



Space is becoming busier with a growing number of governments and commercial companies developing innovative ways to access space. There are nearly 1,400 operating satellites but we are about to see a massive increase in both satellite numbers and other space users. For example, SpaceX is building a 4,000 satellite 'mega constellation' to provide broadband services and OneWeb is planning a constellation of 650 satellites. At lower altitudes, we are also seeing increasing activity, particularly by companies seeking to deliver Internet services such as Project Loon's balloons and Facebook's solar-powered plane. Another exciting development is the advent of space tourism: Virgin Galactic's new spaceship is undergoing tests; Blue Origin is planning to launch its first human passenger paid flight in 2018; and SpaceX is planning to take two space tourists on a trip round the moon in 2018.

The space sector is growing between 5% and 8% annually with over 80 launches a year. The increased use of space-based technologies and the falling cost of launches means that there will be more and more high altitude and space vehicles travelling through airspace. We therefore need to consider what this growth means for the air traffic management industry. At the moment, temporary flight restrictions are imposed to segregate aircraft from rockets during the entire launch window, which can often last hours. But as the amount of launches to and reentry from low earth orbit (LEO) increases, this is not sustainable. Some are asking why civil aircraft traffic should be increasingly disrupted and give way to space vehicles, especially as more and more space traffic is commercial.

The time has come for clear rules, developed and agreed by all stakeholders, to accommodate the requirements of both aircraft in traditional airspace as well as space-bound vehicles travelling through that airspace. This will involve close cooperation between organisations responsible for space traffic management (STM), airspace/space users and ATM; and between the global regulators including ICAO and the United Nations Office for Outer Space Affairs.

As an industry, we need to consider how to integrate commercial space operations into the ATM system. Rather than blanket clearance of airspace, our aim should be to minimise the impact of space vehicles on air traffic, while maintaining a high level of safety. This will require the modification of ATM software to process and display space vehicle trajectories, associated hazard areas and no-fly zones. We need the ability to detect and track commercial spacecraft entering airspace. We also need to train ATCOs and ANSPs, including an understanding of the characteristics of space vehicles.

It is important we have a full debate in our industry about these issues. The CANSO Global ATM Summit in Copenhagen in June will be doing just that with two sessions on this issue. We have attracted an impressive lineup of speakers from the commercial companies at the cutting edge of accessing space, organisations managing space travel, and ANSPs. Watch this space!

Jeff Poole  
CANSO Director General