

EOS Space Capability Achieves Major Milestone

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Electro Optic Systems, (ASX: EOS) has achieved significant milestones in its space business in the key activity area of space situation awareness [SSA].

On 1 February 2017 EOS announced that its Learmonth WA space tracking site had achieved initial operations. The site is intended to be one of a group of sites forming a network which will address long-term space information requirements for domestic and international space operators. Since initial operations began the site has undertaken a comprehensive program of testing to establish key metrics such as total cost of ownership, data output quantities, data quality, operational limitations, reliability, maintainability and efficacy in key missions foreshadowed by customers.

This program is now complete.

EOS has previously disclosed [Annual Report 2017] that the Learmonth location was a worst-case test site, with all other proposed sites offering substantial advantages over this initial test site. The use of this site as the initial network site is a key element in risk mitigation for the full network deployment, as all other locations will be better.



EOS Space Operations Site at Learmonth WA

Key results for the EOS space sensors now deployed are:

- **Capacity.** The new site has lifted current EOS network capacity to 10,000 tracks/week. This is around 10% of the planned network capacity, as expected with 10% of sensor assets deployed. This achievement moves EOS into the top 6 producers of space data globally. All other producers in the top 6 are large nations.
- **Range.** EOS sensors have been operationally proven at all ranges from 300 km low earth orbit [LEO] to 75,000 km, well beyond geostationary earth orbit [GEO].

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- **Concept of Operations.** The EOS sensor network can operate passively, without emitting electromagnetic radiation in any part of the spectrum. It also includes a unique capability to use laser ranging for very rapid orbit determination. This laser capability is required, for example, when an event in space generates many new space objects and orbits must be determined very quickly. EOS has used the sensor network to develop cost-effective operational concepts for the safe use of its lasers.
- **Reliability.** EOS operational reliability across all its space sensors now exceeds 92% with most data loss due to poor weather. This is as forecast, and meets many operational needs. The company can now be confident that from the deployment of its next site, the data reliability will exceed 97% as required by the most stringent space programs.
- **Accuracy.** For over 30 years EOS has provided a significant proportion of the calibration systems and calibration data which allow space agencies to assure the quality and accuracy of their space tracking data. EOS has built this technology into its sensor network so that all EOS space data is validated in real time against global accuracy standards, before data release.
- **Cost.** EOS' cost per space track for large data sets is trending below 10% of the current industry average for fully-calibrated data meeting military standards of reliability and quality. This reduced cost meets the objective cost limits set by users of high quality space data, based on the vast expansion of space threats in an environment where funding is fixed under legacy programs.

With these developments EOS' operational sensors are meeting cost and performance benchmarks established for the fully-deployed network.

EOS Group CEO, Ben Greene, said: "EOS has now proven that its sensors meet current and future requirements for SSA data. We can now deliver 10,000 space tracks/week on demand and we are now well-placed to expand our capability to provide 100,000 calibrated space tracks weekly, contributing to a global SSA data pool which might later incorporate data from uncalibrated sensors. The EOS contribution of space data will be the only calibrated data set of this scale covering all satellite orbits from LEO to GEO with the same calibrated sensors."

EOS Space Systems CEO, Craig Smith, commented: "In addition to our test program moving to operational status, we have also undertaken customer-funded testing to quantify the value proposition for EOS space data. Although those tests are nearing completion, the full analysis and reporting of results from some customers will take several months. We have initiated a planning process for the next phase of network expansion to be completed in parallel with those customer reports."

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ABOUT ELECTRO OPTIC SYSTEMS (ASX:EOS; OTC:EOPSY)

EOS operates in two sectors: Defence Systems and Space Systems.

- EOS Defence Systems specialises in technology for weapon systems optimisation and integration, as well as ISR (Intelligence, Surveillance and Reconnaissance) for land warfare. Its key products are next-generation vehicle turrets and remote weapons systems.
- EOS Space Systems specialises in applying EOS-developed optical sensors to detect, track, classify and characterise objects in space. This information has both military and commercial applications, including managing space assets to avoid collisions with space debris, missile defence and space control.