



Competition and Licensing

Has a Level Playing Field Emerged?

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A view on India's satellite competition and licensing framework, from a wholesale IoT operator

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○ A level playing field: easy to say, hard to design

What a level playing field should deliver

- ✓ Equal opportunity to enter and serve the market
- ✓ Technology-neutral regulatory outcomes
- ✓ Proportionate financial and operational conditions
- ✓ Transparent access to spectrum and authorisation
- ✓ Equivalent security and interference protections

Yet three questions make it hard

- 1 **Pricing** Parity with terrestrial, or proportionate to a shared, complementary resource?
- 2 **Market definition** “Satellite” is treated as one market, but broadband and narrowband IoT are worlds apart
- 3 **Layers** Where does the network layer end and the service layer begin, and who carries which duty?

The stakes: these design choices decide who can enter the market, and, ultimately, who gets connected.

Question 1 · Pricing: parity or proportionality?

The parity argument

Mobile operators

- Terrestrial operators acquired exclusive spectrum through auctions at significant cost.
- Administrative assignment for satellite can therefore appear to create a cost asymmetry.
- The concern is strongest where satellite services directly substitute for terrestrial broadband.

vs

The proportionality argument

Regulator and space industry

- MSS spectrum is assigned within designated bands and coordinated internationally; it is not equivalent to exclusive terrestrial spectrum.
- Auction pricing is poorly suited where the bandwidth, use case and economics do not support exclusive national valuation.
- Renewal should align with constellation refresh cycles, allowing successor satellite generations and filings to operate under a stable licensing framework.

The dilemma: price too high and complementary, rural use never happens; too low and incumbents cry foul. One price for all of “satellite” is unlikely to be the answer.

○ Question 2 · “Satellite” is not one market

Service class	Principal use	Traffic profile	Relation to terrestrial
Satellite broadband	Consumer / enterprise internet	High-throughput, continuous.	May compete in served markets
VSAT / managed	Enterprise, govt, backhaul	Dedicated / managed capacity	Largely unrelated; complementary for enterprise and backhaul
Direct-to-device	Messaging, voice, mobile	Consumer-oriented	Largely complementary when delivered through partnerships
Narrowband IoT	Sensors, meters, tracking	Small, intermittent packets	Largely complementary when delivered through partnerships

The loud debate, over parity and spectrum, is really about broadband constellations. A framework calibrated to that fight can be technology-neutral on paper, yet technology-unequal in effect: the conditions written for broadband become entry barriers for narrowband IoT, the quiet casualty.

The point: complementarity is contested for broadband, but it is not in question for narrowband IoT. The two should not be licensed the same way.

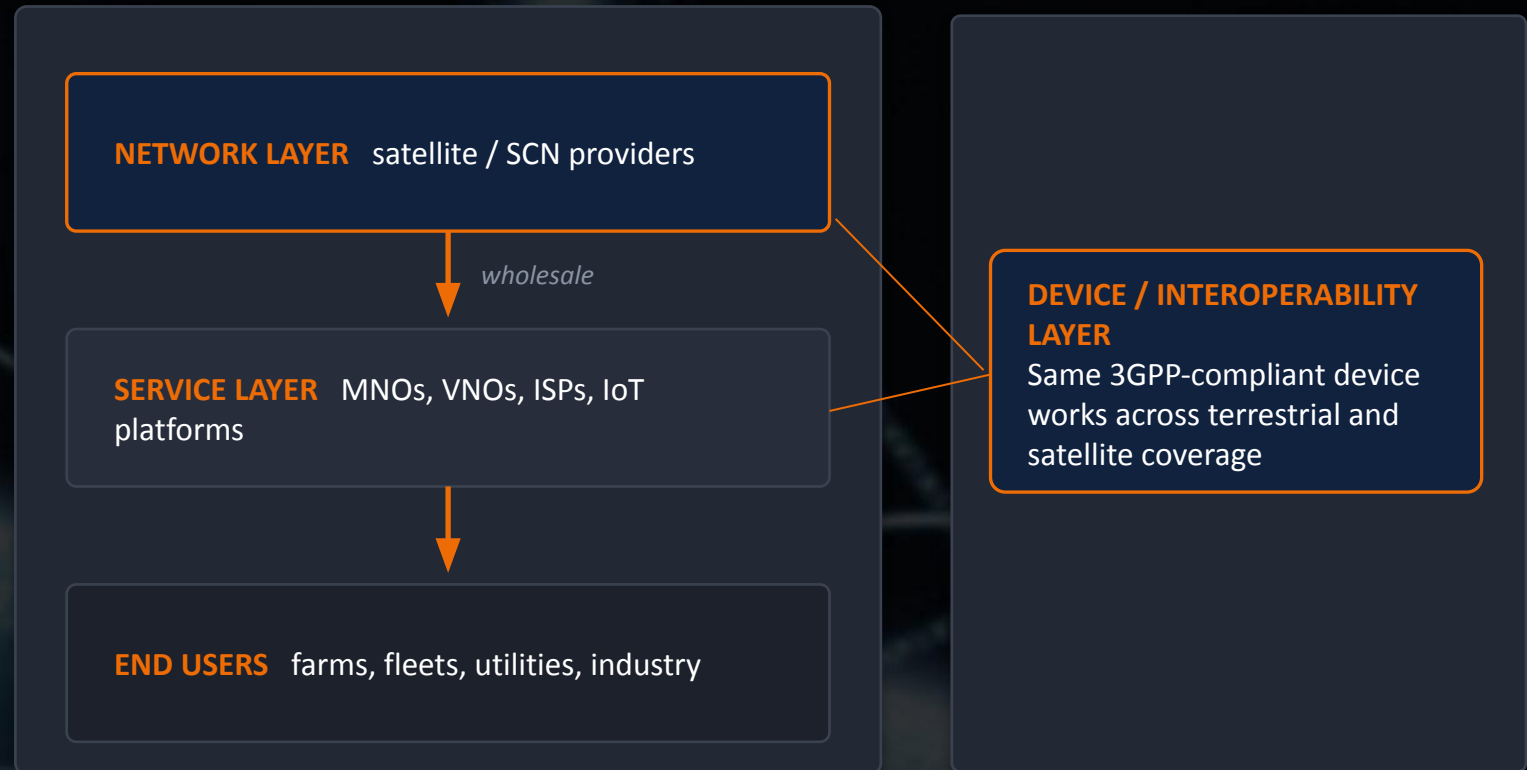
○ Question 3 · Where do the layers divide?

A structural question, not only a financial one

Should a satellite operator be a wholesale network layer that partners with telcos, or a standalone retail service?

DoT rejected a unified network-plus-service framework in January 2025; TRAI's April 2026 SCN consultation is the second attempt at a clean split.

Where the line sits decides which obligations, security, lawful interception, rollout, customer care, attach to which role.



Why it matters: the layer split decides who competes with whom. A clean network layer lets many service providers reach many users, rather than a few integrated players owning the whole stack.

○ Case study · how a complementary operator hits the wall

Take a wholesale narrowband IoT operator: no end-user relationship, rural-focused, extending mobile operators' reach into places towers do not go. On the merits it is the complementary case the framework says it wants. Yet the way in is built for someone else.



Wrong front door

The only clear route is a service authorisation designed for nationwide retail operators



Retail-scale conditions

Entry fees, net-worth and bank-guarantee thresholds sized for consumer telcos



Broadband-shaped charges

A per-MHz floor and per-subscriber charge that do not fit low-ARPU IoT

For scale: such an operator may need only **1–5 MHz** and earn on the order of **USD 1–2 per device / month**, shared with its MNO partner, yet face conditions written for consumer broadband.

The lesson: this is not special pleading for one firm. It is a design flaw that filters out an entire class of complementary operators.

○ Why it matters · affordable, widespread connectivity

Broad 4G exists, but reliable low-power IoT coverage thins out fast across rural and remote India, where the terrestrial last mile is hardest to justify. Low-cost satellite IoT is how those gaps close, if the framework lets the low-cost players in.



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The payoff: get competition and licensing right and low-cost connectivity reaches the last mile; get it wrong and the barriers fall hardest on the users who need it most.

A level playing field is equivalent outcomes calibrated to each model, not identical obligations

Price and license in proportion, keep the network and service layers clean, and the payoff is affordable, widespread connectivity.

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Because a connected world is a better world

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