

## Annex II: Designation and description of frequency blocks

### 1 800 MHz

| Frequency band   | Name of the frequency block | Bandwidth | Channel number | Frequency from ... to ... (uplink / downlink) | Restrictions / effects on utilisation |  |
|------------------|-----------------------------|-----------|----------------|---|---------------------------------------|--|
| 800 MHz (paired) | <b>A1</b>                   | 2 x 5 MHz | -              | 832.0 - 837.0 MHz /<br>791.0 - 796.0 MHz      | Cf. Section 2.4.1 and 2.5.1           |  |
|                  | <b>A2</b>                   | 2 x 5 MHz | -              | 837.0 - 842.0 MHz /<br>796.0 - 801.0 MHz      | dito                                  |  |
|                  | <b>A3</b>                   | 2 x 5 MHz | -              | 842.0 - 847.0 MHz /<br>801.0 - 806.0 MHz      | dito                                  |  |
|                  | <b>A4</b>                   | 2 x 5 MHz | -              | 847.0 - 852.0 MHz /<br>806.0 - 811.0 MHz      | dito                                  |  |
|                  | <b>A5</b>                   | 2 x 5 MHz | -              | 852.0 - 857.0 MHz /<br>811.0 - 816.0 MHz      | dito                                  |  |
|                  | <b>A6</b>                   | 2 x 5 MHz | -              | 857.0 - 862.0 MHz /<br>816.0 - 821.0 MHz      | dito                                  |  |

**Note:** Depending on the definitive assignment situation, the cut-off frequencies and bandwidths of the allocation blocks may vary slightly.

## 2 900 MHz

| Frequency band   | Name of frequency block | Bandwidth   | Channel number  | Frequency from ... to ... (uplink / downlink) | Restrictions / effects on utilisation  | Comments   | Number of preferential frequencies for Switzerland           |
|------------------|-------------------------|-------------|-----------------|---|--|--|--|
| 900 MHz (paired) | <b>B1</b>               | 2 x 5 MHz   | 975 - 999       | 880.1 - 885.1 MHz / 925.1 - 930.1 MHz         | Cf. Section 2.3.2 and 2.5.2  | Protection of GSM-R. The highest GSM channel is the guard channel for GSM. | F-12, F/D-8, D-13, D/A-8, A-13, A/L-8, <u>Ita-0</u>          |
|                  | <b>B2</b>               | 2 x 5 MHz   | 1000 - 1024 (0) | 885.1 - 890.1 MHz / 930.1 - 935.1 MHz         | Cf. Section 2.5.2  | The highest GSM channel is the guard channel for GSM.                      | F-13, F/D-8, D-10, D/A-8, A-12, A/L-8, <u>Ita-0</u>          |
|                  | <b>B3</b>               | 2 x 5 MHz   | 1 - 25          | 890.1 - 895.1 MHz / 935.1 - 940.1 MHz         | Cf. Section 2.5.2  | The highest GSM channel is the guard channel for GSM.                      | F-10, F/D-10, D-24, D/A-12, A-12, A/L-12, <u>Ita-18</u>      |
|                  | <b>B4</b>               | 2 x 5 MHz   | 26 - 50         | 895.1 - 900.1 MHz / 940.1 - 945.1 MHz         | Cf. Section 2.5.2  | The highest GSM channel is the guard channel for GSM.                      | F-8, <u>F/D-0, D-0</u> , D/A-12, A-24, A/L-12, <u>Ita-2</u>  |
|                  | <b>B5</b>               | 2 x 5 MHz   | 51 - 75         | 900.1 - 905.1 MHz / 945.1 - 950.1 MHz         | Cf. Section 2.5.2  | The highest GSM channel is the guard channel for GSM.                      | F-24, F/D-9, <u>D-0, D/A-0, A-0</u> , A/L-0, <u>Ita-12</u>   |
|                  | <b>B6</b>               | 2 x 5 MHz   | 76 - 100        | 905.1 - 910.1 MHz / 950.1 - 955.1 MHz         | Cf. Section 2.5.2  | The highest GSM channel is the guard channel for GSM.                      | F-18, F/D-18, D-12, <u>D/A-0, A-0</u> , A/L-0, <u>Ita-21</u> |
|                  | <b>B7</b>               | 2 x 4.8 MHz | 101 - 124       | 910.1 - 914.9 MHz / 955.1 - 959.9 MHz         | UMTS signal may slightly overlap assigned bandwidth, Cf. Section 2.3.2 and 2.5.2 | Protection of DME  | <u>F-0, F/D-2</u> , D-24, D/A-16, A-24, A/L-16, <u>Ita-6</u> |

### Notes:

Depending on the definitive assignment situation, the cut-off frequencies and bandwidths of the allocation blocks may vary slightly.

GSM guard channels between adjacent frequency blocks are dispensed with.

Each of the existing licensees Swisscom (Schweiz) AG, Sunrise Communications AG and Orange Network SA will, if it acquires frequencies within the framework of this award procedure, be granted a transition period concerning the previously used frequencies in the 900 MHz band beyond the date of expiry of the existing licence of 31.12.2013. This lasts a maximum of one year for Switzerland excluding the regions of Basel and Geneva and a maximum of two years for the regions of Basel and Geneva. A new licensee may make full use of the frequency blocks in the 900 MHz band awarded within the framework of this award only from 1.1.2015 and from 1.1.2016 in the regions of Basel and Geneva.

### 3 1800 MHz

| Frequency band            | Name of frequency block | Bandwidth | Channel number | Frequency from ... to ... (uplink / downlink) | Restrictions / effects on utilisation | Comments   | Number of preferential frequencies for Switzerland                                 |
|---------------------------|-------------------------|-----------|----------------|---|---------------------------------------|--|--|
| 1800 MHz (paired) block 1 | <b>C/D1</b>             | 2 x 5 MHz | 512 - 536      | 1710.1 - 1715.1 MHz / 1805.1 - 1810.1 MHz     | Cf. Section 2.5.2                     | The highest GSM channel is the guard channel for GSM | F-0, F/D-0, D-13, <u>D/A-0</u> , <u>A-0</u> , <u>A/L-0</u> , Ita-13                |
|                           | <b>C/D2</b>             | 2 x 5 MHz | 537 - 561      | 1715.1 - 1720.1 MHz / 1810.1 - 1815.1 MHz     | Cf. Section 2.5.2                     | The highest GSM channel is the guard channel for GSM | F-11, F/D-4, D-5, D/A-4, A-11, A/L-4, Ita-4  |
|                           | <b>C/D3</b>             | 2 x 5 MHz | 562 - 586      | 1720.1 - 1725.1 MHz / 1815.1 - 1820.1 MHz     | Cf. Section 2.5.2                     | The highest GSM channel is the guard channel for GSM | F-24, F/D-24, D-24, D/A-24, A-24, A/L-24, Ita-24                                   |
|                           | <b>C/D4</b>             | 2 x 5 MHz | 587 - 611      | 1725.1 - 1730.1 MHz / 1820.1 - 1825.1 MHz     | Cf. Section 2.5.2                     | The highest GSM channel is the guard channel for GSM | F-14, F/D-7, D-14, D/A-7, A-7, A/L-7, Ita-14                                       |
|                           | <b>C/D5</b>             | 2 x 5 MHz | 612 - 636      | 1730.1 - 1735.1 MHz / 1825.1 - 1830.1 MHz     | Cf. Section 2.5.2                     | The highest GSM channel is the guard channel for GSM | F-11, F/D-5, D-5, D/A-5, A-18, A/L-5, Ita-5  |
| 1800 MHz (paired) block 2 | <b>C/D6</b>             | 2 x 5 MHz | 637 - 661      | 1735.1 - 1740.1 MHz / 1830.1 - 1835.1 MHz     | Cf. Section 2.5.2                     | The highest GSM channel is the guard channel for GSM | F-24, F/D-24, D-24, D/A-24, A-24, A/L-24, <u>Ita-0</u>                             |
|                           | <b>C/D7</b>             | 2 x 5 MHz | 662 - 686      | 1740.1 - 1745.1 MHz / 1835.1 - 1840.1 MHz     | Cf. Section 2.5.2                     | The highest GSM channel is the guard channel for GSM | <u>F-0</u> , <u>F/D-0</u> , D-7, <u>D/A-0</u> , <u>A-0</u> , <u>A/L-0</u> , Ita-24 |
|                           | <b>C/D8</b>             | 2 x 5 MHz | 687 - 711      | 1745.1 - 1750.1 MHz / 1840.1 - 1845.1 MHz     | Cf. Section 2.5.2                     | The highest GSM channel is the guard channel for GSM | F-11, <u>F/D-0</u> , D-0, <u>D/A-0</u> , A-11, <u>A/L-0</u> , Ita-14               |
|                           | <b>C/D9</b>             | 2 x 5 MHz | 712 - 736      | 1750.1 - 1755.1 MHz / 1845.1 - 1850.1 MHz     | Cf. Section 2.5.2                     | The highest GSM channel is the guard channel for GSM | F-24, F/D-17, D-24, D/A-17, A-24, A/L-17, <u>Ita-0</u>                             |
|                           | <b>C/D10</b>            | 2 x 5 MHz | 737 - 761      | 1755.1 - 1760.1 MHz / 1850.1 - 1855.1 MHz     | Cf. Section 2.5.2                     | The highest GSM channel is the guard channel for GSM | <u>F-0</u> , <u>F/D-0</u> , D-5, <u>D/A-0</u> , <u>A-0</u> , <u>A/L-0</u> , Ita-23 |

| Frequency band            | Name of frequency block | Bandwidth   | Channel number | Frequency from ... to ... (uplink / downlink) | Restrictions / effects on utilisation                                  | Comments   | Number of preferential frequencies for Switzerland   |
|---------------------------|-------------------------|-------------|----------------|---|--|--|--|
| 1800 MHz (paired) block 3 | <b>C/D11</b>            | 2 x 5 MHz   | 762 -786       | 1760.1 - 1765.1 MHz / 1855.1 - 1860.1 MHz     | Cf. Section 2.5.2  | The highest GSM channel is the guard channel for GSM.  | F-5, <u>F/D-0</u> , <u>D-0</u> , <u>D/A-0</u> , <u>A-5</u> , <u>A/L-0</u> , <u>Ita-0</u>             |
|                           | <b>C/D12</b>            | 2 x 5 MHz   | 787 -811       | 1765.1 - 1770.1 MHz / 1860.1 - 1865.1 MHz     | Cf. Section 2.5.2  | The highest GSM channel is the guard channel for GSM.<br><br>For category C channel 797-811 available from start of license until 31.12.2013 | F-24, <u>F/D-18</u> , <u>D-24</u> , <u>D/A-18</u> , <u>A-24</u> , <u>A/L-18</u> , <u>Ita-24</u> . /  |
|                           | <b>C/D13</b>            | 2 x 5 MHz   | 812-836        | 1770.1 - 1775.1 MHz / 1865.1 - 1870.1 MHz     | Cf. Section 2.5.2  | The highest GSM channel is the guard channel for GSM.<br><br>For category C channel 812-836 available from start of license until 31.12.2013 | <u>F-1</u> , <u>F/D-0</u> , <u>D-13</u> , <u>D/A-0</u> , <u>A-1</u> , <u>A/L-0</u> , <u>Ita-13</u> . |
|                           | <b>C/D14</b>            | 2 x 5 MHz   | 837 - 861      | 1775.1 - 1780.1 MHz / 1870.1 - 1875.1 MHz     | Cf. Section 2.5.2  | The highest GSM channel is the guard channel for GSM.<br><br>For category C channel 837-839 available from start of license until 31.12.2013 | F-5, <u>F/D-0</u> , <u>D-0</u> , <u>D/A-0</u> , <u>A-5</u> , <u>A/L-0</u> , <u>Ita-0</u>             |
|                           | <b>C/D15</b>            | 2 x 4.8 MHz | 862 - 885      | 1780.1 - 1784.9 MHz / 1875.1 - 1879.9 MHz     | UMTS signal may slightly overlap assigned bandwidth. Cf. Section 2.3.2 | No BCCH in the top 2 MHz to protect DECT, "minor" restrictions   | F-24, <u>F/D-24</u> , <u>D-24</u> , <u>D/A-24</u> , <u>A-24</u> , <u>A/L-24</u> , <u>Ita-24</u>      |

#### Notes:

Depending on the definitive assignment situation, the cut-off frequencies and bandwidths of the allocation blocks may vary slightly.

GSM guard channels between adjacent frequency blocks are dispensed with.

For the period from the award of the licence to 31.12.2013 the winner of category C will get assigned 8.6 MHz bandwidth out of blocks C/D12 to C/D14 (channels 797 – 839, 1767.1-1775.7 paired with 1862.1- 1870.7 MHz) [preferential frequencies: F-16, F/D-8, D-28, D/A-8, A-16, A/L-8, Ita-28].

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From 1.1.2014 to 31.12.2028 the 15 blocks named C/D determine the concrete blocks of abstract categories C and D. For the assignment stage the winner of category C is entitled to get awarded 2 blocks out of C/D.

The allocation of the category C may therefore not contain the same frequencies for the total licence term.

Each of the existing licensees Swisscom (Schweiz) AG, Sunrise Communications AG, Orange Network SA and in&phone SA will, if it acquires frequencies within the framework of this award procedure, be granted a transition period concerning the previously used frequencies in the 1800 MHz band beyond the date of expiry of the existing licence of 31.12.2013. This lasts a maximum of one year for Switzerland excluding the regions of Basel and Geneva and a maximum of two years for the regions of Basel and Geneva.

With the exception of Category C, a new licensee may make full use of the frequency blocks in the 1800 MHz band awarded within the framework of this award only from 1.1.2015 and from 1.1.2016 in the regions of Basel and Geneva.

#### 4 2100 MHz TDD (1900 MHz band)

| Frequency band       | Name of frequency block | Bandwidth | Channel number | Frequency from ... to ... (uplink / downlink) | Restrictions / effects on utilisation                         | Comments  |
|----------------------|-------------------------|-----------|----------------|---|---|---|
| 1900 MHz (un-paired) | <b>E/F1</b>             | 1 x 5 MHz | 9501 - 9525    | 1900.1 - 1905.1 MHz                           | Transmission power max. +43dBm coordinated, cf. Section 2.3.3 | Illegal operation of imported DECT devices with incorrect frequencies may cause interference. Cf. Section 2.4.2 |
|                      | <b>E/F2</b>             | 1 x 5 MHz | 9526 - 9550    | 1905.1 - 1910.1 MHz                           | Transmission power max. +30dBm coordinated, cf. Section 2.3.3 | Illegal operation of imported DECT devices with incorrect frequencies may cause interference. Cf. Section 2.4.2 |
|                      | <b>E/F3</b>             | 1 x 5 MHz | 9551 - 9575    | 1910.1 - 1915.1 MHz                           | Transmission power max. +20dBm coordinated, cf. Section 2.3.3 | Illegal operation of imported DECT devices with incorrect frequencies may cause interference. Cf. Section 2.4.2 |
|                      | <b>E/F4</b>             | 1 x 5 MHz | 9576 - 9600    | 1915.1 - 1920.1 MHz                           | Transmission power max. +20dBm coordinated, cf. Section 2.3.3 | Illegal operation of imported DECT devices with incorrect frequencies may cause interference. Cf. Section 2.4.2 |

#### Notes:

For the period from the award of the licence to 31.12.2016 the winner of category E will get assigned block E/F1.

From 1.1.2017 to 31.12.2028 the 4 blocks named E/F determine the concrete blocks of abstract categories E and F. For the assignment stage the winner of category E is entitled to get awarded 1 block out of E/F.

The allocation of the category E may not contain the same frequencies during the total license term.

## 5 2100 MHz FDD

| Frequency band    | Name of frequency block | Bandwidth   | Channel number | Frequency from ... to ... (uplink / downlink) | Restrictions / effects on utilisation | Comments   |
|-------------------|-------------------------|-------------|----------------|---|---------------------------------------|--|
| 2100 MHz (paired) | <b>G/H1</b>             | 2 x 5 MHz   | 10553 - 10577  | 1920.5 - 1925.5 MHz /<br>2110.5 - 2115.5 MHz  |                                       | Illegal operation of imported DECT devices with incorrect frequencies may cause interference to base stations. Cf. Section 2.4.2 |
|                   | <b>G/H2</b>             | 2 x 4.8 MHz | 10578 - 10601  | 1925.5 - 1930.3 MHz /<br>2115.5 - 2120.3 MHz  |                                       | Illegal operation of imported DECT devices with incorrect frequencies may cause interference to base stations. Cf. Section 2.4.2 |
|                   | <b>G/H3</b>             | 2 x 5 MHz   | 10602 - 10626  | 1930.3 - 1935.3 MHz /<br>2120.3 - 2125.3 MHz  |                                       |  |
|                   | <b>G/H4</b>             | 2 x 5 MHz   | 10627 - 10651  | 1935.3 - 1940.3 MHz /<br>2125.3 - 2130.3 MHz  |                                       |  |
|                   | <b>G/H5</b>             | 2 x 4.8 MHz | 10652 - 10675  | 1940.3 - 1945.1 MHz /<br>2130.3 - 2135.1 MHz  |                                       |  |
|                   | <b>G/H6</b>             | 2 x 5 MHz   | 10676 - 10700  | 1945.1 - 1950.1 MHz /<br>2135.1 - 2140.1 MHz  |                                       |  |
|                   | <b>G/H7</b>             | 2 x 5 MHz   | 10701 - 10725  | 1950.1 - 1955.1 MHz /<br>2140.1 - 2145.1 MHz  |                                       |  |
|                   | <b>G/H8</b>             | 2 x 4.8 MHz | 10726 - 10749  | 1955.1 - 1959.9 MHz /<br>2145.1 - 2149.9 MHz  |                                       |  |
|                   | <b>G/H9</b>             | 2 x 5 MHz   | 10750 - 10774  | 1959.9 - 1964.9 MHz /<br>2149.9 - 2154.9 MHz  |                                       |  |
|                   | <b>G/H10</b>            | 2 x 5 MHz   | 10775 - 10799  | 1964.9 - 1969.9 MHz /<br>2154.9 - 2159.9 MHz  |                                       |  |
|                   | <b>G/H11</b>            | 2 x 4.8 MHz | 10800 - 10823  | 1969.9 - 1974.7 MHz /<br>2159.9 - 2164.7 MHz  |                                       |  |
|                   | <b>G/H12</b>            | 2 x 5 MHz   | 10824 - 10848  | 1974.7 - 1979.7 MHz /<br>2164.7 - 2169.7 MHz  |                                       |  |

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**Notes:**

For the period from the award of the licence to 31.12.2016 the winners of category G blocks will bid for blocks G/H10, G/H11 and G/H12 in the assignment stage.

From 1.1.2017 to 31.12.2028 the 12 blocks named G/H determine the concrete blocks of abstract categories G and H.

The allocation of the category G may not contain the same frequencies during the total license term.

Depending on the definitive assignment situation, the cut-off frequencies and bandwidths of the allocation blocks may vary slightly. If G/H2, G/H5, G/H8 or G/H11 are allocated alone and not contiguous, these will be widened to 5 MHz to the detriment of the largest allocation (2 or more contiguous blocks) of other operators. This means that the largest allocation of another operator will accordingly be reduced by 0.2 or 0.4 MHz.

Coordinated means that the frequency blocks are allocated contiguously to one operator or the respective operators coordinate the use of these.

## 6 2600 MHz TDD

| Frequency band      | Name of frequency block | Bandwidth  | Channel number | Frequency from ... to ... (uplink / downlink) | Restrictions / effects on utilisation   | Comments  |
|---------------------|-------------------------|------------|----------------|---|---|---|
| 2600 MHz (unpaired) | <b>J1</b>               | 1 x 15 MHz | -              | 2570.0 - 2585.0 MHz                           | Allocation of the adjacent frequency block and adjacent FDD Uplink. For the lowest 5 MHz max. transmission power +25dBm imperative. Cf. Section 2.3.4 |   |
|                     | <b>J2</b>               | 1 x 15 MHz | -              | 2585.0 - 2600.0 MHz                           | Allocation of the adjacent frequency blocks. For the lowest 5 MHz max. transmission power +25dBm uncoordinated. Cf. Section 2.3.4                     | Restriction lifted if coordinated.  |
|                     | <b>J3</b>               | 1 x 15 MHz | -              | 2600.0 - 2615.0 MHz                           | Allocation of the adjacent frequency block. For the lowest 5 MHz max. transmission power +25dBm uncoordinated. Cf. Section 2.3.4                      | Restriction lifted if coordinated.  |
|                     |                         | 1 x 5 MHz  | -              | 2615.0 - 2620.0 MHz                           | Guard band between frequency blocks J3 and I1 Cf. Section 2.3.4   | If frequency blocks J3 and I1 are allocated to the same operator, this range will also be allocated to this operator. Utilisation is restricted due to system requirements. |

## 7 2600 MHz FDD

| Frequency band    | Name of frequency block | Bandwidth | Channel number | Frequency from ... to ... (uplink / downlink) | Restrictions / effects on utilisation | Comments  |
|-------------------|-------------------------|-----------|----------------|---|---------------------------------------|---|
| 2600 MHz (paired) | <b>I1</b>               | 2 x 5 MHz | -              | 2500.0 - 2505.0 MHz /<br>2620.0 - 2625.0 MHz  |                                       |   |
|                   | <b>I2</b>               | 2 x 5 MHz | -              | 2505.0 - 2510.0 MHz /<br>2625.0 - 2630.0 MHz  |                                       |   |
|                   | <b>I3</b>               | 2 x 5 MHz | -              | 2510.0 - 2515.0 MHz /<br>2630.0 - 2635.0 MHz  |                                       |   |
|                   | <b>I4</b>               | 2 x 5 MHz | -              | 2515.0 - 2520.0 MHz /<br>2635.0 - 2640.0 MHz  |                                       |   |
|                   | <b>I5</b>               | 2 x 5 MHz | -              | 2520.0 - 2525.0 MHz /<br>2640.0 - 2645.0 MHz  |                                       |   |
|                   | <b>I6</b>               | 2 x 5 MHz | -              | 2525.0 - 2530.0 MHz /<br>2645.0 - 2650.0 MHz  |                                       |   |
|                   | <b>I7</b>               | 2 x 5 MHz | -              | 2530.0 - 2535.0 MHz /<br>2650.0 - 2655.0 MHz  |                                       |   |
|                   | <b>I8</b>               | 2 x 5 MHz | -              | 2535.0 - 2540.0 MHz /<br>2655.0 - 2660.0 MHz  |                                       |   |
|                   | <b>I9</b>               | 2 x 5 MHz | -              | 2540.0 - 2545.0 MHz /<br>2660.0 - 2665.0 MHz  |                                       |   |
|                   | <b>I10</b>              | 2 x 5 MHz | -              | 2545.0 - 2550.0 MHz /<br>2665.0 - 2670.0 MHz  |                                       |   |
|                   | <b>I11</b>              | 2 x 5 MHz | -              | 2550.0 - 2555.0 MHz /<br>2670.0 - 2675.0 MHz  |                                       |   |
|                   | <b>I12</b>              | 2 x 5 MHz | -              | 2555.0 - 2560.0 MHz /<br>2675.0 - 2680.0 MHz  |                                       |   |
|                   | <b>I13</b>              | 2 x 5 MHz | -              | 2560.0 - 2565.0 MHz /<br>2680.0 - 2685.0 MHz  | Cf. Section 2.4.3                     | Local effect due to radar installations possible. |
|                   | <b>I14</b>              | 2 x 5 MHz | -              | 2565.0 - 2570.0 MHz /<br>2685.0 - 2690.0 MHz  | Cf. Section 2.4.3                     | Local effect due to radar installations possible. |

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**Notes:**

Depending on the definitive assignment situation, the cut-off frequencies and bandwidths of the allocation blocks may vary slightly.

Coordinated means that the frequency blocks are allocated contiguously to one operator or the respective operators coordinate the use of these frequencies with each other.

FOR INFORMATION ONLY

## 8 2000 MHz (Frequency block for separate award)

| Frequency band                 | Name of frequency block | Bandwidth    | Channel number | Frequency from ... to ... (uplink / downlink) | Restrictions / effects on utilisation                              | Comments  |
|--------------------------------|-------------------------|--------------|----------------|---|--|---|
| 2000 MHz (unpaired) Not in CCA | K1                      | 1 x 14.2 MHz | 10053 - 10123  | 2010.5 - 2024.7 MHz                           | Until 31.12.2013 max. transmission power +23dBm, Cf. Section 2.3.3 | Band for separate individual round, outside the CCA. After 01.01.2014 no further restriction within the BEM |