

EARTH OBSERVATION SYMPOSIUM (B1)
International Cooperation in Earth Observation Missions (1)

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STATUS AND FUTURE PROSPECTS FOR EARTH OBSERVATION

Abstract

By 2018 it is estimated that 260 Earth observation and meteorology satellites will be launched from over 30 countries. This compares to a total of 128 successful launches over the previous 10 years. With satellite systems becoming increasingly more capable and current government emphasis on defence, security and climate change strong growth is expected in the sector.

The next generation of high-resolution US commercial satellites WorldView-I/II (DigitalGlobe) and GeoEye-1/2 (GeoEye), private initiatives in Europe including the RapidEye constellation and Infoterra's TerraSAR/Tandem-X sees the commercial market for EO satellite operation significantly expanding. This is being met by a growing demand for commercial data, with the market surpassing \$1 billion for the first time in 2009.

Despite the growth of the commercial sector, government operators still dominate the sector with the historical largest programs (NASA, ESA, China, CNES...) as well as an increasing number of new countries looking to develop EO satellites capacity. As a result, in 2009, Earth observation investment peaked with \$7.8 billion invested in civil and unclassified defense programs.

The increasing satellites reflect government agencies concern by the cost and time of their projects, encouraging "cheaper, smaller and faster" missions, often using generic platforms.

Secondly, this demonstrates the growing number of countries that are investing in space research and technology for operational objectives to meet local/regional needs such as disaster management, natural resource monitoring and cartography.

These emergent players (such as Algeria, Thailand, Nigeria etc.) are developing small EO platforms as a low-cost way of rapidly acquiring space technology. SSTL for instance has proved successful in selling a 50-kg satellite to space agencies and larger space-primes are also supplying know-how through technology-transfer.

Commercialization of data derived from government programs is also seen as a growing trend with national bodies looking for return on the satellite investment: COSMO-Skymed through Telespazio and Korean, Taiwanese as well as CNES satellites through SPOT Image. With government the first customer for defense and security application the data market is witnessing strong growth which should continue with more capable (increasing ground resolutions and re-visit times) systems.

With increasing competition the commercial actors will look to diversify their business interests in order to grow and expand their market share. This includes both expanding their client base, mechanisms for data delivery and services offering including more value-added products.