

## Controlling the Space Industry Narrative

The narrative of the satellite industry over the last week had all the components of a blockbuster novel or film: with new adventures beginning, dramatic challenges to overcome, redemption and an emotional end.

Like lots of good stories, we start with those characters setting off on new adventures. Firstly, China launched its most powerful imaging satellite, Gaofen-2. It carries a High Resolution Optical Imager capable of providing images with a [spatial resolution](#) of 80cm in panchromatic mode and 3.2m in multispectral mode, and has a swath width of 48km. It is the second in series of seven Earth observation (EO) satellites, following Gaofen-1 launched in April 2013, which will provide environmental monitoring, disaster management support, urban planning and geographical mapping. The Long March 4B rocket launched Gaofen-2, redeeming itself following a failure last December causing the loss of the CBERS-3 EO satellite. The second significant launch was from the International Space Station on the 19th August, when the first pair from the twenty-eight constellation satellites of Flock 1B were launched; with further pairs sent on the 20th, 21st and 23rd. Flock 1B is part of three earth imaging nanosat constellations from Plant Labs, providing images with a spatial resolution of between 3 – 5m.

ESA's Galileo satellites, Doresa and Milena, provided the drama by failing to reach their planned altitude of 29.9km, reaching an orbit of 26.9km; in addition, their inclination angle is 49.8 degrees to the equator, rather than 55 degrees. They were the fifth and sixth satellites in Europe's version of the American GPS satellite navigation system, launched on the Soyuz rocket. Getting the satellites to the correct position is likely to require more fuel than they carry. Like Long March 4B, Soyuz will get its chance of redemption in December with the launch of the next two Galileo satellites.

The Tropical Rainfall Measuring Mission (TRMM), a joint mission between NASA and Japan Aerospace, provides the emotional end to our story with the announcement last week that it had run out of fuel. Launched in 1997, TRMM had a three year life expectancy, but will now provide an incredible nineteen years worth of data. It will continue collection until early 2016, when its instruments will be turned off in preparation for re-entry.

It's interesting to see how this news has been reported in the mainstream media, little mention of China's progress, or the second Flock constellation or the amazing longevity of TRMM; instead, the focus was the failure of the Galileo satellites. There is rarely widespread coverage of the successful launches of satellites, but there is a push within the UK for the community to celebrate our successes more so the full range of space activities can be seen.

Earth observation is all about data and images, and whilst these may interest people, it's only through the power of storytelling that we can describe the positives of the industry motivating and inspiring people. Remember to create stories for your industry, and your company, or someone

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else will dictate the narrative.

