁶

This situation is unique to Canada. The Service's major allies, including European partners, recognized by the late 1990s that there was a need for lawful access legislation, and took the necessary steps to introduce new laws.⁴⁷ SIRC believes that without a change to Canada's legislation, the Branch will continue to be challenged to meet its objectives.

⁴⁴ CSIS Briefing Note, "Briefing Note For The Director," December 17, 2007, CSIS / DOJ Meetings, Legislative Review, Interception Working Group – Lawful Access, ADM 370-350, #11, p.1-2.

⁴⁵ For its part, the Service argues that its interception powers would not be expanded under the proposed law, and that they would still be required to receive Federal Court authorization before intercepting a target's telecommunications.

⁴⁶ Privacy Commissioner Document, "Annual Report to Parliament – 2007/08," Office of the Privacy Commissioner of Canada, December 2008, p.55.

⁴⁷ CSIS Memo to SIRC, "Study 2008-03," November 19, 2008, p.3.

7 CONCLUDING OBSERVATIONS

This review has emphasized the technological complexity, time sensitivity and importance of the STS Branch's work on behalf of CSIS. The evolving S&T landscape will continue to influence how STS upgrades, expands and replaces technological equipment and information systems to address the Service's operational needs. However, the absence of lawful access legislation will continue to restrict the collection options available for the Service's investigations.

8 SUMMARY OF FINDINGS

- SIRC found that the Branch has taken a number of steps to reduce the challenges associated with the planning cycle. (Section 4.2)
- SIRC found that STS maintained robust foreign and domestic liaison in order to develop scientific and technological solutions for CSIS operations. (Section 5.2)
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- SIRC found that the Branch's decisions, resources and CSIS's technical operations were significantly hindered by the absence of lawful access legislation. The Committee believes that this situation will persist until the government enacts lawful access legislation. (Section 6)

9 SUMMARY OF RECOMMENDATIONS

There were no recommendations arising from this review.

LIST OF ACRONYMS

CSIS	Canadian Security Intelligence Service (the Service)
DND	Department of National Defence
OTR	Operational Technological Requirements
S&T	Science and Technology
STS	Scientific and Technical Services Branch (the Branch)
TSP	Telecommunications Service Provider