

Space Business Review

A monthly round-up of space industry developments for the information of our clients and friends.

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CONTACT

Dara A. Panahy
202-835-7521
dpanahy@milbank.com

Bijan Ganji
202-835-7543
bganji@milbank.com

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AIREON SECURES \$200M CREDIT FACILITY

On January 16, **Aireon LLC** (Aireon) announced that in December 2018 it entered into a \$200m credit facility agreement with a group of independent investor funds, led by **Deutsche Bank** as sole structuring bank and underwriter. Aireon intends to use the proceeds from the credit facility to fund payments to **Iridium Communications Inc.** (Iridium) relating to the integration, launch and hosting of **AireonSM** payloads on the **Iridium NEXT** constellation, as well as capital and operational expenditures and other costs incurred by the company as it commences and expands provision of services. To date, Aireon has paid \$43m of a total of \$200m in hosting fees owed to Iridium, including \$35m enabled by the credit facility. Aireon expects its system to be operational beginning in the first quarter of 2019; once live, the Aireon system will enable global, real-time aircraft surveillance, serving Air Navigation Service Providers worldwide.

JANUARY INVESTMENT ROUND-UP

January 16 – Isotropic Systems Ltd. (Isotropic), a London-based start-up focused on the development of satellite user terminals for broadband connectivity, announced that it closed a \$14m Series A financing round led by **Boeing HorizonX Ventures**, the venture capital arm of **Boeing**, with participation from **WML Partners LLC**, **Space Angels Holdings Inc.** and **Space Capital Investments Ltd.** Isotropic's communication terminal solution, which uses an innovative optimal beamforming technology for radio wave direction control, represents the world's first multi-service, high-bandwidth, low-power, fully-integrated high-throughput satellite user terminal. The company plans to use the Series A funding to accelerate commercialization of its technology for use by satellite operators and to explore opportunities for other space-based and wireless connectivity applications.

January 24 – Swarm Technologies Inc. (Swarm), a start-up working to develop a low-cost global Internet-of-Things communications network, announced that it closed a \$25m Series A financing round led by **Craft Ventures LLC** and **Sky Dayton**, with participation from **Social Capital LP**, **4DX Ventures Management LLC** and **NJF Capital Ltd.** Swarm plans to use the Series A funding to expand operations, accelerate software and hardware integrations for customer services and deploy a 150-satellite constellation over the course of the next 18 months.

SPACEX COMPLETES IRIDIUM CAMPAIGN

On January 11, **Space Exploration Technologies Corp.** (SpaceX) successfully launched, on a flight-proven **Falcon 9** launch vehicle, the final batch of 10 satellites of a total of 75 satellites that it was selected by **Iridium Communications Inc.** (Iridium) to launch for the **Iridium NEXT** constellation. Following stage separation, SpaceX successfully recovered the Falcon 9's first stage on the **Just Read the Instructions** drone ship. The mission marks the eighth and final launch of Iridium NEXT satellites by SpaceX, concluding an almost two-year launch campaign. Iridium NEXT is a next generation LEO system that will provide mobile voice and data communications services globally, including the **AireonSM** aircraft surveillance system and the **Iridium CertusTM** L-band broadband connectivity service. **Thales Alenia Space** and **Orbital ATK Inc.** (now **Northrop Grumman Innovation Systems**, a business sector of **Northrop Grumman Corporation**) manufactured the Iridium NEXT satellites, as prime contractor and subcontractor for production, respectively.

TELESAT SELECTS BLUE ORIGIN

On January 31, **Telesat Canada** (Telesat) and **Blue Origin, LLC** (Blue Origin) announced that they entered into a multi-launch agreement whereby Blue Origin will perform launch services for satellites of Telesat's planned low-Earth orbit global broadband constellation using the heavy-lift **New Glenn** launch vehicle. New Glenn's inaugural flight is scheduled for 2021.

MAXAR WORLDVIEW-4 MALFUNCTION

On January 7, **Maxar Technologies Inc.** (Maxar) announced that its **WorldView-4** satellite experienced a failure in its control moment gyros, resulting in the loss of an axis of stability and preventing further collection of imagery. Maxar is working with suppliers to resolve the failure but stated that restoration of satellite functionality is unlikely. Manufactured by **Lockheed Martin Corporation** and launched in November 2016, **WorldView-4** generated roughly \$85m in revenues in FY 2018. Maxar plans to seek full recovery for loss of the satellite under its insurance policies.

VSAT & SATELLITE BROADBAND OUTLOOK

Northern Sky Research's latest **VSAT and Broadband Satellite Markets** report forecasts \$159b in revenues for the Very Small Aperture Terminal (VSAT) and satellite broadband markets over the next decade.