1. After public consultation and approval at WG SE meeting in May and before publication, ECO will copy the approved version into the current template for ECC Recommendations

**CEPT/ERC/RECOMMENDATION 12-08 E (Podebrady 1997, Saariselkä 1998)**

**HARMONISED RADIO FREQUENCY CHANNEL ARRANGEMENTS AND BLOCK ALLOCATIONS FOR LOW, MEDIUM AND HIGH CAPACITY SYSTEMS**

**IN THE BAND 3600 MHz TO 4200 MHz**

Recommendation adopted by the Working Group “Spectrum Engineering” (WGSE):

“The European Conference of Postal and Telecommunications Administrations

*considering*

1) that CEPT has a long term objective to harmonise the use of frequencies throughout Europe;

2) that CEPT should develop radio frequency channel arrangements and block allocation rules in order to make the most effective use of the spectrum for point to point (P-P) and point to multipoint (P-MP) applications;

3) that the achievement of harmonisation requires the adoption of a minimum number of channel arrangements and block allocation rules;

*noting*

a) that Article S.5 of the Radio Regulations allocates the band 3600 MHz to 4200 MHz on a primary basis to the Fixed and Fixed - Satellite service and on a secondary basis to the Mobile service;

b) that current use of the band 3600 - 4200 MHz in most European countries is according to ITU-R Recommendation F.635 and/or Recommendation F.382;

c) that ITU-R Recommendation F.635 only sets a basic raster of 10 MHz without defining a specific channel spacing or a duplex spacing;

e) that in most European countries there is a need for medium and high capacity radio relay systems for long range applications and/or the allocation of additional spectrum for P-MP systems in the band 3600-4200 MHz;

g) that frequency separation may be required for un-coordinated deployment of current and future systems;

h) that cellular deployment of P-MP systems preferably requires the allocation of continuous spectrum to the operator;

*recommends*

that CEPT administrations having the band 3600-4200 MHz available for the fixed service should adopt channel arrangements in accordance with either:

1) Annex A

 which is based onITU-R Recommendation F.635 for the frequency range 3600-4200 MHz with channel spacings of 30 or 15 MHz and a duplex spacing of 320 MHz;

or

2) Annex B

 which is based on ITU-R Recommendation F.382 for the frequency range 3800-4200 MHz.

**ANNEX A**

**Harmonisation of the frequency range 3600 to 4200 MHz based on**

**ITU-R Recommendation F.635 with 30 MHz and 15 MHz channels**

**for medium and high capacity systems**

An arrangement based on ITU-R Recommendation F.635 with 30 MHz channel spacing would provide a total of 9 “go” and 9 “return” channels.

Let *f* 0 (=3900 MHz) be the frequency of the centre of the band of frequencies occupied

 *f* n be the centre frequency of one radio frequency channel in the lower half of the band

 *f '* n be the centre frequency of one radio frequency channel in the upper half of the band

then the frequencies in MHz of the individual channels are expressed by the following relationships:

**30 MHz channel spacing**

Lower half of the band: *f* n = (*f* 0 - 310 + 30 n) MHz

Upper half of the band: *f '* n = (*f* 0 + 10 + 30 n) MHz

where n = 1, 2, 3 ... 9

**15 MHz channel spacing**

Lower half of the band: *f* n = (*f* 0 - 302.5 + 15 n) MHz

Upper half of the band: *f '* n = (*f* 0 + 17.5 + 15 n) MHz

where n = 1, 2, 3 ... 18



**ANNEX B**

**Harmonisation of the frequency range 3800 to 4200 MHz based on**

**ITU-R Recommendation F.382 with 29 MHz channels**

**for high capacity systems**

An arrangement based on ITU-R Recommendation F.382 with 29 MHz channel spacing would provide a total of 6 ”go” and 6 ”return” channels.

Let *f* 0(=4003.5 MHz) be the frequency of the centre of the band of frequencies occupied (MHz)

*f* n be the centre frequency of one radio-frequency channel in the lower half of the band (MHz)

*f '* n be the centre frequency of one radio-frequency channel in the upper half of the band (MHz),

then the frequencies in MHz of individual channels are expressed by the following relationships:

 lower half of the band: *f* n = *f* 0 - 208 + 29 n*,*

 upper half of the band: *f* n = *f* 0 + 5 + 29 n*,*

where

 n = 1, 2, 3, 4, 5 or 6.



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