

29th IAA SYMPOSIUM ON SPACE POLICY, REGULATIONS AND ECONOMICS (E3)
Game changers in the space economy (3)

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NEWSPACE COMMERCIAL EARTH OBSERVATION SMALL SATELLITES – A GAME CHANGER
OR A BUBBLE?

Abstract

The potential of using small satellites for commercial Earth Observation (EO) has successfully appraised the investment community into enabling NewSpace enterprises to launch several constellations like never before. Several of these constellations aim mostly at provisioning data at revolutionary costs and at never before achieved revisits. On one hand these NewSpace enterprises are looking to disrupt the traditional high-resolution EO data markets and on the other they are targeting either creating/supporting big data analytics platforms via these constellations to either open up new markets for EO products.

The NewSpace commercial EO small satellites has already witnessed a large company such as Google acquiring SkyBox Imaging and some level of market consolidation with Planet Labs acquiring BlackBridge and Urthecast acquiring Deimos. Even with such changes in the marketplace, there are over hundreds of satellites planned by several new players. Given the sheer number of NewSpace companies and the variety of constellations that are out there, one needs to wonder if this is going to be a game changer or is it a massive bubble.

In the next 5-10 years, will there be an oversupply of EO data or is there a shortfall in supply of market relevant data? Will big data analytics platforms driven by high-revisit data availability be a game changer in the EO marketplace? Are the NewSpace commercial EO constellations targeting only price and revisit or is there more to this story? Do these constellations cater to most of the needs of EO data users? The present work makes an attempt to provide a critical analysis of the NewSpace EO small satellite platforms and the constellations to perform an assessment of the commercial exploitation of such platforms in the EO marketplace.