

# Space-telecom tech raises legal issues

## Convergence poses regulatory concerns

**KOMSAN TORTERMVASANA**

Thailand should urgently draw up a policy framework to govern the fast-blurring boundary between telecom and space activities as converging technologies could pose regulatory challenges for national interest in the future.

“Convergence poses complex legal challenges. If telecom and space activities become indistinguishable without corresponding amendments to primary and secondary legislation, Thailand may struggle to effectively regulate the communications system landscape,” said AM Thanapant Raicharoen, commissioner of the National Broadcasting and Telecommunications Commission (NBTC), at an aviation and space legal policy seminar co-hosted by the NBTC, Thammasat University’s Faculty of Law, and aviation and space agencies.

He said global tech giants are likely to gravitate towards jurisdictions or domains perceived as borderless or weakly regulated.

The impact could be more severe than the entry of over-the-top platforms, where telecom broadcasting technology convergence outpaces regulatory development, said AM Thanapant.

Aviation and space legal policy present profound challenges, given the complexity of both law and technology — particularly in outer space, which is borderless, while technology is evolving quickly, he said.

An earlier wave of broadband internet expansion enabled consumers to stream content on mobile devices and



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**AM THANAPANT RAICHAROEN**

Commissioner, National Broadcasting and Telecommunications Commission

triggered convergence among broadcasting, TV and telecom.

If regulatory and legal adjustments do not keep pace with the converging technologies, it limits regulators’ ability to oversee cross-platform content effectively, with implications for society and national security, said AM Thanapant.

“Broadband technology continues to advance, ushering in a new wave of convergence, not only on the ground but also between telecom and space activities,” he said.

Low Earth orbit satellite broadband providers such as Starlink, OneWeb and Project Kuiper have entered global markets, operating at the intersection of telecom and space services.

AM Thanapant said satellite sector development in the future may extend to cover space-based data centres,

potentially benefiting from naturally cold temperatures and solar energy in orbit.

“Such developments raise new legal questions, including whether investors could establish data centres in space without seeking permission from any single country, and whether regulators such as the NBTC could lawfully introduce ‘landing rights’ for access to space-based data infrastructure,” he said.

In 2019, Thailand amended its frequency allocation law to allow the NBTC to issue regulations on landing rights for foreign satellite signals. Similar legal foundations may be needed for future oversight mechanisms, AM Thanapant said.

The convergence trend also extends to the Internet of Things and connected vehicles.

For example, Tesla filed patents for vehicle roof-mounted dish terminals capable of connecting directly to Starlink satellites.

Chinese automaker BYD partnered with domestic satellite operators and is expected to expand beyond BeiDou navigation to 5G non-terrestrial networks, alongside cooperation with Huawei on fully autonomous driving systems.

These innovations raise questions about the applicability of Thailand’s 1955 Radio Communications Act, which remains the legal basis for regulating frequency-using equipment, AM Thanapant said.

Whether the law can effectively govern next-generation satellite-connected vehicle hardware needs to be studied, he said, noting coordination with other agencies will be essential.

“We must jointly formulate a legal policy for establishing internationally aligned standards and enabling sustainable innovation in Thailand,” AM Thanapant said.