

# Wrap-Up Report of the Ad-Hoc RSSSA Advisory Committee

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# Wrap-Up Report of the Ad-Hoc RSSSA Advisory Committee

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## 1. Executive Summary

The Ad Hoc RSSSA Review Advisory Committee was established in 2019 to obtain external input from the space community in support of the review and renewal of the *Remote Sensing Space Systems Act* (RSSSA; the “*Act*”) and the *Remote Sensing Space Systems Regulations* (RSSSR; the “*Regulations*”), including analysis of the recommendations resulting from the two independent reviews of the *Act* carried out in 2012 and 2017.

Co-chaired by Global Affairs Canada (GAC) and the Institute of Air and Space Law of McGill University’s Faculty of Law (McGill), the Committee included representatives from industry, academia, foreign experts on the regulation of remote sensing, and other Canadian government departments. Over the course of eight meetings, the Committee members discussed a wide range of topics relating to the renewal process.

Members were invited to identify what, in their views, was most important to them for consideration of the renewal, modification, or improvement of the *Act*. Their feedback was categorized into four broad topics: no legal change required; changes to the *Regulations* required; changes to the *Act* required; and issues for future consideration.

This report provides an overview of the topics discussed at each of the meetings (Section 2); a summary of the feedback from each meeting (Section 3); and the recommendations of the two Independent Reports tabled in 2012 and 2017 (Section 4). The report also details how each item from Sections 3 and 4 was actioned and which items still need to be addressed.

The engagement of a diverse group of space industry stakeholders garnered varied perspectives on their experience with the implementation of the *Act* and *Regulations*. The Committee served as a platform for concerns to be articulated and understood, thereby informing the work ahead to improve the regulatory framework, while enhancing the Earth observation landscape in Canada in support of Canadian industry and their competitiveness.

## 2. Ad-Hoc RSSSA Advisory Committee Meetings Overview

The *Act* has been the subject of two independent reviews, one conducted in 2012 and the second in 2017. GAC initiated an analysis of the two reviews and other inputs for the purpose of improving implementation of and assessing possible updates to the *Act* and the *Regulations*. The Ad-Hoc Advisory Committee serves as an invaluable resource to inform the decisions to be taken on the future of the *Act* and its *Regulations*.

Below is a description of the Ad-Hoc RSSSA Advisory Committee:

### **Ad-Hoc RSSSA Advisory Committee Vision**

The Ad-Hoc RSSSA Advisory Committee supports the continued relevance of the *Act* by discussing members' experience and availing of their respective expertise to support efforts to keep the *Act* and the *Regulations* current with Canada's international obligations as well as national security, industry, and economic trends.

### **Ad-Hoc RSSSA Advisory Committee Mission**

The Ad-Hoc RSSSA Advisory Committee will draw on the knowledge of all committee members to contribute to the review of the *Act* and its *Regulations*, and provide advice on industry needs and trends to ensure the continued relevance of the *Act*.

### **Ad-Hoc RSSSA Advisory Committee Objectives**

The Ad-Hoc RSSSA Advisory Committee has a clear goal of supporting the regulatory review of the *Act* and its *Regulations*, specifically by providing:

1. Advice to GAC (Non-Proliferation, Disarmament and Space **division**; IGN) on matters relating to the review of the *Act* and its *Regulations* and the reports on the independent reviews of 2012 and 2017.
2. Analysis of the impact and relevance of the *Act* and the *Regulations* based on remote sensing regulation trends and evolution of space activities.
3. A vehicle for augmenting GAC's outreach to industry and international partners on remote sensing regulations.

### **Membership Composition**

The Committee was envisioned to be composed of the following members:

- Stakeholders from academia who do not hold a licence under the *Act* and one of whom will serve as co-chair with GAC's Deputy Director for Space – the selection was a representative from the Institute of Air and Space Law, McGill University;
- Members from Non-Government Organizations (NGOs);
- Representatives from different Government of Canada Departments such as the Department of National Defence (DND), Innovation, Science and Economic

- Development (ISED), National Research Council (NRC), and Natural Resources Canada (NRCan);
- Current RSSSA licence holders; and
  - Ex-officio members from GAC

The Committee had 15 members, with observers and guests invited by the Co-Chairs depending on the agenda of the meeting.

### **Responsibilities of Committee Members**

- Attend meetings and participate in discussions
- Contribute to the RSSSA Review to ensure continuing relevance of the *Act*
- Review discussion papers
- Update GAC on emerging trends and developments in the remote sensing industry and other space activities
- Advise GAC on technological changes in the space industry that could affect the *Act*

### **Ad-Hoc RSSSA Advisory Committee Meetings**

The Committee met eight (8) times. Below is a listing of each meeting and the major topics discussed.

<b>Meeting Date</b>	<b>Topics of Discussion</b>
13 Nov 19	<ol style="list-style-type: none"><li>1. Roundtable introduction of Members and identification of most important improvements to the RSSSA</li><li>2. Administration Items – Meeting to be conducted in English and under Chatham House Rules</li><li>3. Comments to “What Can Be Done When” document</li><li>4. “RSSSA Renewal”<sup>1</sup> Items #1 and #2</li></ol>
15 Jan 19	<ol style="list-style-type: none"><li>1. Administration items – Explanation of Chatham House Rules</li><li>2. Class exemptions</li><li>3. “RSSSA Renewal” Items #3 and #4</li><li>4. Other Business – Outreach</li></ol>
19 Feb 20	<ol style="list-style-type: none"><li>1. Administration items – Kepler’s note on Class Exemptions and Outreach (GAC e-mail)</li><li>2. Client Procedural Circular (CPC)</li><li>3. “RSSSA Renewal” Items #5 and #6</li><li>5. Other Business – Cloud Compliance and Foreign Operated Satellites</li></ol>

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<sup>1</sup> RSSSA Renewal Document is the compilation of the recommendations from the 2012 and 2017 Independent Reviews.

<b>Meeting Date</b>	<b>Topics of Discussion</b>
25 Mar 20	<ol style="list-style-type: none"> <li>1. Changes that can be implemented without <i>Act</i> or <i>Regulations</i> changes</li> <li>2. “RSSSA Renewal” Items #7 and #8</li> <li>3. Other Business – Two questions on frequency allocation and the roles played by GAC and ISED (answered at the next Meeting)</li> </ol>
13 May 20	<ol style="list-style-type: none"> <li>1. Two Questions from a Committee member (raised 25 March 2020)</li> <li>2. Mechanisms to support Research and Development (R&amp;D)</li> <li>3. “RSSSA Renewal” Items #9 and #10</li> </ol>
10 Jun 20	<ol style="list-style-type: none"> <li>1. Administration items – New GAC RSSSA e-mail.</li> <li>2. CPC – RSSSA Questionnaire</li> <li>3. CPC – Frequently Asked Questions (FAQs)</li> <li>4. Modifications to the <i>Regulations</i></li> <li>5. “RSSSA Renewal” Items #11, #12 and #13</li> <li>6. Other Business – Committee Member’s views on the modifications to U.S. Remote Sensing Regulations.</li> </ol>
09 Sep 20	<ol style="list-style-type: none"> <li>1. Administration items – Outreach (Meeting Notes to be published)</li> <li>2. CPC Draft V2 // RSSSA Operating Licence Application Guide<sup>2</sup></li> <li>3. Modifications to the Act</li> <li>4. “RSSSA Renewal” Items #14, #15 and #16</li> </ol>
09 Dec 20	<ol style="list-style-type: none"> <li>1. “RSSSA Renewal” Items #17 and #18</li> <li>2. Comments on the Wrap-up Report (draft)</li> </ol>

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<sup>2</sup> The CPC was split into two separate documents: the “RSSSA Operating Licence Application Guide” and the “RSSSA 101”

### 3. Overview of Concerns and How Addressed

The following table lists the various concerns raised at the meetings and how they are addressed. Those that are still to be addressed are highlighted.

*“To be addressed”* indicates that further discussions and considerations must take place before a decision is made. These discussions can be undertaken within GAC, with different government departments, or with the space community at large.

Committee Comments	Covered in:					
	Application Guide <sup>3</sup>	RSSSA 101 <sup>4</sup>	Regulations <sup>5</sup>	Act <sup>6</sup>	Interim Solution	To be addressed
<b><i>From Nov 19 Meeting: Item #2 – Roundtable</i></b>						
Ensuring Canada is compliant with obligations vis-à-vis other States and United Nations obligations.					Multi-lateral and bi-lateral discussions have taken place, but further analysis is required on this topic.	X
Enabling Canadian industry.	X	X	X		The CPCs should help with this topic.	
Clarifying some of the language, such as raw-data, roles and responsibilities (Licensee and System Participants)	X	X			Some definitions have been drafted in both CPCs (RSSSA 101 to be finalised)	
Protecting national security while allowing growth of the remote sensing space industry					Initial discussions on types of technologies (e.g., university CubeSats) have commenced.	X
Ensuring the <i>Act</i> enables the competitiveness of the Canadian industry	X	X	X		The CPCs should help with this topic. Follow-up discussion on the CPCs with industry required.	

<sup>3</sup> “Application Guide” – RSSSA Operational Licence Application Guide

<sup>4</sup> “RSSSA 101” – CPC RSSSA Framework

<sup>5</sup> “Regulations” – Changes to the *Regulations*

<sup>6</sup> “Act” – Changes to the *Act*

Committee Comments	Covered in:					
	Application Guide <sup>3</sup>	RSSSA 101 <sup>4</sup>	Regulations <sup>5</sup>	Act <sup>6</sup>	Interim Solution	To be addressed
Providing clarity and predictability (both domestically and internationally) in the regulatory framework	X	X			Having the CPCs may help with understanding and predicting outcome of license applications.	
Ensuring that the <i>Act</i> keeps pace with the rapid development of industry					GAC can conduct ongoing or regular internal reviews	
Implementing properly the regulatory framework	X	X			The CPCs should help with this topic.	
Obtaining licenses within a reasonable timeline	X				The CPC (Application Guide) should help with this topic.	
Correcting the impression that the <i>Act</i> encourages Canadian business to go elsewhere	X	X			The CPCs should help with this topic. Follow-on discussion with industry required.	X
Seeking clarity on what the <i>Act</i> intends to achieve	X	X			The CPCs should help with this topic.	
Ensuring that the <i>Act</i> attracts investment in Canada	X	X			The CPCs should help with this topic.	
Addressing overlapping regulations					Increased international dialogue and cooperation.	X
Ensuring more resources for the office of the regulator					Two new personnel added in 2020.	X
Pursuing principle of proportionality					Class Exemptions might help with this topic, such as for resolution (e.g. meter vs km resolution).	X
Seeking clarity on the 180-day duration for a licence, as expressed in the <i>Act</i> , and the way this is calculated.	X	X			The CPCs should help with this topic.	

Committee Comments	Covered in:					
	Application Guide <sup>3</sup>	RSSSA 101 <sup>4</sup>	Regulations <sup>5</sup>	Act <sup>6</sup>	Interim Solution	To be addressed
Seeking clarity on the application of the <i>Act</i> and <i>Regulations</i> to: -imaging resolution (high vs low), and -non-earth imaging such as imaging of satellite (satellite selfie).	X	X			The CPCs should help with this topic. Also, future Class Exemptions could assist.	X
Modernising the <i>Act</i>			X	X	To be considered/worked on post Ad-Hoc Committee.	X
Categorising the licence / <i>Act</i> (compartmentalising), such as an approval specifically for the ground segment (ground station).	X		X	X	The CPC should help with this topic. Reorganising the <i>Act</i> or <i>Regulations</i> might help.	
Ensuring continued relevance of the <i>Act</i>					Annual Feedback or via future iteration of the Ad-Hoc Committee.	X
<b>From Nov 19 Meeting:</b> <b>Item #4 – Comments to “What can be done when” document</b>						
Should there be an exemption applied automatically to preferred companies from Five Eye (FVEY) countries?					Potential Class Exemption consideration.	X
Exemptions could be applied to satellites with cameras intended to look at/observe the satellite itself even if the Earth happens to be in its field of view or exemptions for launch vehicle cameras. (Note: Cameras on launch vehicles are not considered under the <i>Act</i> .)	X	X			Potential Class Exemption consideration. The CPCs should help with this topic.	X
The regulators should approve an application as the default position and justification be provided in the case of a denial.	X	X			The CPCs should help with this topic. Note: Justification in the case of a denial is already the practice.	
Modify the <i>Act</i> in order to authorize the Minister to delegate more power, including in respect of exemptions, to GAC officers.					NO. A better way to save the Minister’s time on signatures <b>may be</b> through Class Exemptions.	

Committee Comments	Covered in:					
	Application Guide <sup>3</sup>	RSSSA 101 <sup>4</sup>	Regulations <sup>5</sup>	Act <sup>6</sup>	Interim Solution	To be addressed
Strict rules may be applied to the operation of a remote sensing mission, but data handling should have less rules.					Review rules for raw data products.	X
The members of the Committee should publicize and promote what Canada has been doing regarding the review of the RSSSA, working within what is allowed under the Committee's Terms of Reference.					Ad-Hoc Committee Notes are posted on McGill's website and available upon request from GAC. The idea of promoting through the SATCAN site was proposed. GAC will look into this suggestion.	X
<b><i>From Jan 20 Meeting: Item #3 – Class Exemptions</i></b>						
The discussions revealed a large interest in and a desire for Class Exemptions.					Work on the Class Exemption needs to be continued post Ad-Hoc Committee.	X
<b><i>From Jan 20 Meeting: Item #5 – Other Business</i></b>						
Methods to increase public awareness included: <ul style="list-style-type: none"> <li>• distribution of the notes on a GAC or other public website; news articles;</li> <li>• distribution of the notes to other colleagues by committee members;</li> <li>• attendance at conferences and presentations at other events.</li> </ul> The Space Advisory Board (SAB) could possibly supplement outreach activities. They could be invited to share outcomes.					The notes from the Committee meetings have been translated and posted on McGill website and available from GAC upon request. Other Ad-Hoc Committee documents are currently being translated for release on the two websites.	X

Committee Comments	Covered in:					
	Application Guide <sup>3</sup>	RSSSA 101 <sup>4</sup>	Regulations <sup>5</sup>	Act <sup>6</sup>	Interim Solution	To be addressed
<b>From Feb 20 Meeting:</b> <b>Item #3 – Client Procedural Circular (CPC)</b>						
Improvements feedback to the first review of the CPC when it was initially one document:						
• Addition of a Frequently Asked Questions (FAQ) section	X	X			Significant feedback was provided, and this was later captured between the two CPCs.	
• More information on, and explanation of, application timelines and response time	X				The application guide includes FAQs related to the license application; other FAQs will be covered in the RSSSA 101.	
• Elaboration on “reporting” requirements as to what they might be		X				
• Common mistakes in applications					NO. Instead of pointing out common mistakes, the Guide provides elaborations on the application steps and requested information.	
• Lessons learned from past submissions	X	TBD			No specific section on lessons learned will be implemented. However, any lessons learned were considered in the writing of the Guide.	
• Disclaimer – this is not legal advice but as a guide	X	X				
• Caveat – to be read in conjunction with the Act and Regulations	X	X				
• How to build in compliance with the Act and Regulations	X	TBD			“Compliance” is discussed in the Application Guide. The subject might not be needed in the RSSSA 101.	

Committee Comments	Covered in:					
	Application Guide <sup>3</sup>	RSSSA 101 <sup>4</sup>	Regulations <sup>5</sup>	Act <sup>6</sup>	Interim Solution	To be addressed
• Language utilised to be more user-friendly and documents to have additional visuals	X	X				
• Inclusion of a hypothetical example to illustrate an application					NO. The complexity of a system varies too greatly with too many variables. This will not be implemented.	
• Explanation/context behind the <i>Act's</i> Section 14 – “shutter control”	X	TBD			“Shutter control” is discussed in the Application Guide. The subject might not be needed in the RSSSA 101.	
• Contact information of person who can provide guidance	X	X			GAC’s RSSSA email is properly highlighted.	

**From Mar 20 Meeting:**  
**Item #3 – Changes that can be implemented without Act or Regulations changes**

Current efforts were summarized:					The bulk of the feedback received can be implemented within the two CPCs.	
1. Developing a process flowchart to outline steps in an application review as a guide to regulators.	X	TBD				
2. Developing a CPC that includes a “list of documents required” for a complete application and a description of the steps taken to consider an application or conduct an inspection.	X					
3. Reaching out through presentations at conferences and other events and inviting greater public involvement in the modernization of the <i>Act</i> .					GAC Staff are attending and presenting at more conferences. This needs to be maintained.	X

Committee Comments	Covered in:					
	Application Guide <sup>3</sup>	RSSSA 101 <sup>4</sup>	Regulations <sup>5</sup>	Act <sup>6</sup>	Interim Solution	To be addressed
4. Proposing training courses for staff on Cybersecurity.					GAC is in the process of reviewing and updating its training plan. To be completed and finalised.	X
5. Ensuring that the industry, especially new players, is aware that early contact with the regulator is both possible and encouraged.	X	X			Also relying on Committee members to highlight the importance of early contact with GAC.	

**From May 20 Meeting:**

**Item #4 – Mechanisms to support R&D**

1. There are “developmental licences” as a concept in the Radio Frequency (RF) realm. Can we implement the same (or a similar form) in the <i>Act</i> ?	X				The Application Guide explores “testing.”  Additional considerations and internal discussions to take place. Possible use of Class Exemptions could be a solution.	X
2. Open collaboration across boundaries, even among different academic institutions worldwide, is a challenge under the <i>Act</i> ; the requirement for identification of users and researchers, as well as constraints in accessing raw data by different international academic institutions, were cited as main areas of difficulties.					Additional considerations and internal discussions to take place. Possible use of Class Exemptions could be a solution.	X

Committee Comments	Covered in:						To be addressed
	Application Guide <sup>3</sup>	RSSSA 101 <sup>4</sup>	Regulations <sup>5</sup>	Act <sup>6</sup>	Interim Solution		
3. Latency in accessing data is not a particular concern for most academia research and could potentially be a solution for R&D type of activities. But latency could be an issue for industry operational demonstration purpose – i.e., proving commercial capability (at which point it is no longer R&D).					Additional considerations and internal discussions to take place. Possible use of Class Exemptions could be a solution.  Remark: Germany does not distinguish “latency” between commercial and scientific access, but on risk factor only. However, Germany is attentive to high-resolution products (such as complex radar data).	X	
<b>From June 20 Meeting:</b> <b>Item #3 – CPC Draft V2 // RSSSA Questionnaire</b>							
Final mechanism for outreaching to the space community (a specialized community) using the questionnaire remains to be determined.					“RSSSA Questionnaire” if completed, how to implement / benefit from it is to be determined.	X	
It was noted that some questions were very specific to government policy; therefore, might be outside the realm of expertise of industry (and others) resulting in questions having partial or no answers at all.					Feedback noted.		
Private sector websites or academic websites (such as McGill and SATCAN) offered their respective platforms to circulate the Questionnaire to a specific audience.					Feedback noted. Decision to be determined.	X	
The Questionnaire is a good opportunity for industry [and others] to help steer the direction of government policy on remote sensing.					Feedback noted.		

Committee Comments	Covered in:					
	Application Guide <sup>3</sup>	RSSSA 101 <sup>4</sup>	Regulations <sup>5</sup>	Act <sup>6</sup>	Interim Solution	To be addressed
<b>From June 20 Meeting:</b> <b>Item #5 – Modifications to the Regulations</b>						
Feedback regarding modifications to the <i>Regulations</i> include the following:					The CPCs could be used to initiate some degree of clarifications.	
i. Clarifying Definitions: e.g., sensor vs satellite, and “raw data”	X	X	TBD	TBD	The CPCs could be used to clarify some of the definitions. May require changes to <i>Act</i> and <i>Regulations</i> definitions.	
ii. Licence Term: normally life of the sensor	X		X		Might not be the same as the “life of the system”, which consists of the Space Segment, Ground Segment, and data.	
iii. Vague Terminology: better alignment with international terminology	X	X	X		Remark: some definitions are inconsistent “internationally”, even with UN terminology and with industry.	
iv. Additional Requirements: no additional rules to be added to the licence					NO. Additional “rules” will be dependent on emerging new technologies that may drive new considerations. The intent is not to add rules on existing technology.	
v. Possible Outdated Formats for Documents: electronic not “written”	X		X		Desired electronic format is expressed in CPC.	
vi. Guarantee Arrangements: delete and put in another more appropriate law					NO. Guarantee Arrangements will become more important as Canada moves towards becoming a State with independent launch capability.	

Committee Comments	Covered in:					
	Application Guide <sup>3</sup>	RSSSA 101 <sup>4</sup>	Regulations <sup>5</sup>	Act <sup>6</sup>	Interim Solution	To be addressed
vii. Documentation Requirements: add complete list of documents and required technical details	X				NO. No complete listing in the <i>Regulations</i> , since advancements may drive different needs. The Application Guide can reflect proper document listing.	
viii. Satellite Registration: add requirement for proof of registration	X				NO. Satellite Registration is part of the document listing in the Application Guide.	
ix. Preamble for Industry: add support for industry similar to the proposed “Tier” system from the 2020 regulations on U.S. Licensing of Private Remote Sensing Space Systems	X		X		Additional language could be added in the <i>Regulations</i> .	
x. Built-in flexibility / future-proofing, so that the <i>Act</i> and <i>Regulations</i> adapt to changes in technology					Extremely difficult to specify. The <i>Act</i> and <i>Regulations</i> could remain “open minded” to accommodate future technologies and developments.	
xi. Faster licensing process	X				Early consultation with GAC and the CPCs can assist with this topic.	
xii. Clear indication to applicants that no ground station is to be built before a licence is granted.	X		X		Better communications and exchange of information between GAC and ISED will be required for Ground Stations (may include other government departments).	X
a. As part of this, assess the location of a new ground segment, especially if it is to be built in proximity of another station.			X		Better communications between GAC and ISED will be required for Ground Stations (may include other government departments).	X

Committee Comments	Covered in:					
	Application Guide <sup>3</sup>	RSSSA 101 <sup>4</sup>	Regulations <sup>5</sup>	Act <sup>6</sup>	Interim Solution	To be addressed
Other Feedback:						
i. Have a tool or application form that clearly outlines what information is needed for an application (required fields, optional fields).	X				The <i>Regulations</i> ' Schedule 1 has been formatted into an application form.	
ii. Establish ties with ISED and share information when a ground segment deals with spacecraft licenced under the <i>Act</i> and <i>Radiotelecommunications Act</i> .					GAC and ISED are working to improve communications and data sharing.	X
iii. Have more FTEs and a bigger budget at GAC to support the increased number of applications and be able to address issues quickly (e.g., security issues, inspections).					GAC is slowly growing, with additional funding for site inspections, training and other expenses.	X

***From Sep 20 Meeting:***

***Item #3 – CPC Draft V2 // RSSSA Operating Licence Application Guide***

Feedback and discussions regarding the RSSSA Operating Licence Application Guide includes:					The main recommendations have been embedded within the CPC.	
• Emphasis on early consultation, the importance of it, and possibly elaborating on the process beyond what is currently written;	X					
• Clarification about the “complete application or no process review” notes in the document	X					
• Other (minor) suggestions were sent separately to GAC, including the use of more explicit language in some places.	X				Additional time was provided for comprehensive feedback, which was received and implemented by the end of September 2020.	

Committee Comments	Covered in:					
	Application Guide <sup>3</sup>	RSSSA 101 <sup>4</sup>	Regulations <sup>5</sup>	Act <sup>6</sup>	Interim Solution	To be addressed
<b>From Sep 20 Meeting:</b> <b>Item #4 – Modifications to the Act</b>						
Received proposed <i>Act</i> changes include:					The CPCs could be used to initiate some degree of clarifications.	
1) Separate the <i>Act</i> 's current definition of "person" so that a "person" is a person in the usual sense of the word as opposed to include corporations and agencies. It may have saved a few lines in the <i>Act</i> , but it confuses all first, second and even third time readers.		X		X	CPC's RSSSA 101 could be used to help clarify this definition. Note: The legal definition of "person" has always referred to natural persons and include legal persons. The <i>Act</i> 's definition is just a repeat of the legal definition.	
2) Define "sensors" and not "satellites"		X		X		
3) Add an expression of support for industry in the <i>Act</i> itself and not just in the <i>Regulations</i> .		X		X	This added language could help support industry.	
4) Define "tiers" similar to the proposed 2020 regulations on U.S. Licensing of Private Remote Sensing Space Systems.					To be discussed internally, and further analysis of US "tiers" are required. Something similar could be supported by Class Exemptions.	X
5) Include HAPS (High Altitude Pseudo Satellites) in the <i>Act</i> .					To be considered.	X
6) Re-define "Raw Data" similar to what is in the UN documents.	X	X		X	UN definition needs to be reviewed and compared to Canada's.	
7) Clarify which parts of the <i>Act</i> refer to "operations" and which to "data." Alternately, reorganise the <i>Act</i> into the parts of the System (people, system participant, space segment, ground segment, and data).	X	X	X	X	The Application Guide is divided into 5 sections: Applicant, System Participants, Space Segment, Ground Segment, and Data. Organising the <i>Act</i> (or <i>Regulations</i> ) similarly could help better organise the flow.	

Committee Comments	Covered in:					
	Application Guide <sup>3</sup>	RSSSA 101 <sup>4</sup>	Regulations <sup>5</sup>	Act <sup>6</sup>	Interim Solution	To be addressed
8) Incorporate Class exemptions					To be developed and to be determined where to be described (within the <i>Act</i> or separate document).	X
<b>From Dec 20 Meeting:</b>						
<b>Item #5 – RSSSA Ad Hoc Wrap-up Discussion (2) Overview of Concerns Table</b>						
During the review of comments and recommendations from the Nov 19 Meeting: <i>Roundtable:</i>						
i. Regarding the “protecting national security while allowing growth of the remote sensing space industry” comment: -GAC commented on providing greater flexibility for university cubesats. -Committee member noted that this “greater flexibility” should not create a competitiveness imbalance with industry.					GAC has taken note, and the added “flexibility” takes in consideration the mission’s purpose (i.e., R&D and not as a source of income)	
ii. Regarding the “ensuring the <i>Act</i> enables the competitiveness of the Canadian industry” comment: -Canadian industry needs to maintain international competitiveness. The Canadian based ground stations can play this role.					The CPC’s compartmentalised approach should help with the Canadian ground station international competitiveness aspect.	
<b>From Dec 20 Meeting:</b>						
<b>Item #8 – Future of the Ad Hoc Committee</b>						
GAC is considering a continuation of the “Ad-Hoc RSSSA Advisory Committee”.					Since there are still documents to finalize, a follow-on meeting in 6 months (in May/Jun) may be useful until the future structure of a possibly Advisory Committee is decided	X

#### 4. RSSSA Independent Review Recommendations

The recommendations from the two Independent Reviews (2012 and 2017) were summarized into 18 topics. Topics 1 to 16 were covered in the first seven meetings and the final two will be covered as part of the wrap-up meeting.

The column titled “Recommendation Status” will indicate that a recommendation is considered “open” or “closed”. These terms mean the following:

- Closed Items – are recommendations that are considered to be resolved. These items do not necessarily mean the related work is completed, but that GAC has a way forward in addressing the recommendation and there is a commitment to resolve it, such as through either CPCs, in future modifications to the *Act* or *Regulations*, or addressed in some other capacity.
- Open Items – are unresolved recommendations that require a decision or further discussions. Depending on the context, these further discussions can vary from internal discussions within GAC, to inter governmental department discussions, to discussions involving Canadian industry, academia, and/or others.

RSSSA Renewal Recommendations	Covered in:					Recommendation Status (Open/Closed)
	Application Guide <sup>7</sup>	RSSSA 101 <sup>8</sup>	Regulations <sup>9</sup>	Act <sup>10</sup>	GAC Approach	
<b>Recommendation #1:</b> Make the language of the <i>Act</i> clearer in regards to remote sensing, Earth Observation and whether the latter falls within its purview. Alternatively, issue a Client Procedural Circular (CPC), in “layman’s terms”, to outline the intended interpretation of the <i>Act</i> ’s various phrases.	X	X			<p>The CPC is to be divided into two documents.</p> <p>The first to be published (posted on the website) is the RSSSA Operational Licence Application Guide.</p> <p>Still to be produced is the second document, which will be the RSSSA Framework (a RSSSA 101 type document).</p>	OPEN  RSSSA 101 to be completed.
<b>Recommendation #2:</b> Investigate whether there are more appropriate ways of addressing the seeming difficulties associated with the definition of “transform”. Similarly, utilize the authority granted under section 20(1)(a) to denote specific activities as either		X		TBD	<p>A review of the definition of transformed data and raw data is required.</p> <p>The CPC could present examples to help with clarifications and, additionally, define a transformation.</p> <p>The Minister, when evaluating an application that includes processing, could</p>	OPEN  To be resolved

<sup>7</sup> “Application Guide” – RSSSA Operational Licence Application Guide

<sup>8</sup> “RSSSA 101” – CPC RSSSA Framework

<sup>9</sup> “Regulations” – Changes to the *Regulations*

<sup>10</sup> “Act” – Changes to the *Act*

RSSSA Renewal Recommendations	Covered in:					Recommendation Status (Open/Closed)
	Application Guide <sup>7</sup>	RSSSA 101 <sup>8</sup>	Regulations <sup>9</sup>	Act <sup>10</sup>	GAC Approach	
transforming or not transforming raw data.					make a decision on whether or not a requested particular transformation is sufficient to render the result as no longer “raw data”.	
<b>Recommendation #3:</b> Define the scope of “operate” in section 5 to determine who must be licensed for their activities related to the operation of a remote sensing space system or, alternatively, establish an exemption process for persons acting as employees or agents of remote sensing satellite operators from procuring a licence where reasonable to do so.	X	X			As is the current practice, an “entity” (person), when applying for a licence, lists those employees that will perform controlled activities and demonstrates that each such person has the appropriate security level. These employees are then considered as authorized to perform a controlled activity under the terms of the licence. Thus, they do not need individual licences.	CLOSED
<b>Recommendation #4:</b> Amend the <i>Act</i> so that the default term of a licence is for the lifetime of the satellite system. Conversely, issue a Client Procedural Circular or similar document that communicates the official position of the regulator on this position.	X	X			The CPCs will discuss issues to be considered when addressing the term of a licence. Among others, topics include: lifespan of single satellite systems, sensitivity of data from satellites, cybersecurity concerns for the ground segment, and the term of the operator’s contract with the satellite owner. Antenna farms would be evaluated based on overall business levels.	CLOSED
<b>Recommendation #5:</b> Consider implementing a deadline by which the Minister must provide a decision on an application for licence. Additionally, applicants seeking a remote sensing space system licence should begin to involve the regulator as early as possible in the design and development stages of their operation.	X				The Application Guide provides: (1) a list of required documents for a complete application; (2) an invitation to an early discussion with the regulator; and (3) a notice that the 180 day timeframe starts when the documentation is complete.	CLOSED

RSSSA Renewal Recommendations	Covered in:					Recommendation Status (Open/Closed)
	Application Guide <sup>7</sup>	RSSSA 101 <sup>8</sup>	Regulations <sup>9</sup>	Act <sup>10</sup>	GAC Approach	
<b>Recommendation #6:</b> Engage with licensees affected by a S14 restriction order to determine whether alternative courses of action may reach the same objective without hindering commercial operations or whether there are ways to mitigate the harm caused to the commercial operator (such as compensation for loss of business).	X	X			<p>S14 deals with the use of “shutter control.” GAC clarified that such an order does not always mean shutting down the entire system; however, it could be just prohibition of imaging a certain area. Clarifying S14 in the CPCs can alleviate misunderstanding.</p> <p>Note: As of writing this document, S14 of the <i>Act</i> has never been invoked.</p>	CLOSED
<b>Recommendation #7:</b> Ensure proper compensation for priority access (as made available in the <i>Regulations</i> ) and clarify what kinds of representations may be made by an operator and what effect such representations would have on the priority access order.		X		X	<p>S15 deals with the use of “priority access.” In this situation, the Minister must compensate the licensee at a reasonable cost.</p> <p>Review the choice of the word “may” in the <i>Act</i> and perhaps add an article on priority requests, both interruptions of service and priority requests.</p> <p>Note: As of writing this document, S15 of the <i>Act</i> has never been invoked.</p>	OPEN  To be resolved
<b>Recommendation #8:</b> Monitor remote sensing security strategy to ensure Canada’s security interests are maintained despite changing international players and evolving and divergent interests.					<p>Such changes are one reason why long term licences are not the best solution.</p> <p>The Regulator continues to monitor remote sensing security strategy to ensure Canada’s security interests are protected.</p>	CLOSED
<b>Recommendation #9:</b> Embed within the <i>Act</i> different ways of stimulating commercial interest so that the balance between security and technological development is regained.	X	X			<p>Although technological development is not viewed as more important than national security, other avenues may be explored:</p> <ul style="list-style-type: none"> <li>(1) Clarifications within the CPCs,</li> <li>(2) Class Exemptions related to technology development.</li> </ul>	OPEN  Further discussions on this topic is required.

RSSSA Renewal Recommendations	Covered in:					Recommendation Status (Open/Closed)
	Application Guide <sup>7</sup>	RSSSA 101 <sup>8</sup>	Regulations <sup>9</sup>	Act <sup>10</sup>	GAC Approach	
<b>Recommendation #10:</b> Provide the regulatory office in charge of remote sensing with significantly more resources and more personnel.					GAC is already taking steps to increase expert resources in the regulatory office. Two additional staff have been added in 2020.	“OPEN” TBD in time if sufficient.
<b>Recommendation #11:</b> Establish an independent regulatory body that is tasked with overseeing the RSSSA from the perspective of reviewing applications, granting licences, conducting inspections, monitoring compliance, etc. The independent body should be provided with sufficient financial resources, technical expertise, a broad mandate to regulate (in consultation with other key departments and agencies) and should aim to facilitate commercial space remote sensing activities.					The current regulatory body within GAC should be allowed to grow to a division level status, using some of the resources suggested in Recommendation 10. Recognizing the specialized expert knowledge and nature of the work, there is a need to ensure that rapid management rotation is avoided. The creation of a “regulatory advisory board” could be an interesting addition.	OPEN Further discussions required.
<b>Recommendation #12:</b> Implement a reasonable fee in the application and licensing process that will establish a certain level of expected service and, if implemented on a cost-recovery basis, will alleviate the resource shortages currently associated with the regulator’s office.	X				This subject raised many issues and complexities during the Ad-Hoc Committee discussions (e.g., new applicants, licence updating and licence house cleaning). In the end, the creation of a fee was NOT recommended by the Ad-Hoc Committee. One approach is for the Application Guide to provide a guideline for applicants with the required list of documentation to assist and simplify the application process.	OPEN To be discussed internally keeping in mind Ad-Hoc Committee recommendation.

RSSSA Renewal Recommendations	Covered in:					Recommendation Status (Open/Closed)
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<b>Recommendation #13:</b> Implement a formal process whereby the licensee and the regulator have an opportunity to discuss and review a licence (before and after it is issued), such that any disagreements regarding conditions or restrictions can be resolved or mitigated as best as possible without needed to undertake the licence amendment process.	X				Early contact permits GAC to manage expectations in the licencing process. GAC's ongoing policy of early and continuing contact with applicants throughout the process leading to issuance of the licence, as well as discussions after the licence is issued, meets the requirements of this recommendation.	CLOSED
<b>Recommendation #14:</b> Engage community stakeholders by attending industry and academic conferences, publishing client information circulars and establishing an easily and intuitively-accessible online presence to explain clearly and candidly what kinds of activities fall within the scope of remote sensing as defined in the <i>Act</i> .					Community engagement is clearly a desirable objective. The two CPCs are in different stages of development (one to be posted on the GAC website) and an Ad-Hoc Advisory Committee was created to provide input to the review and renewal process (its future is subject to follow-on consideration in 2021). Additionally, GAC staff have engaged in outreach activities and have started to attend and make presentations at conferences.	CLOSED  But these community engagement activities MUST be maintained.
<b>Recommendation #15:</b> Include a provision that would allow Canada to be indemnified by a private entity for damages it is required to pay internationally as a result of a private entity's space activity causing damage as well as a provision that requires all operators to procure insurance to cover the liability risks associated with space activity.				X	GAC to reconsider whether the <i>Act</i> should specifically state that liability insurance must be obtained by satellite owners for the purpose of indemnifying Canada from damages it is required to pay in the event of activity causing damage.  In Canada, space launches would largely be controlled under the <i>Aeronautics Act</i> . Thus, perhaps the wording in the <i>Act</i> , "of a suitable guarantee", may be sufficient.	OPEN  To be resolved, still in discussion.

RSSSA Renewal Recommendations	Covered in:					Recommendation Status (Open/Closed)
	Application Guide <sup>7</sup>	RSSSA 101 <sup>8</sup>	Regulations <sup>9</sup>	Act <sup>10</sup>	GAC Approach	
<b>Recommendation #16:</b> Enter discussions that harmonize international rules related to the cloud so that anyone operating in the cloud, regardless of physical location, is subjected to the same regulations and/or operating procedures as attempting to unilaterally address the cloud without causing severe consequences to private industry is nearly impossible.					GAC staff are participating in bi-lateral and multi-lateral discussions with regulatory bodies of other countries.	CLOSED  But these multi- and bi-lateral engagements MUST be maintained.
<b>Recommendation #17:</b> Engage foreign allies in high- and low-level discussions in an attempt to harmonize the various rules, procedures, standards, methods and strategies by which remote sensing operations are regulated.					GAC staff are participating in bi-lateral and multilateral discussions regulatory bodies of other countries.	CLOSED  These discussions will be maintained.
<b>Recommendation #18:</b> Enact a general Outer Space Act that would apply to new and emerging space activities as they become a reality.					GAC staff is monitoring and contributing to discussions on space regulatory modernization, but the concept of a general Outer Space Act is outside of GAC's area of responsibility.	CLOSED <sup>11</sup>  Even though outside of the <i>Act</i> , GAC is to remain involved in any discussions.

<sup>11</sup> This was changed from “OPEN” (as per Ad-Hoc Dec Meeting Notes) to “CLOSED” during the January review of the Ad-Hoc Wrap-up Report.

## 5. Summary of the Next Steps

Below are the follow-up actions to be pursued by the GAC team in the quest to continue improving the implementation of the *Act* and *Regulations*.

- 1) Items identified in the Wrap-up Report – Follow-on actions and activities of all “to be addressed” items from Section 3 and all “open” items from Section 4 will be undertaken. Additionally, GAC **will continue to maintain** tasks supporting “closed” items, as the situation requires (**e.g. multilateral and bilateral consultations with other regulators**).
- 2) Outreach – GAC staff will continue to attend and present at conferences in order to maintain contacts, raise awareness on and receive feedback on RSSSA from Canadian industry and academia.
- 3) RSSSA 101 – This second CPC will be completed and thereafter posted on website.
- 4) Class Exemptions – GAC will continue its work on potential exemptions to specific sections of the *Act* and *Regulations*. The ongoing works includes:
  - a. Determining the best way to create these exemptions;
  - b. Determining the best topics/subjects to which these can apply (such as exemptions for academia, low-resolution, “selfie” cameras); and
  - c. Inviting feedback from industry and academia on these potential Class Exemptions.
- 5) Continue to assess and consider improvements of the *Regulations*.
- 6) Continue to assess and consider improvements of the *Act*.
- 7) Any ongoing follow-on updates or improvements to the CPCs:
  - a. Document review after six months following initial publication; and
  - b. Feedback solicitation from Canadian industry and academia.
- 8) Future Meetings/Committee – GAC will determine the best approach with the next phase of the Ad-Hoc RSSSA Advisory Committee. A “follow-on” discussion of the Ad-Hoc Committee is to take place in 6 months (occurring in May or June 2021) to allow for updates, discussion of unfinished business, and the matter of the future structure of the Committee or a potential successor.

**Remarks:** All of the Ad-Hoc RSSSA Advisory Committee work will serve as important reference materials for the 2022 Independent Review, the third review of the *Act* and its *Regulations*.

## 6. Conclusion

The Ad-Hoc RSSSA Review Advisory Committee was formed to obtain external input from the many segments of the space community during the review and renewal of the “*Act*” and the “*Regulations*”. As its work and mandate came to its conclusion in December 2020, the Committee members agree that the Committee has largely fulfilled its mission, met its objectives, and contributed to the advancement of efforts to make the *Act* and the *Regulations* relevant as the remote sensing industry and technology evolves. The Members recognize that there is much work to do and have flagged areas of concern.

The Committee deliberations benefited significantly from the exchange of varied perspectives on issues of importance to the *Act* and related topics, and on experiences with the implementation of the *Act* and the *Regulations*. The consultations benefitted from the diverse membership of the group of space industry stakeholders. The Committee members were able to voice their concerns and interests and the forum allowed the regulator and government contacts to elaborate the context behind the *Act*, *Regulations* and their implementation. Importantly, the Committee made real strides in identifying and articulating suggested ways to improving the regulatory framework to help improve the Earth observation landscape for Canadian stakeholders.

## 7. Abbreviations

CPC	Client Procedural Circular
DND	Department of National Defence
FAQ	Frequently Asked Questions
FVEY	Five Eye
GAC	Global Affairs Canada
HAPS	High Altitude Pseudo Satellites
ISED	Innovation, Science and Economic Development
McGill	Institute of Air and Space Law of McGill University’s Faculty of Law (McGill)
NGO	Non-Government Organizations
NRC	National Research Council
NRCan	Natural Resources Canada
R&D	Research and Development
RF	Radio Frequency
RSSSA	Remote Sensing Space Systems Act (the “ <i>Act</i> ”)
RSSSR	Remote Sensing Space Systems Regulations (the “ <i>Regulations</i> ”)
SAB	Space Advisory Board
SATCAN	Satellite Canada Innovation Network Inc.

## Annex 1 Supplemental Ad-Hoc Documents

# SUPPLEMENTAL AD-HOC DOCUMENTS

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For each of the Committee meetings, additional documents were circulated for discussion. Below is a listing of these supplementary documents.

Meeting Date	Supplemental Document
13 Nov 19	1 “What Can Be Done When” document 2 “RSSSA Renewal” document
15 Jan 19	1. Class Exemptions Document
19 Feb 20	1. <b>Kepler’s Note on Class Exemptions</b>
25 Mar 20	Nil
13 May 20	1. Two Questions from a Committee member (GAC and RF Licences) 2. CPC Draft V1 <sup>12</sup>
10 Jun 20	Nil
09 Sep 20	1. CPC Draft V2 // RSSSA Operating Licence Application Guide V2 <sup>13</sup>
09 Dec 20	1. <b>Wrap-Up Report of the Ad-Hoc RSSSA Advisory Committee V2</b>

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<sup>12</sup> The CPC was split into two documents: the RSSSA Operating Licence Application Guide and the RSSSA 101.

<sup>13</sup> The RSSSA Operating Licence Application Guide, link: [https://www.international.gc.ca/world-monde/issues\\_development-enjeux\\_developpement/peace\\_security-paix\\_securite/RSSSA-guide-LSTS.aspx?lang=eng](https://www.international.gc.ca/world-monde/issues_development-enjeux_developpement/peace_security-paix_securite/RSSSA-guide-LSTS.aspx?lang=eng).