



235 Queen Street
Ottawa, Ontario
K1A 0H5

Supplement, October 5, 2016
Exhibit E - 2016 Canadian License Renewal
IBFS File No. SES-REG-20160218-00154
FCC Form 312
Kongsberg Satellite Services AS

JUN 08 2016

RADIO LICENCE

Our File: 3150-1 (684471 CP)

Ms. Angela Kulig
Spectrum and Regulatory Specialist
Engineering
exactEarth Ltd
50 Struck Court
Cambridge, Ontario N1R 8L2

Angela
Dear Ms. Kulig:

This letter constitutes a radio licence for the operation of the ADS satellite system for the purposes of collecting AIS data and TT&C in the frequency bands as outlined in the table below:

Orbital Position	Frequency Bands	
	space-to-Earth	Earth-to-space
NGSO	400.15-401 MHz 2200-2273.75 MHz 2276.45-2290 MHz 5150-5250 MHz	2025-2110 MHz 399.9-400.05 MHz

This licence is valid from April 1, 2016 to March 31, 2017, and is subject to the conditions outlined in the Department's letter of August 12, 2011.

In keeping with our commitment to open, fair and transparent licensing processes, this licence may be posted on the Department's spectrum and telecommunications website. If you have any questions regarding this letter, please contact me at (343) 291-1969 or Shari Scott at (613) 986-0017.

Yours sincerely,

Suzanne Lambert,
Director, Space Services Operations



235 Queen Street
Ottawa, Ontario
K1A 0H5

SPECTRUM LICENCE

APR 22 2016

Our file: 3150-1 (673709 AT)

Ms. Angela Kulig
Spectrum and Regulatory Specialist
Engineering
exactEarth Ltd
50 Struck Court
Cambridge, Ontario N1R 8L2

Dear Ms. Kulig:

This letter constitutes a spectrum licence granting exactEarth Ltd. authority to use the following radio frequencies to operate its ADS-1B, ADS-02, ADS-03 and ADS-04 low earth orbit satellites for the provision of its mobile satellite services in Canada, in particular for the space-based reception of maritime Automatic Identification System (AIS) signals.

Frequency Bands

161.975 MHz (Earth-to-space)	- Receive AIS signals
162.025 MHz (Earth-to-space)	- Receive AIS signals
161.950 MHz (Earth-to-space)	- Receive AIS signals
162.000 MHz (Earth-to-space)	- Receive AIS signals
156.775 MHz (Earth-to-space)	- Receive AIS signals
156.825 MHz (Earth-to-space)	- Receive AIS signals

This is an annual licence subject to the conditions set out in the attachment. This licence expires on March 31st, 2017.

Sincerely,

Suzanne Lambert
Director, Space Services Operations

Attachment

Attachment:

**exactEarth Ltd (exactEarth)
Conditions of Licence to Operate its ADS-1B, ADS-02, ADS-03 and ADS-04 Low Earth
Orbit Satellites in the Provision of its Mobile Satellite Services**

1. Eligibility

exactEarth must conform with the eligibility criteria as set out in section 9 (1) of the *Radiocommunication Regulations*.

2. Licence Transferability

This licence may not be transferred or assigned without the prior authorization of the Minister of Innovation, Science and Economic Development Canada (ISED). For clarification and without limiting the generality of the foregoing, “transfer” includes any leasing, sub-leasing or other disposition of the rights and obligations of the licence.

3. Laws, Regulations and Other Obligations

a) exactEarth is subject to and must comply with the ITU *Radio Regulations*, the Canadian *Radiocommunication Act*, *Radiocommunication Regulations*, and Canada's spectrum policies pertaining to its authorized radio frequency bands and satellite orbit.

b) Should the operation of the satellite network cause unacceptable or harmful interference to the reception of any station entitled to protection, exactEarth must immediately take measures to eliminate the interference, including, if necessary, ceasing operations.

4. International Coordination

a) It is the responsibility of exactEarth to participate, on an ongoing basis, in coordination activities with a view to protecting its network and fulfilling ITU obligations. To this end, exactEarth must undertake the following: participate, at its own expense, in the coordination of the satellite network with the satellite and terrestrial networks of other countries; provide the Department, in a manner acceptable to the ITU, with the satellite coordination, notification and administrative due diligence information required by the ITU; pay the applicable ITU cost recovery charges for satellite network filings; and ensure that the operation of the satellite complies with any arrangements and agreements undertaken by Canada with respect to the coordination of the satellite.

b) exactEarth must maintain a valid ITU filing associated with the satellite system or network at all times.

5. Domestic Coordination

- a) In order to avoid harmful interference, exactEarth will be required to coordinate its satellite system with other potentially affected Canadian satellite and terrestrial services, and the satellite system must be operated in a manner consistent with any arrangements made to facilitate domestic satellite coordination.
- b) In the event that coordination cannot be successfully completed between licensees, the Department may impose the implementation of mitigation techniques, taking into account all relevant factors including, without limitation, the order of domestic authorization. exactEarth must ensure that the operation of its satellite system complies with all measures imposed by the Department.

6. Information Requirements

At the Department's request, exactEarth must provide all necessary information to a licence applicant to facilitate the coexistence analysis for the Department's consideration, as part of that applicant's licence application. Such information must be provided within a reasonable time frame.

7. Annual Reports

- a) exactEarth must immediately inform the Department of any changes to its contact information or to information concerning satellite development, operations and/or control, including a change in control facilities. exactEarth is also required to report any suspension of service to the Department.
- b) exactEarth must submit an annual report for each year of operation, indicating continued compliance with these conditions. This report is due by March 31 of each year.
- c) exactEarth shall provide any information requested by the Department, within the timeframe established in the request.
- d) All reports are to be submitted to the Manager, Satellite Authorization Policy at ic.satelliteauthorization-autorisationsatellite.ic@canada.ca.

8. Licence Fees

exactEarth must pay applicable annual authorization fees on or before March 31st of each year.