

Using Priority MSS Bands for D2D:

Closing Caribbean coverage gaps

CTU SMTF

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VIASAT PROPRIETARY

D2D is a new tool for closing coverage gaps

In the Americas, 22% of rural and isolated populations have **no cellular coverage**.

A further 5% have **only 2G connectivity**.

Even in developed markets, users are out of coverage zones on a daily basis.

Offshore coverage is critical to ensuring safety at sea, including for small-scale fisherfolk and pleasure craft.

Integrating D2D to connectivity plans/policies can be an efficient way to close coverage gaps and improve services.



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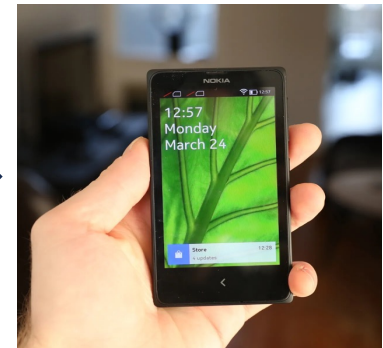
L- and S- band MSS is known and reliable

- L- and S- band are globally accepted bands for MSS in use for many years. The addition of 3GPP Non-Terrestrial Network (NT) Standards unlocks potential for integration to mass market consumer devices.
- Interference risk is understood and managed already, meaning no WRC-27 action is required for these bands.

NTN Satellite Band		Uplink	Downlink
3GPP NTN FR1 Bands (L and S Bands)	n256 (FDD)	1980MHz – 2010MHz	2170MHz – 2200MHz
	n255 (FDD)	1626.5MHz – 1660.5MHz	1525MHz – 1559MHz
Proposed 3GPP NTN FR2 Bands (Ka Band)	n510 (FDD)	27.5GHz-28.35GHz	17.7GHz-20.2GHz
	n511 (FDD)	28.35GHz-30.0GHz	17.7GHz-20.2GHz
	n512 (FDD)	27.5GHz-30.0GHz	17.7GHz-20.2GHz

L- and S- band Device Ecosystem is Evolving

- Use of 3GPP Standards allows integration to mass market consumer devices.
 - Standalone phones may remain viable for certain use cases (maritime, ruggedized handsets, etc.)
- Bridge devices are available today; integration to 5G mobiles under way.
 - Samsung, Qualcomm, Motorola, among others have chips on the market today for GSO L- and S- band D2D.



Further Resources:

MSSA: Mobile Satellite Services Association

<https://www.mss-association.org>

GSOA: “Satellite Direct-to-Device Connectivity”

<https://gsoasatellite.com/wp-content/uploads/GSOA-D2D-Paper.pdf>

PCC.II Paper on “REGULATORY, TECHNICAL, AND OPERATIONAL CONSIDERATIONS FOR DIRECT-TO-DEVICE MOBILE-SATELLITE SERVICES (MSS)” by Viasat, Omnispace, Terrestar and Ligado

Document: “CCPII-2024-43-6033r2_i”

PCC.I Paper on “OPPORTUNITIES TO UTILIZE MSS D2D IN NATIONAL CONNECTIVITY POLICY AGENDAS”, by Viasat

Document: “CCPI-2024-44-5545_i”