

GSMA
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Programme

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D2D and Digital Inclusion

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direct-to-device

D2D

Enabling Mass-Market
Satellite Connectivity



57%

Of the global population is connected to mobile broadband on their own device.

66% have some access to a device

37%

Of the world's population live within the footprint of a mobile broadband network but are not using it...

... THE USAGE GAP

2/3 of these do not own a phone

4%

Of the global population is not covered by mobile broadband...

... THE COVERAGE GAP

D2D

May be one part of the solution to the COVERAGE GAP. It will not impact the USAGE GAP.

D2D Spectrum

- D2D may use mobile satellite (MSS) or terrestrial mobile (IMT) spectrum.
- Today, there is very low availability of handsets for D2D using MSS spectrum
- D2D using terrestrial mobile spectrum will use standard handsets

Early Regulation on D2D Using Mobile Spectrum

United States



← 4500km →

- “SCS will be authorized pursuant to a secondary MSS allocation in the U.S. Table. These operations may not cause harmful interference to—and shall not claim protection from—any station operating in accordance with ITU provisions, whether in the United States or internationally.”
- “We authorize SCS only where one or more terrestrial licensees ... lease access to their spectrum rights to a participating satellite operator.”

Australia



← 4000km →

- “Our view is that operation of an IMT satellite direct-to-mobile service in Australia is only practical where there is an Australia-wide spectrum licence.”
- “When a space station transmits to a radiocommunications receiver in a mobile phone, reception by the phone continues to be authorised by the spectrum licence”
- “A mobile phone used in an IMT satellite direct-to-mobile service can be operated within the geographic area of the spectrum licence, provided it operates in accordance with the conditions of the licence.”

D2D using satellite spectrum

- Existing in-country spectrum regulations may allow D2D using satellite spectrum
- SNOs may provide service directly to consumers but partnerships with MNOs could be beneficial

D2D using mobile spectrum

- Provided on a 'secondary' basis – it must protect mobile networks from interference and not claim any protection itself
- Satellite operators must obtain agreement from MNOs to use their licensed spectrum