

## TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

ETAS ID: TM571886

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT		
<b>NATURE OF CONVEYANCE:</b>	RELEASE OF SECURITY INTEREST		
<b>CONVEYING PARTY DATA</b>			
<b>Name</b>	<b>Formerly</b>	<b>Execution Date</b>	<b>Entity Type</b>
Royal Bank of Canada		04/08/2020	Corporation: CANADA
<b>RECEIVING PARTY DATA</b>			
<b>Name:</b>	MDA Geospatial Services, Inc.		
<b>Street Address:</b>	13800 Commerce Parkway		
<b>City:</b>	Richmond		
<b>State/Country:</b>	CANADA		
<b>Postal Code:</b>	V6V 2J3		
<b>Entity Type:</b>	Corporation: CANADA		
<b>PROPERTY NUMBERS Total: 1</b>			
<b>Property Type</b>	<b>Number</b>	<b>Word Mark</b>	
<b>Registration Number:</b>	2177128	EARTHVIEW	
<b>CORRESPONDENCE DATA</b>			
<b>Fax Number:</b>			
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>			
<b>Phone:</b>	7205664217		
<b>Email:</b>	trademarks@cooley.com		
<b>Correspondent Name:</b>	Kristin Leavy		
<b>Address Line 1:</b>	1299 Pennsylvania Avenue NW, Suite 700		
<b>Address Line 4:</b>	Washington, D.C. 20004-2400		
<b>NAME OF SUBMITTER:</b>	Kristin Leavy		
<b>SIGNATURE:</b>	/Kristin Leavy/		
<b>DATE SIGNED:</b>	04/14/2020		
<b>Total Attachments: 20</b>			
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**RELEASE OF SECURITY INTEREST IN PATENT AND TRADEMARK COLLATERAL**

This **RELEASE OF SECURITY INTEREST IN PATENT AND TRADEMARK COLLATERAL** (the “Release”) is dated as of April 8, 2020 by ROYAL BANK OF CANADA, in its capacity as collateral agent (in such capacity, the “Collateral Agent”) in favor of MAXAR TECHNOLOGIES ULC (including as successor by amalgamation to Maxar Technologies Ltd. (previously MacDonald, Dettwiler and Associates Ltd.)), MACDONALD, DETTWILER AND ASSOCIATES INC. (including as successor by amalgamation to Neptec Design Group Ltd.), MACDONALD, DETTWILER AND ASSOCIATES CORPORATION, MDA GEOSPATIAL SERVICES INC. (collectively, the “Released Grantors”) and SPACE SYSTEMS/LORAL, LLC (“SSL” and, together with the Released Grantors, the “Grantors”). All capitalized terms used but not otherwise defined herein have the meanings given to them in the Security Agreements (as defined below), and if not defined therein, shall have the meanings given thereto in that certain Restated Credit Agreement, dated as of October 5, 2017 (the “Original Credit Agreement”) among Maxar Technologies Inc. and Maxar Technologies ULC (being the successor by way of amalgamation among Maxar Technologies ULC and MDA Systems Holdings Ltd.), Royal Bank of Canada, as administrative agent and as collateral agent and the lenders from time to time party thereto, as amended by that certain First Amending Agreement dated as of December 21, 2018, that certain Second Amending Agreement dated as of December 21, 2018 (including the Amending Agreement thereto dated January 15, 2019), that certain Third Amending Agreement dated as of November 4, 2019, that certain Fourth Amending Agreement dated as of December 11, 2019, that certain Fifth Amending Agreement dated as of December 19, 2019 and that certain Sixth Amending Agreement dated as of April 1, 2020, and as supplemented by that certain Assumption and Novation Agreement dated as of January 1, 2019 and that certain Assumption Agreement dated as of April 6, 2020 (the Original Credit Agreement as so amended and supplemented and as may be further amended, amended and restated, modified, restated or supplemented from time to time, the “Credit Agreement”).

**WITNESSETH**

WHEREAS, the Grantors and the Collateral Agent entered into that certain Amended and Restated Security Agreement and that certain Amended and Restated Pledge and Security Agreement, each dated as of December 11, 2019 (collectively, the “Security Agreements”);

WHEREAS, pursuant to the Credit Agreement and the Security Agreements, the Grantors executed and delivered to the Collateral Agent that certain (i) U.S. Patent and Trademark Security Agreement dated as of October 5, 2017 (the “2017 Patent and Trademark Security Agreement”) and recorded with the United States Patent and Trademark Office (“USPTO”) on October 5, 2017 at Reel/Frame Nos. 44167/0396 and 6174/0481, (ii) U.S. Patent and Trademark Security Agreement dated as of October 18, 2019 (the “2019 Patent and Trademark Security Agreement”) and recorded with the USPTO on October 25, 2019 at Reel/Frame Nos. 50828/0716 and 6780/0171, and (iii) Amended and Restated U.S. Patent and Trademark Security Agreement dated as of December 11, 2019 (the “A&R Patent and Trademark Security Agreement”) and together with the 2017 Patent and Trademark Security Agreement and 2019 Patent and Trademark Security Agreement, the “Patent and Trademark Security Agreements”) and recorded with the USPTO on December 11, 2019 at Reel/Frame Nos. 51258/0720, 6813/0757, and 6813/0713 and on December 13, 2019 at Reel/Frame Nos. 51287/0330, 51287/0403, 51287/0448, and 51287/0496, pursuant to which the Grantors granted to the Collateral Agent for the benefit of the Secured Parties, a security interest in and to all of the Grantors’ right, title and interest in and to the Collateral (as defined in the Patent and Trademark Security Agreements);

WHEREAS, Maxar Technologies Inc. has advised the Collateral Agent that the correct assignee of patent number 10341012 issued on July 2, 2019 by the USPTO and as further described and set forth in Schedule I, attached hereto and incorporated herein by this reference (the “Specified US Patent”)

is MacDonald, Dettwiler and Associates Corporation and not SSL, and that the Specified US Patent was attributed to SSL as grantor on the list of Collateral on Schedule I to the A&R Patent and Trademark Security Agreement in error;

WHEREAS, the Collateral Agent has agreed to release its security interest in all of the right, title, and interest in and to (i) the patents, patent applications, trademark registrations, and trademark applications owned by the Released Grantors, including, without limitation, those set forth in Schedule I; and (ii) the Specified US Patent (collectively, the "Released Collateral"), and to reconvey any and all of its right, title, and interest in and to the Released Collateral to the Grantors; and

WHEREAS, the security interest in the Collateral owned by each of DigitalGlobe, Inc., Radiant Geospatial Solutions LLC and SSL granted to the Collateral Agent pursuant to the Security Agreements and the Patent and Trademark Security Agreements (the "Remaining Collateral"), will be unaffected by this Release and such security interest in the Remaining Collateral will continue in full force and effect.


NOW, THEREFORE, for and in consideration of the foregoing, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and upon the terms set forth in this Release:

1. the Collateral Agent, hereby terminates, releases and forever discharges, without recourse, representation, or warranty of any kind or nature, its security interest in the Released Collateral, and retransfers and reassigns to Released Grantors any right, title or interest the Collateral Agent has or may have in, to or under the Released Collateral, without representation or warranty. The Collateral Agent shall retain its security interest in all other portions of the Collateral granted pursuant to the Security Agreements and the Patent and Trademark Security Agreements that are not the Released Collateral and the Security Agreements and the Patent and Trademark Security Agreements shall not otherwise be terminated or modified in any way and will remain in full force and effect.
2. the Collateral Agent agrees to execute and deliver such further documents and to do all such further acts as may be necessary or proper in the to carry out the provisions of this Release.
3. This Release shall be governed by and construed in accordance with the laws of the State of New York and the federal laws of the United States of America applicable therein.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Collateral Agent has caused this Release to be duly executed and delivered as of the date first written above.

**ROYAL BANK OF CANADA**, as Collateral Agent

By:   
Name: Helena Sachowski  
Title: Manager, Agency

SCHEDULE I  
to  
RELEASE OF SECURITY INTEREST IN PATENT AND TRADEMARK COLLATERAL

**PATENT REGISTRATIONS AND PATENT APPLICATIONS**

Reel/Frame No. 44167/0396

Patent Number (Application Number)	Title	Owner of Record	Filing Date	Patent Issue Date
5,500,530	ELECTRO-OPTIC ICE DETECTION	MACDONALD, DETTWILER AND ASSOCIATES INC.	10/31/1994	3/19/1996
5,684,727	High-speed correlator	MAXAR TECHNOLOGIES ULC (F/K/A MACDONALD, DETTWILER AND ASSOCIATES LTD. AND MAXAR TECHNOLOGIES LTD.) <sup>1</sup>	2/7/1996	11/4/1997
5,986,526	RF MICROWAVE BELLOWS TUNING POST	MACDONALD, DETTWILER AND ASSOCIATES CORPORATION	3/3/1997	11/16/1999
6,065,791	Collet End Effector	MACDONALD, DETTWILER AND ASSOCIATES INC.	6/1/1998	5/23/2000
6,341,933	HINGED SCOOP END EFFECTOR	MACDONALD, DETTWILER AND ASSOCIATES INC. (f/k/a MACDONALD DETTWILER SPACE AND ADVANCED ROBOTICS LTD.) <sup>2</sup>	6/4/1999	1/29/2002

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<sup>1</sup> MacDonald, Dettwiler and Associates Ltd. changed its name to “Maxar Technologies Ltd.” on October 5, 2017 and merged into “Maxar Technologies ULC” on January 1, 2019. Change of name filed with the USPTO on January 26, 2020 at Reel/Frame 052239/0310.

<sup>2</sup> Change of name from MacDonald, Dettwiler Space and Advanced Robotics Ltd. to MacDonald, Dettwiler and Associates Inc. filed 3/30/2020 at Reel/frame 052255/0713.

<b>Patent Number (Application Number)</b>	<b>Title</b>	<b>Owner of Record</b>	<b>Filing Date</b>	<b>Patent Issue Date</b>
6,396,453	HIGH PERFORMANCE MULTIMODE HORN	MACDONALD, DETTWILER AND ASSOCIATES CORPORATION	4/16/2001	5/28/2002
6,492,955	STEERABLE ANTENNA SYSTEM WITH FIXED FEED SOURCE	MACDONALD, DETTWILER AND ASSOCIATES CORPORATION	10/2/2001	12/10/2002
6,747,604	STEERABLE OFFSET ANTENNA WITH FIXED FEED SOURCE	MACDONALD, DETTWILER AND ASSOCIATES CORPORATION	10/8/2002	6/8/2004
6,749,533	GEARBOX	MACDONALD, DETTWILER AND ASSOCIATES INC.	5/24/2002	6/15/2004
6,929,591	TOOL STORAGE HOLSTER	MACDONALD, DETTWILER AND ASSOCIATES INC.	12/16/2002	8/16/2005
6,969,030	Spacecraft Docking Mechanism	MACDONALD, DETTWILER AND ASSOCIATES INC.	7/14/2004	11/29/2005
7,038,636	HELICAL ANTENNA	MACDONALD, DETTWILER AND ASSOCIATES CORPORATION	6/16/2004	12/23/2004
7,138,959	METHOD FOR IMPROVING ISOLATION OF AN ANTENNA MOUNTED ON A STRUCTURE	MACDONALD, DETTWILER AND ASSOCIATES CORPORATION	12/30/2003	11/21/2006
7,183,990	APERTURE ILLUMINATION CONTROL MEMBRANE	MACDONALD, DETTWILER AND ASSOCIATES CORPORATION	2/3/2005	2/27/2007
7,236,142	ELECTROMAGNETIC BANDGAP DEVICE FOR ANTENNA STRUCTURES	MACDONALD, DETTWILER AND ASSOCIATES CORPORATION	10/3/2005	6/26/2007

<b>Patent Number (Application Number)</b>	<b>Title</b>	<b>Owner of Record</b>	<b>Filing Date</b>	<b>Patent Issue Date</b>
7,474,272	PARASITIC ELEMENT FOR HELICAL ANTENNA	MACDONALD, DETTWILER AND ASSOCIATES CORPORATION	6/27/2007	1/6/2009
7,756,615	TRAFFIC MANAGEMENT SYSTEM BASED ON A PASSAGEWAY ENVIRONMENT	MACDONALD, DETTWILER AND ASSOCIATES INC.	7/26/2006	7/13/2010
7,783,734	Satellite communications system for providing global, high quality movement of very large data files	MAXAR TECHNOLOGIES ULC (F/K/A MACDONALD, DETTWILER AND ASSOCIATES LTD. AND MAXAR TECHNOLOGIES LTD.)	1/1/2005	8/24/2010
7,860,301	3-D IMAGING SYSTEM	MACDONALD, DETTWILER AND ASSOCIATES INC.	2/13/2006	12/28/2010
7,889,129	Lightweight space-fed active phased array antenna system	MAXAR TECHNOLOGIES ULC (F/K/A MACDONALD, DETTWILER AND ASSOCIATES LTD. AND MAXAR TECHNOLOGIES LTD.)	5/7/2008	2/15/2011
7,996,110	Surgical robot and robotic controller	MACDONALD, DETTWILER AND ASSOCIATES INC.	11/20/2006	8/9/2011
8,031,909	Method and Apparatus for Producing 3D Model of an Underground Environment	MACDONALD, DETTWILER AND ASSOCIATES INC.	12/18/2009	10/4/2011
8,031,933	METHOD AND APPARATUS FOR PRODUCING 3D MODEL OF AN ENVIRONMENT OR AN OBJECT	MACDONALD, DETTWILER AND ASSOCIATES INC.	12/18/2009	10/4/2011
8,074,935	ROBOTIC SATELLITE REFUELLING METHOD AND SYSTEM	MACDONALD, DETTWILER AND ASSOCIATES INC.	3/10/2008	12/13/2011



<b>Patent Number (Application Number)</b>	<b>Title</b>	<b>Owner of Record</b>	<b>Filing Date</b>	<b>Patent Issue Date</b>
8,090,491	Guidance, Navigation, and Control System for an Underground Mining Vehicle	MACDONALD, DETTWILER AND ASSOCIATES INC.	12/21/2007	1/3/2012
8,181,911	Satellite Refuelling System and Method	MACDONALD DETTWILER AND ASSOCIATES INC.	8/2/2011	5/22/2011
8,196,870	Robotic Satellite Refueling Tool	MACDONALD DETTWILER AND ASSOCIATES INC.	12/12/2011	6/12/2012
8,260,483	Guidance, Navigation, and Control System for a Vehicle	MACDONALD, DETTWILER AND ASSOCIATES INC	8/12/2011	9/4/2012
8,412,851	Satellite communications system for providing global, high quality movement of very large data files	MAXAR TECHNOLOGIES ULC (F/K/A MACDONALD, DETTWILER AND ASSOCIATES LTD. AND MAXAR TECHNOLOGIES LTD.)	8/4/2010	4/2/2013
8,444,631	SURGICAL MANIPULATOR WITH RIGHT-ANGLE PULLEY DRIVE MECHANISMS	MACDONALD, DETTWILER AND ASSOCIATES INC.	12/22/2008	5/21/2013
8,448,904	Robotic Satellite Refueling Tool	MACDONALD, DETTWILER AND ASSOCIATES INC.	5/14/2012	5/28/2013
8,491,603	SURGICAL MANIPULATOR	MACDONALD, DETTWILER AND ASSOCIATES INC.	6/14/2007	7/23/2013
8,515,576	Surgical robot and robotic controller	MACDONALD, DETTWILER AND ASSOCIATES INC.	8/8/2011	8/20/2013
8,532,368	METHOD AND APPARATUS FOR PRODUCING 3D MODEL OF AN ENVIRONMENT	MACDONALD, DETTWILER AND ASSOCIATES INC.	8/15/2011	9/10/2013
8,693,730	Method of Real-Time Tracking of Moving/Flexible Surfaces	MACDONALD, DETTWILER AND ASSOCIATES INC.	11/15/2012	4/8/2014

<b>Patent Number (Application Number)</b>	<b>Title</b>	<b>Owner of Record</b>	<b>Filing Date</b>	<b>Patent Issue Date</b>
8,702,341	Scalable Common Interface Plate System (SCIPS)	MACDONALD, DETTWILER AND ASSOCIATES INC.	2/15/2011	4/22/2014
8,899,527	Propellant Transfer System and Method for Resupply of Propellant to On-Orbit Spacecraft	MACDONALD, DETTWILER AND ASSOCIATES INC.	11/15/2012	12/2/2014
9,059,682	ORTHOMODE JUNCTION ASSEMBLY WITH ASSOCIATED FILTERS FOR USE IN AN ANTENNA FEED SYSTEM	MACDONALD, DETTWILER AND ASSOCIATES CORPORATION	8/23/2013	6/16/2015
9,093,742	WIDE SCAN STEERABLE ANTENNA WITH NO KEY-HOLE	MACDONALD, DETTWILER AND ASSOCIATES CORPORATION	10/16/2012	7/28/2015
9,101,267	Method of Real-Time Tracking of Moving/Flexible Surfaces	MACDONALD, DETTWILER AND ASSOCIATES INC.	3/21/2014	8/11/2015
9,108,747	Tool for Accessing Satellite Fill/Drain valves During Propellant Resupply	MACDONALD, DETTWILER AND ASSOCIATES INC.	12/5/2012	7/18/2015
9,115,867	DUAL REFLECTOR SYSTEM FOR LINEAR LAMP ILLUMINATORS	MACDONALD, DETTWILER AND ASSOCIATES INC.	10/19/2010	8/25/2015
9,172,128	ANTENNA POINTING SYSTEM	MACDONALD, DETTWILER AND ASSOCIATES CORPORATION	12/21/2012	10/27/2015
9,174,396	METHOD OF MAKING CHARGE DISSIPATIVE SURFACES OF POLYMERIC MATERIALS WITH LOW TEMPERATURE DEPENDENCE OF SURFACE RESISTIVITY AND LOW RF LOSS	MACDONALD, DETTWILER AND ASSOCIATES CORPORATION	7/3/2013	11/3/2015

<b>Patent Number (Application Number)</b>	<b>Title</b>	<b>Owner of Record</b>	<b>Filing Date</b>	<b>Patent Issue Date</b>
9,259,271	AUTOMATED IN-BORE MR GUIDED ROBOTIC DIAGNOSTIC AND THERAPEUTIC SYSTEM	MACDONALD, DETTWILER AND ASSOCIATES INC.	3/7/2013	2/16/2016
9,260,206	Propellant Transfer System and Method for Resupply of Propellant to On-Orbit Spacecraft	MACDONALD, DETTWILER AND ASSOCIATES INC.	12/1/2014	2/16/2016
9,285,481	A Wearable Object Locator and Imaging System	MACDONALD, DETTWILER AND ASSOCIATES INC.	8/20/2012	3/15/2016
9,333,041	SURGICAL MANIPULATOR WITH RIGHT-ANGLE PULLEY DRIVE MECHANISMS	MACDONALD, DETTWILER AND ASSOCIATES INC.	5/21/2013	5/10/2016
9,339,935	Scalable Common Interface Plate System (SCIPS)	MACDONALD, DETTWILER AND ASSOCIATES INC.	3/7/2014	5/17/2016
9,369,883	Satellite communications system for providing global, high quality movement of very large data files	MAXAR TECHNOLOGIES ULC (F/K/A MACDONALD, DETTWILER AND ASSOCIATES LTD. AND MAXAR TECHNOLOGIES LTD.)	3/28/2013	6/14/2016
9,399,295	Spacecraft Capture Mechanism	MACDONALD, DETTWILER AND ASSOCIATES INC.	3/19/2013	7/26/2016
9,567,111	Tool for Accessing Satellite Fill/Drain valves During Propellant Resupply	MACDONALD, DETTWILER AND ASSOCIATES INC.	6/19/2015	2/14/2017
9,669,950	Spacecraft Capture Mechanism	MACDONALD, DETTWILER AND ASSOCIATES INC.	5/2/2015	6/6/2017
9,676,096	ROBOTIC SERVICING MULTIFUNCTIONAL TOOL	MACDONALD DETTWILER AND ASSOCIATES INC.	10/15/2012	6/13/2017
9,688,422	Tool for Accessing Satellite Fill/Drain valves During Propellant Resupply	MACDONALD, DETTWILER AND ASSOCIATES INC.	6/19/2015	6/27/2017

<b>Patent Number (Application Number)</b>	<b>Title</b>	<b>Owner of Record</b>	<b>Filing Date</b>	<b>Patent Issue Date</b>
(12/458,486)	Method of making charge dissipative surfaces of polymeric materials with low temperature dependence of surface resistivity and low RF loss	MACDONALD, DETTWILER AND ASSOCIATES CORPORATION	7/14/2009	
(12/458,490)	Orthomode junction assembly with associated filters for use in an antenna feed system	MACDONALD, DETTWILER AND ASSOCIATES CORPORATION	7/14/2009	
(12/687,661)	COLLATERAL VALIDATION SYSTEM	MACDONALD, DETTWILER AND ASSOCIATES CORPORATION	1/14/2010	
(13/122,545)	OPTICAL ALIGNMENT SYSTEM, SUCH AS FOR AN ORBITING CAMERA	MAXAR TECHNOLOGIES ULC (F/K/A MACDONALD, DETTWILER AND ASSOCIATES LTD. AND MAXAR TECHNOLOGIES LTD.)	6/16/2011	
(14/716,795)	Payload Ejection Mechanism	MACDONALD, DETTWILER AND ASSOCIATES INC.	5/19/2015	
(15/219,017)	Spacecraft Capture Mechanism	MACDONALD, DETTWILER AND ASSOCIATES INC.	7/25/2016	
(15/418,154)	Compact and Lightweight TEM-Line Network for RF components of Antenna Systems	MACDONALD, DETTWILER AND ASSOCIATES CORPORATION	1/27/2017	
(15/480,941)	THREE AXIS ANTENNA DEPLOYMENT AND POINTING MECHANISM	MACDONALD, DETTWILER AND ASSOCIATES CORPORATION	4/6/2017	
(15/623,764)	Antenna Reflector Interchange Mechanism	MACDONALD, DETTWILER AND ASSOCIATES CORPORATION	6/15/2017	

<b>Patent Number (Application Number)</b>	<b>Title</b>	<b>Owner of Record</b>	<b>Filing Date</b>	<b>Patent Issue Date</b>
(15/621,362)	Robotic Servicing Multifunctional Tool	MACDONALD, DETTWILER AND ASSOCIATES INC.	6/21/2017	
(15/620,300)	Robotic Servicing Multifunctional Tool	MACDONALD, DETTWILER AND ASSOCIATES INC.	6/21/2017	
(15/645,929)	System And Method For Automated Artificial Vision Guided Dispensing Of Viscous Fluids And Caulking And Sealing Operations	MACDONALD, DETTWILER AND ASSOCIATES INC.	7/10/2017	
(62/433,624)	Strut and Joint Spaceframe Structure Assemblies	MACDONALD, DETTWILER AND ASSOCIATES CORPORATION	12/13/2016	Provisional
(62/437,965)	Unobtrusive Driving Assistance Method and System for a Vehicle to Avoid Obstacles	MACDONALD, DETTWILER AND ASSOCIATES INC.	12/22/2016	Provisional
(62/438,919)	CALIBRATION SYSTEM AND METHOD FOR OPTIMIZING LEAKAGE PERFORMANCE OF A MULTI-PORT AMPLIFIER	MACDONALD, DETTWILER AND ASSOCIATES CORPORATION	12/23/2016	Provisional

Reel/Frame No. 50828/0716

	<b>Assignee</b>	<b>Patent Title</b>	<b>Serial No.</b>	<b>Filing Date</b>	<b>Patent No.</b>	<b>Issue Date</b>
1.	MacDonald, Dettwiler and Associates Inc. (f/k/a Neptec) <sup>3</sup>	Data collection unit	US29204181	2004/04/26	USD508565S1	2005/08/16
2.	MacDonald, Dettwiler and Associates Inc. (f/k/a Neptec Design Group Ltd.)	Wide angle bistatic scanning optical ranging sensor	US13880938	2013/11/26	US9255790B2	2016/02/09
3.	MacDonald, Dettwiler and Associates Inc. (f/k/a Neptec Design Group Ltd.)	Return pulse shape analysis for falling edge object discrimination of aerosol LIDAR	US13127945	2011/08/16	US8781790B2	2014/07/15
4.	MacDonald, Dettwiler and Associates Inc. (f/k/a Neptec Design Group Ltd.)	High speed 360 degree scanning LIDAR head	US14397155	2015/03/16	US9791555B2	2017/10/17

Reel/Frame No. 51287/0330

	<b>Assignee</b>	<b>Patent Title</b>	<b>Serial No.</b>	<b>Filing Date</b>	<b>Patent No.</b>	<b>Issue Date</b>
1.	MacDonald, Dettwiler and Associates Corporation	Adaptive Satellite Channelizer	US15725194A	2017/10/04	10341012	2019/07/02
2.	MacDonald, Dettwiler and Associates Corporation	High performance multimode horn	US2001833713A	2001/04/13	US6396453B2	2002/05/28
3.	MacDonald, Dettwiler and Associates Corporation	Steerable antenna system with fixed feed source	US2001967949A	2001/10/02	US6492955B1	2002/12/10
4.	MacDonald, Dettwiler and Associates Corporation	Steerable offset antenna with fixed feed source	US2002265600A	2002/10/08	US6747604B2	2004/06/08
5.	MacDonald, Dettwiler and Associates Corporation	Method for improving isolation of an antenna mounted on a structure	US2003747278A	2003/12/30	US7138959B2	2006/11/21

<sup>3</sup> Neptec Design Group Ltd. amalgamated into MacDonald, Dettwiler and Associates Inc. on January 7, 2020. Name changes were filed with the USPTO March 26, 2020, Reel/Frame 052239/0852.

	<b>Assignee</b>	<b>Patent Title</b>	<b>Serial No.</b>	<b>Filing Date</b>	<b>Patent No.</b>	<b>Issue Date</b>
6.	MacDonald, Dettwiler and Associates Corporation	Helical antenna	US2004 868210 A	2004/06/16	US70386 36B2	2006/05/02
7.	MacDonald, Dettwiler and Associates Corporation	Aperture illumination control membrane	US2005 48824A	2005/02/03	US71839 90B2	2007/02/27
8.	MacDonald, Dettwiler and Associates Corporation	Electromagnetic bandgap device for antenna structures	US2005 240497 A	2005/10/03	US72361 42B2	2007/06/26
9.	MacDonald, Dettwiler and Associates Corporation	Parasitic element for helical antenna	US2007 819337 A	2007/06/27	US74742 72B2	2009/01/06
10.	MacDonald, Dettwiler and Associates Corporation	Orthomode junction assembly with associated filters for use in an antenna feed system	US1397 4640A	2013/08/23	US90596 82B2	2015/06/16
11.	MacDonald, Dettwiler and Associates Corporation	Wide scan steerable antenna with no key/hole	US1365 2680A	2012/10/16	US90937 42B2	2015/07/28
12.	MacDonald, Dettwiler and Associates Corporation	Antenna pointing system	US1372 3844A	2012/12/21	US91721 28B2	2015/10/27
13.	MacDonald, Dettwiler and Associates Corporation	Wide scan steerable antenna	US1484 9919A	2015/09/10	US96473 34B2	2017/05/09
14.	MacDonald, Dettwiler and Associates Corporation	Compact and lightweight TEM/line network for RF components of antenna systems	US1541 8154A	2017/01/27	US10069 184B2	2018/09/04
15.	MacDonald, Dettwiler and Associates Corporation	Architecture and method for optimal tracking of multiple broadband satellite terminals	US1544 2653A	2017/02/25		
16.	MacDonald, Dettwiler and Associates Corporation	Three axis reflector deployment and pointing mechanism	US1548 0941A	2017/04/06		
17.	MacDonald, Dettwiler and Associates Corporation	Antenna reflector interchange mechanism	US1562 3764A	2017/06/15		

	<b>Assignee</b>	<b>Patent Title</b>	<b>Serial No.</b>	<b>Filing Date</b>	<b>Patent No.</b>	<b>Issue Date</b>
18.	MacDonald, Dettwiler and Associates Corporation	Strut and joint for spaceframe structure assemblies	US15838585A	2017/12/12		
19.	MacDonald, Dettwiler and Associates Corporation	Calibration system and method for optimizing leakage performance of a multi/port amplifier	US15853588A	2017/12/22		
20.	MacDonald, Dettwiler and Associates Corporation	RF rotary joint using a matched horn coupler assembly	US16116554A	2018/08/29		
21.	MacDonald, Dettwiler and Associates Corporation	Modular Channelizer	US15729257A	2017/10/10		
22.	MacDonald, Dettwiler and Associates Corporation	Lightweight Deployable Aperture Reflectarray Antenna Reflector	16/406,349	2019/05/08		

Reel/Frame No. 51287/0403

	<b>Assignee</b>	<b>Patent Title</b>	<b>Serial No.</b>	<b>Filing Date</b>	<b>Patent No.</b>	<b>Issue Date</b>
1.	MacDonald, Dettwiler and Associates Inc.	Gearbox	US2002153600A	2002/05/24	US6749533B2	2004/06/15
2.	MacDonald, Dettwiler and Associates Inc.	Surgical robot and robotic controller	US11603352A	2006/11/20	US7996110B2	2011/08/09
3.	MacDonald, Dettwiler and Associates Inc.	Surgical robot and robotic controller	US13205524A	2011/08/08	US8515576B2	2013/08/20
4.	MacDonald, Dettwiler and Associates Inc.	Spacecraft docking mechanism	US2004890513A	2004/07/14	US6969030B1	2005/11/29
5.	MacDonald, Dettwiler and Associates Inc.	3D imaging system	US2006352399A	2006/02/13	US7860301B2	2010/12/28
6.	MacDonald, Dettwiler and Associates Inc.	Method and apparatus for producing 3D model of an underground environment	US2009654451A	2009/12/18	US8031909B2	2011/10/04



	<b>Assignee</b>	<b>Patent Title</b>	<b>Serial No.</b>	<b>Filing Date</b>	<b>Patent No.</b>	<b>Issue Date</b>
7.	MacDonald, Dettwiler and Associates Inc.	Method and apparatus for producing an enhanced 3D model of an environment or an object	US2009 654452 A	2009/12/18	US80319 33B2	2011/10/04
8.	MacDonald, Dettwiler and Associates Inc.	Method and apparatus for producing 3D model of an environment	US1321 0275A	2011/08/15	US85323 68B2	2013/09/10
9.	MacDonald, Dettwiler and Associates Inc.	Traffic management system for a passageway environment	US2006 493027 A	2006/07/26	US77566 15B2	2010/07/13
10.	MacDonald, Dettwiler and Associates Inc.	Guidance, navigation, and control system for a vehicle	US2007 922706 A	2008/03/19	US80904 91B2	2012/01/03
11.	MacDonald, Dettwiler and Associates Inc.	Guidance, navigation, and control system for a vehicle	US1320 9247A	2011/08/12	US82604 83B2	2012/09/04
12.	MacDonald, Dettwiler and Associates Inc.	Surgical manipulator	US2007 812094 A	2007/06/14	US84916 03B2	2013/07/23
13.	MacDonald, Dettwiler and Associates Inc.	Surgical manipulator	US2008 318151 A	2008/12/22	US84446 31B2	2013/05/21
14.	MacDonald, Dettwiler and Associates Inc.	Surgical manipulator	US1389 9300A	2013/05/21	US93330 41B2	2016/05/10
15.	MacDonald, Dettwiler and Associates Inc.	Satellite refuelling system and method	US2008 73795A	2008/03/10	US80749 35B2	2011/12/13
16.	MacDonald, Dettwiler and Associates Inc.	Satellite refuelling system and method	US1319 6750A	2011/08/02	US81819 11B1	2012/05/22
17.	MacDonald, Dettwiler and Associates Inc.	Robotic satellite refueling tool	US1332 3472A	2011/12/12	US81968 70B2	2012/06/12
18.	MacDonald, Dettwiler and Associates Inc.	Robotic satellite refuelling tool	US1347 0661A	2012/05/14	US84489 04B2	2013/05/28
19.	MacDonald, Dettwiler and Associates Inc.	Scalable common interface plate system (SCIPS)	US1302 8051A	2011/02/15	US87023 41B2	2014/04/22
20.	MacDonald, Dettwiler and Associates Inc.	Scalable common interface plate system (SCIPS)	US1422 1946A	2014/03/21	US93399 35B2	2016/05/17

	<b>Assignee</b>	<b>Patent Title</b>	<b>Serial No.</b>	<b>Filing Date</b>	<b>Patent No.</b>	<b>Issue Date</b>
21.	MacDonald, Dettwiler and Associates Inc.	Dual reflector system for linear lamp illuminators	US2010 907685 A	2010/10/19	US91158 67B2	2015/08/25
22.	MacDonald, Dettwiler and Associates Inc.	Robotic servicing multifunctional tool	US1365 2339A	2012/10/15	US96760 96B2	2017/06/13
23.	MacDonald, Dettwiler and Associates Inc.	Robotic servicing multifunctional tool	US1562 0300A	2017/06/12	US10005 180B2	2018/06/26
24.	MacDonald, Dettwiler and Associates Inc.	Robotic servicing multifunctional tool	US1562 1362A	2017/06/13	US99504 24B2	2018/04/24
25.	MacDonald, Dettwiler and Associates Inc.	Propellant transfer system and method for resupply of propellant to on/orbit spacecraft	US1367 8281A	2012/11/15	US88995 27B2	2014/12/02
26.	MacDonald, Dettwiler and Associates Inc.	Propellant transfer system and method for resupply of propellant to on/orbit spacecraft	US1455 4695A	2014/11/26	US92602 06B2	2016/02/16
27.	MacDonald, Dettwiler and Associates Inc.	Method of real/time tracking of moving/flexible surfaces	US1367 8162A	2012/11/15	US86937 30B2	2014/04/08
28.	MacDonald, Dettwiler and Associates Inc.	Method of real/time tracking of moving/flexible surfaces	US1422 1085A	2014/03/20	US91012 67B2	2015/08/11
29.	MacDonald, Dettwiler and Associates Inc.	Tool for accessing satellite fill/drain valves during propellant resupply	US1370 6126A	2012/12/05	US91087 47B2	2015/08/18
30.	MacDonald, Dettwiler and Associates Inc.	System and tool for accessing satellite fill/drain valves during propellant resupply	US1482 6429A	2015/08/14	US95671 11B2	2017/02/14
31.	MacDonald, Dettwiler and Associates Inc.	System and tool for accessing satellite fill/drain valves during propellant resupply	US1482 6444A	2015/08/14	US96884 22B2	2017/06/27
32.	MacDonald, Dettwiler and Associates Inc.	Spacecraft capture mechanism	US1383 9529A	2013/03/15	US93992 95B2	2016/07/26
33.	MacDonald, Dettwiler and Associates Inc.	Spacecraft capture mechanism	US1521 9017A	2016/07/25	US97644 78B2	2017/09/19
34.	MacDonald, Dettwiler and Associates Inc.	Wearable object locator and imaging system	US1358 9957A	2012/08/20	US92854 81B2	2016/03/15

	<b>Assignee</b>	<b>Patent Title</b>	<b>Serial No.</b>	<b>Filing Date</b>	<b>Patent No.</b>	<b>Issue Date</b>
35.	MacDonald, Dettwiler and Associates Inc.	Spacecraft capture mechanism	US14703709A	2015/05/04	US9669950B2	2017/06/06
36.	MacDonald, Dettwiler and Associates Inc.	Payload ejection system	US14716795A	2015/05/19	10427808	2019/10/01
37.	MacDonald, Dettwiler and Associates Inc.	System and method for automated artificial vision guided dispensing viscous fluids for caulking and sealing operations	US15645929A	2017/07/10		
38.	MacDonald, Dettwiler and Associates Inc.	Actuated resettable shockless hold down and release mechanism (ARES HDRM)	US15849225A	2017/12/20		
39.	MacDonald, Dettwiler and Associates Inc.	Unobtrusive driving assistance method and system for a vehicle to avoid hazards	US15849427A	2017/12/20		
40.	MacDonald, Dettwiler and Associates Inc.	Low/Profile Manipulator Interface System (MIPS)	15/829,619	2017/12/01		
41.	MacDonald, Dettwiler and Associates Inc.	Refueling Tool and System Incorporating The Refueling Tool	62/782,007	2018/12/19		
42.	MacDonald, Dettwiler and Associates Inc.	Radial Latch Manipulator Interface System	62/869,943	2019/07/02		
43.	MacDonald, Dettwiler and Associates Inc. (f/k/a MacDonald, Dettwiler Space and Advanced Robotics Ltd.) <sup>4</sup>	Hinged scoop end-effector	US1999325640A	1999/06/04	US6341933B1	2002/01/29

<sup>4</sup> MacDonald, Dettwiler Space and Advanced Robotics Ltd. changed its name to “MacDonald, Dettwiler and Associates Inc.” on April 25, 2005. Change of name filed with USPTO March 30, 2020 at Reel/frame 052255/0713.

Reel/Frame No. 51287/0448

	<b>Assignee</b>	<b>Patent Title</b>	<b>Serial No.</b>	<b>Filing Date</b>	<b>Patent No.</b>	<b>Issue Date</b>
1.	Maxar Technologies ULC (f/k/a MacDonald, Dettwiler and Associates Ltd. and Maxar Technologies Ltd.) <sup>5</sup>	Satellite communications system for providing global, high quality movement of very large data files	US2003 530018 A	2005/04/01	US77837 34B2	2010/08/24
2.	Maxar Technologies ULC (f/k/a MacDonald, Dettwiler and Associates Ltd. and Maxar Technologies Ltd.)	Satellite communications system for providing global, high quality movement of very large data files	US2010 850426 A	2010/08/04	US84128 51B2	2013/04/02
3.	Maxar Technologies ULC (f/k/a MacDonald, Dettwiler and Associates Ltd. and Maxar Technologies Ltd.)	Satellite communications system for providing global, high quality movement of very large data files	US1385 3027A	2013/03/28	US93698 83B2	2016/06/14
4.	Maxar Technologies ULC (f/k/a MacDonald, Dettwiler and Associates Ltd. and Maxar Technologies Ltd.)	Lightweight space/fed active phased array antenna system	US2007 912585 A	2008/05/07	US78891 29B2	2011/02/15

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<sup>5</sup> MacDonald, Dettwiler and Associates Ltd. changed its name to “Maxar Technologies Ltd.” on October 5, 2017 and merged into “Maxar Technologies ULC” on January 1, 2019. Change of name filed with the USPTO on January 26, 2020 at Reel/Frame 052239/0310.

Reel/Frame No. 51287/0496

	<b>Assignee</b>	<b>Patent Title</b>	<b>Serial No.</b>	<b>Filing Date</b>	<b>Patent No.</b>	<b>Issue Date</b>
1.	MacDonald, Dettwiler and Associates Inc. (f/k/a Neptec) <sup>6</sup>	Data collection unit	US2920 4181	2004/04/ 26	USD508 565S1	2005/08/ 16
2.	MacDonald, Dettwiler and Associates Inc. (f/k/a Neptec Design Group Ltd.)	Wide angle bistatic scanning optical ranging sensor	US1388 0938	2013/11/ 26	US92557 90B2	2016/02/ 09
3.	MacDonald, Dettwiler and Associates Inc. (f/k/a Neptec Design Group Ltd.)	Return pulse shape analysis for falling edge object discrimination of aerosol LIDAR	US1312 7945	2011/08/ 16	US87817 90B2	2014/07/ 15
4.	MacDonald, Dettwiler and Associates Inc. (f/k/a Neptec Design Group Ltd.)	High speed 360 degree scanning LIDAR head	US1439 7155	2015/03/ 16	US97915 55B2	2017/10/ 17

Reel/Frame No. 51258/0720

	<b>Assignee</b>	<b>Patent Title</b>	<b>Serial No.</b>	<b>Filing Date</b>	<b>Patent No.</b>	<b>Issue Date</b>
1.	MacDonald, Dettwiler and Associates Corporation <sup>7</sup>	Adaptive Satellite Channelizer	US1572 5194A	2017/10/ 04	1034101 2	2019/07/ 02

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<sup>6</sup> Neptec Design Group Ltd. was amalgamated into MacDonald, Dettwiler and Associates Inc. January 7, 2020. The amalgamation documents were filed with the USPTO March 30, 2020 at Reel/frame 052239/0852.

<sup>7</sup> Space Systems/Loral, LLC is not the owner of this patent. The correct assignee of this patent is MacDonald, Dettwiler and Associates Corporation, which was the original applicant for the patent.

**TRADEMARK REGISTRATIONS AND TRADEMARK APPLICATIONS**

Reel/Frame No. 6174/0481

	<b>Owner</b>	<b>Trademark</b>	<b>Serial No.</b>	<b>Filing Date</b>	<b>Reg. No.</b>	<b>Reg. Date</b>
1.	MDA Geospatial Services Inc.	EARTHVIEW	75/012,791	10/31/1995	2177128	7/28/1998

Reel/Frame No. 6780/0171

	<b>Owner</b>	<b>Trademark</b>	<b>Serial No.</b>	<b>Filing Date</b>	<b>Reg. No.</b>	<b>Reg. Date</b>
1.	MacDonald, Dettwiler and Associates Inc. (f/k/a Neptec Design Group Ltd.) <sup>8</sup>	TRIDAR	87/863,499	4/4/2018	5,947,237	12/31/2019

Reel/Frame No. 6813/0757

	<b>Owner</b>	<b>Trademark</b>	<b>Serial No.</b>	<b>Filing Date</b>	<b>Reg. No.</b>	<b>Reg. Date</b>
1.	MDA Geospatial Services Inc.	EARTHVIEW	75/012,791	10/31/1995	2177128	7/28/1998

Reel/Frame No. 6813/0713

	<b>Owner</b>	<b>Trademark</b>	<b>Serial No.</b>	<b>Filing Date</b>	<b>Reg. No.</b>	<b>Reg. Date</b>
1.	MacDonald, Dettwiler and Associates Inc. (f/k/a Neptec Design Group Ltd.)	TRIDAR	87/863,499	4/4/2018	5,947,237	12/31/2019

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<sup>8</sup> Neptec Design Group Ltd. amalgamated into MacDonald, Dettwiler and Associates Inc. on January 7, 2020. The amalgamation documents were filed with the USPTO March 26, 2020, Reel/Frame 6900/0463.