

24.10.2017

Norwegian Communications Authority
P.O. Box 93
N-4791 LILLESAND
NORWAY

Your reference: 1704171-13-

Coordination Agreement for the 700 MHz band (MFCN vs. MFCN)

Dear Mr. Mazurkiewicz

Please find attached the signed coordination Agreement for MFCN networks in the 700 MHz band.

With regards



Tom Wikström
Senior Specialist
Finnish Communications
Regulatory Authority

Appendices

700 MHz MFCN-MFCN coordination Agreement

**Agreement between the Finnish Communications Regulatory Authority
and the Norwegian Communications Authority concerning the use of the
700 MHz frequency band (694 - 791 MHz) for Terrestrial Services in the
border areas**

2017

A handwritten signature in blue ink, consisting of stylized initials and a surname, located in the bottom right corner of the page.

1. Principles and definitions

- 1.1. The 700 MHz-band, as referred to in this agreement, covers the frequencies from 694 MHz to 791 MHz, with the Frequency Division Duplex (FDD) arrangement, including SDL (4×5 MHz in the duplex gap) of ECC Decision(15)01 as well as BB-PPDR systems with frequency arrangements of ECC Decision (16)01. The use of other arrangements such as Time Division Duplex (TDD) is not covered in this agreement.
- 1.2. This agreement is based on the concept of field strength levels and in the case when LTE systems are used preferential PCIs as defined in Annex 1.
- 1.3. This Agreement covers the co-ordination of base stations. User equipment, or terminals, are allowed to be used on non-interfering basis, in accordance with ITU RR 4.4.

2. Use of frequencies without coordination by administrations

- 2.1. Finland may use the 700 MHz-band without co-ordination with Norway, if the predicted mean field strength produced by a base station does not exceed **59 dB(μ V/m)/5 MHz** at the borderline and a value of **41 dB(μ V/m)/5 MHz** at a distance of 6 km inside the neighboring country.
- 2.2. Norway may use the 700 MHz-band without co-ordination with Finland, if the predicted mean field strength produced by a base station does not exceed **59 dB(μ V/m)/5 MHz** at the borderline and a value of **41 dB(μ V/m)/5 MHz** at a distance of 6 km inside the neighboring country.
- 2.3. In case of other frequency block sizes, a value of $10 \times \log_{10}(\text{frequency block size}/5 \text{ MHz})$ should be added to the field strength values in 2.1 and 2.2.

3. Co-ordination procedure

- 3.1. If a frequency assignment has to be co-ordinated, the period of co-ordination shall not exceed 45 days from the date of the receipt of a written request and 20 days after a reminder. A request may be sent by e-mail to the administration's official e-mail address. If no reply is received after 65 days after the initial request the frequency assignment shall be considered as co-ordinated.



- 3.2. The exchange of the co-ordination information shall be in electronic form and sent by e-mail or by other electronic means as appropriate.
- 3.3. Preliminary co-ordination may take place between the operators concerned. The results of such preliminary co-ordination must be approved by the administrations.

4. General

- 4.1. A complaint in case of harmful interference shall be based on the median values of measurements of field strength, performed at 3 meter of receiving antenna height at least on two different occasions over a range of at least 100 m along the zones.
- 4.2. In the presence of interference, the report of harmful interference shall be presented in accordance with Appendix 10 of the Radio Regulations. The other Administration shall take all possible steps in order to eliminate the interference.
- 4.3. The field strength values in this Agreement are based on a receiving antenna height of 3 m, 10% of the time and 50% of the locations.
- 4.4. The latest version of Recommendation ITU-R P.1546 "Method for point-to-area predictions for terrestrial services in the frequency range 30-3000 MHz" shall be used for field strength calculations.

5. Revision and cancellation

- 5.1. This Agreement may be revised upon mutual agreement of the two administrations.
- 5.2. This Agreement may be cancelled with a notice of at least twelve months from any of the two parties.

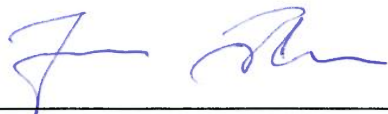
6. Entry into force

- 6.1. This Agreement shall enter into force from the date Norway changes from DTT to mobile service. Norway will inform Finland as soon as a final date of the change of service is set.
- 6.2. This Agreement has been drawn up in two identical copies, one for Finland and one for Norway.



Place *Helvink*
Date *24 October 2017*

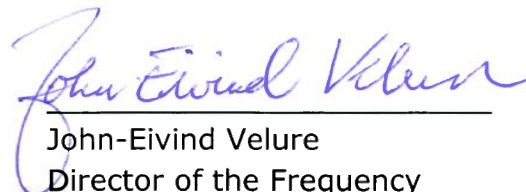
For the Finnish Communications
Regulatory Authority



Jarno Ilme
Director, Radio Frequencies

Place *Lillesand*
Date *19 October 2017*

For the Norwegian
Communications Authority



John-Eivind Velure
Director of the Frequency
Management Department

ANNEX 1

PREFERENTIAL PHYSICAL-LAYER CELL IDENTITIES (PCI) FOR LTE

PCI division, according to Table 2 below, may be used in border areas to improve coverage and service when channel centre frequencies are aligned.

The PCIs are divided between the administrations according to the following table:

PCI	Set A 0 to 83	Set B 84 to 167	Set C 168 to 251	Set D 252 to 335	Set E 336 to 419	Set F 420 to 503
Country	Finland	Norway	Finland	Norway	Norway	Finland

Table 2. Preferential Physical-Layer Cell Identities (PCI) for LTE

