

GSMA
Ministerial
Programme

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D2D and the Satellite Sector

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GSOA

Satellite Direct to Device Connectivity

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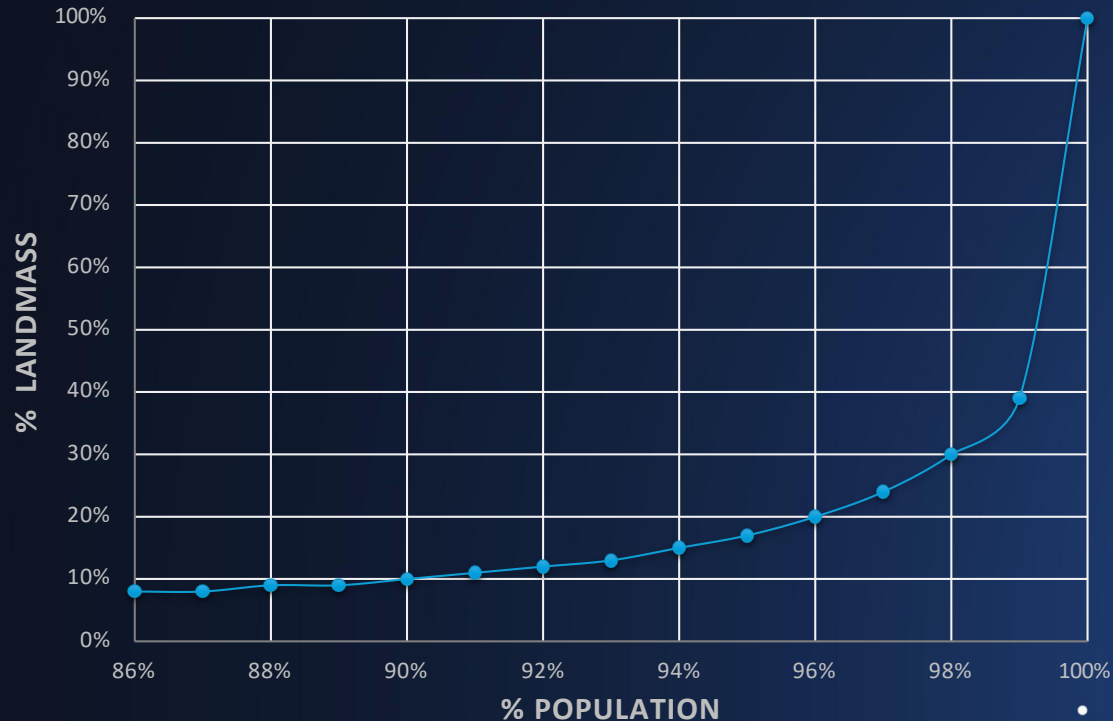


Global Association Representing the Entire Satellite Industry



GSOA provides a platform for collaboration between member companies involved in the satellite ecosystem globally and a unified voice for the sector

Economics of Digital Divide and Diminishing Returns



World population distribution as percentage of landmass (source UNdata)

• Terrestrial solutions currently cover 96% of the population using infrastructure deployed across 20% of the landmass.

• Extending this coverage to 99% would necessitate doubling the terrestrial infrastructure footprint to 39%.

• Achieving 100% requires a multiple increase in current investment.

Non-Terrestrial Networks (NTNs)



D2D in MSS bands

- Uses spectrum allocated to Mobile Satellite Service
- Leverages 3GPP Release 17 and later NTN specifications
- Requires no additional regulatory action if MSS authorized
- Support L- and S-Band, and Ka- Ku in future release
- Additional MSS spectrum allocations studies in WRC-27 Agenda Items 1.12 and 1.14

Challenges:

- Needs mobile chipset vendors to include those 3GPP bands



D2D in Terrestrial bands

- Uses terrestrial spectrum
- Can use off-the-shelf mobile handsets
- Requires partnerships with MNOs
- Complements existing mobile coverage
- Using IMT bands < 3GHz
- Coexistence being studied under WRC-27 Agenda Item 1.13


Challenges:

- Interference management between MNOs and satellite operators
- International regulatory hurdles (ITU RR 4.4)

THANK YOU!




Satellite Solutions for Universal Service: Bridging the Digital Divide



Extending connectivity to the remaining 4% unconnected populations is challenging. Fostering the use of space-based solutions is key to improving access, reliability, and broadband expansion in underserved areas.

Global Challenges | Satellite Answers

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The Future of Satellite Connectivity: Various Approaches to Direct-to-Device Services



Exploring the transformative impact of satellite direct-to-device connectivity, shaping the future of ubiquitous mobile communication.

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