B. ITU R Rec. 382

This band is used for High Capacity Fixed link (34 and 140 MBit/s) systems and uses a 29 MHz channel separation. A duplex spacing of 213 MHz is used. It is unlikely that this band would be specified for Point-to-Multipoint.

C. ITU-R Rec. 283-5

This is an old established recommendation that covers the fixed link services in four ranges between 1.7 GHz and 2.7 GHz for low and medium capacity Analogue Systems. These ranges are likely to be gradually released as analogue systems become obsolete.
Each range has its own center frequency as follows:

1.700-1.900 GHz F_0 = 1.808 GHz
1.900-2.100 GHz F_0 = 2.000 GHz
2.100-2.300 GHz F_0 = 2.203 GHz
2.500-2.700 GHz F_0 = 2.586 GHz

Individual Channels are defined in two ways depending on the ITU Region of operation

<u>Region 1 and 3 (Europe, Africa Far and Middle East)</u>

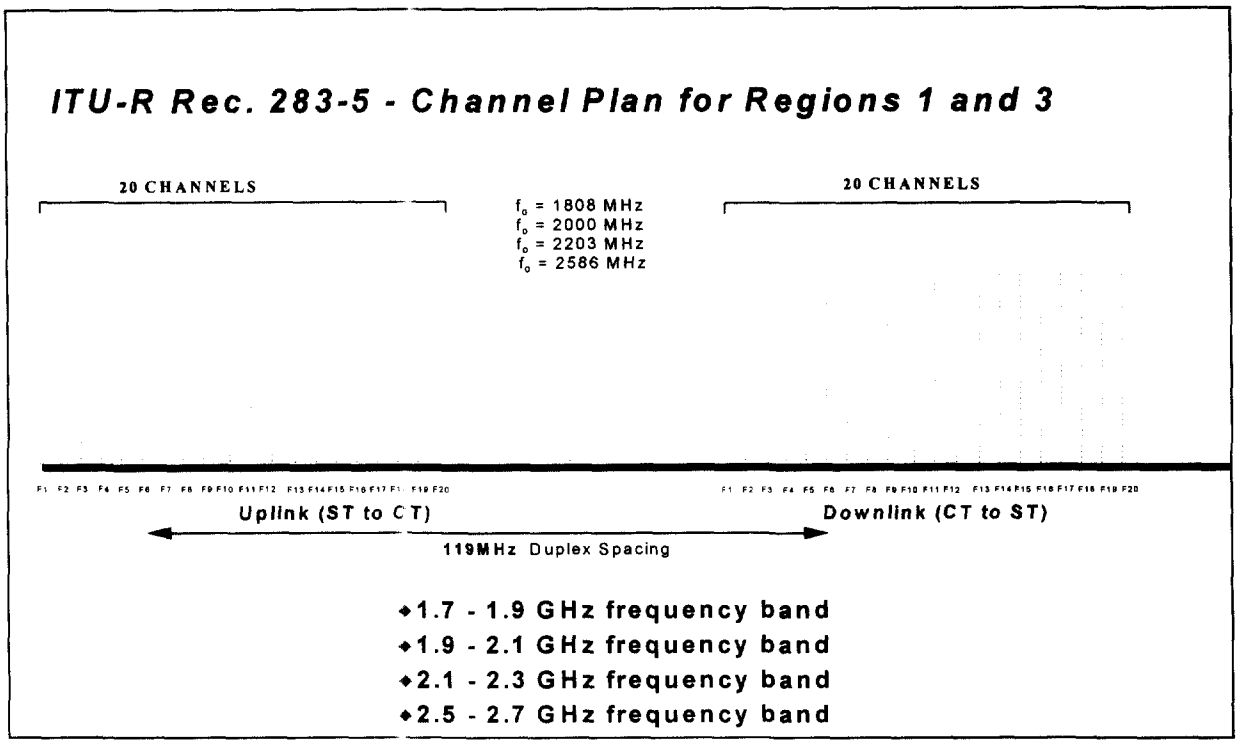
Lower half of band $F_n = F_0 - 108.5 + 14n$
Upper half of band $F_n = F_0 + 10.5 + 14n$
(Duplex Spacing 119 MHz)

<u>Region 2 (USA and South America)</u>

Lower half of band $F_n = F_0 - 94.5 + 14n$
Upper half of band $F_n = F_0 - 3.5 + 14n$
(Duplex Spacing 91 MHz)

In both cases channelization is derived from 14 MHz giving 7 and 3.5 and possibly 1.75 sub channels. This a well-established band and as analogue equipment is becoming obsolete, work has been carried out to update and revise this plan. The first result was the revised CEPT plan that has now been provisionally issued as ITU-R Rec. 1098.

The Region 1 and 3 channel plans based on 3.5 MHz RF channels are shown in the Figure below.



D. ITU-R 1098

ITU R Rec. 1098 has been published in draft revision November 1994, this has been produced as a result of the work carried out in CEPT derived from work carried out at WARC 92.

ITU-R Recommendation ITU-R-F1098 only covers the range from 1.9 - 2.3 GHz. The recommendation is made up of 3 Annexes. The first annex covers systems with a duplex spacing of 175 MHz, while the second uses a duplex spacing of 189 MHz. Both of these plans use a channelization of 14 MHz subdivided down to 7,3.5 and 1.75 MHz. The third annex uses a 10 MHz channelization with a duplex spacing of 190 MHz. The decision on which plan to use will depend on individual countries and whether or not FPLMTS is proposed for the future. The band most likely to be used is that described in Annex 1 (i.e. the system with 175 MHz duplex spacing).

E. ITU-R Rec. F 746

This recommendation covers general channel arrangements for a number of bands up to 55 GHz. It generally refers out to other Recommendations but most significantly it includes, as annexes, a plan for the range 2.3 - 2.5 GHz, and a plan for the range 1.427 - 1.53 GHz.

2.3 - 2.5 GHz

Lower half of band $F_n = F_o - 87 + n$

Upper half of band $F_n = F_o + 7 + n$

$F_n = 2394$ MHz

Where n = 1,2,3.....80

This produces a plan with a 1 MHz (or multiples of) basic channelization and a duplex spacing of 94 MHz.

1.427 - 153 GHz

Lower half of band $F_n = F_o - 51.5 + 0.5n$

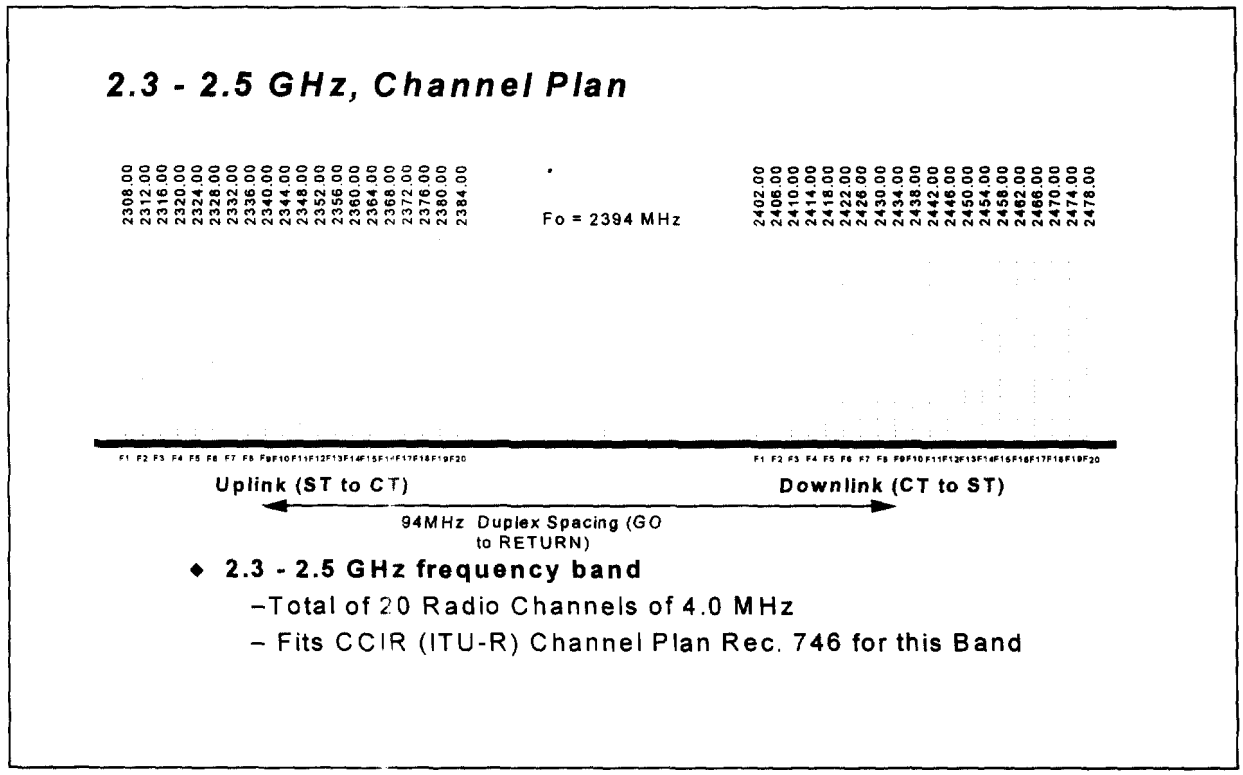
Upper half of band $F_n = F_o + 14 + 0.5n$

$F_n = 1478.5$ MHz

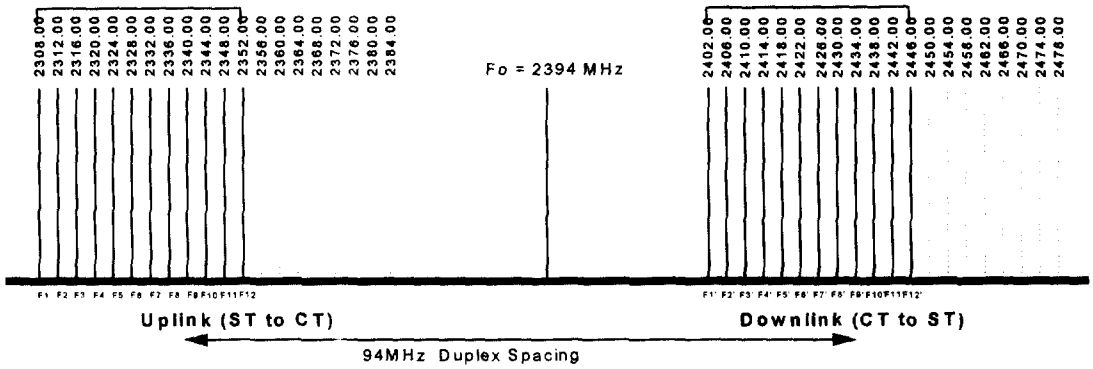
Where n = 1,2,3.....74

Various channelization with a duplex spacing is 65.5 MHz.

The 2.3 - 2.5 GHz channel plan based on 4 MHz RF channels are shown in the Figure below. Following this figure are Figures pertaining to three sub-bands allocations which represent implementations of the 12 RF channel Airspan channel plans.

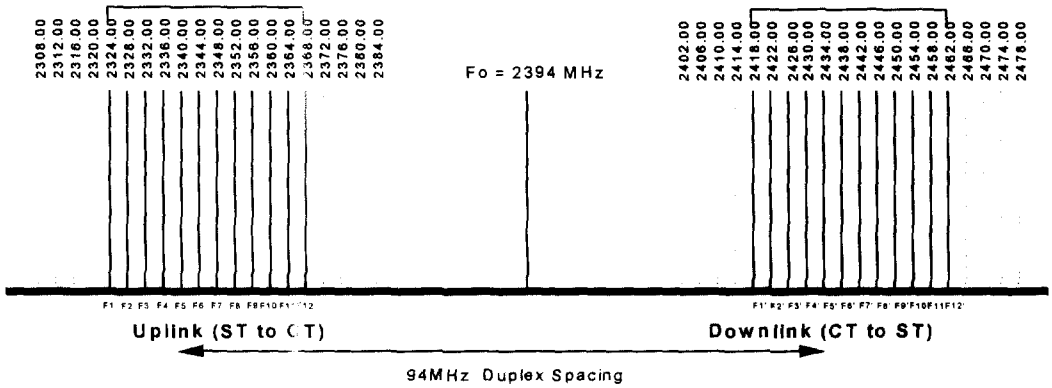


2.3 - 2.5 GHz, Lower Sub Band Channel Plan

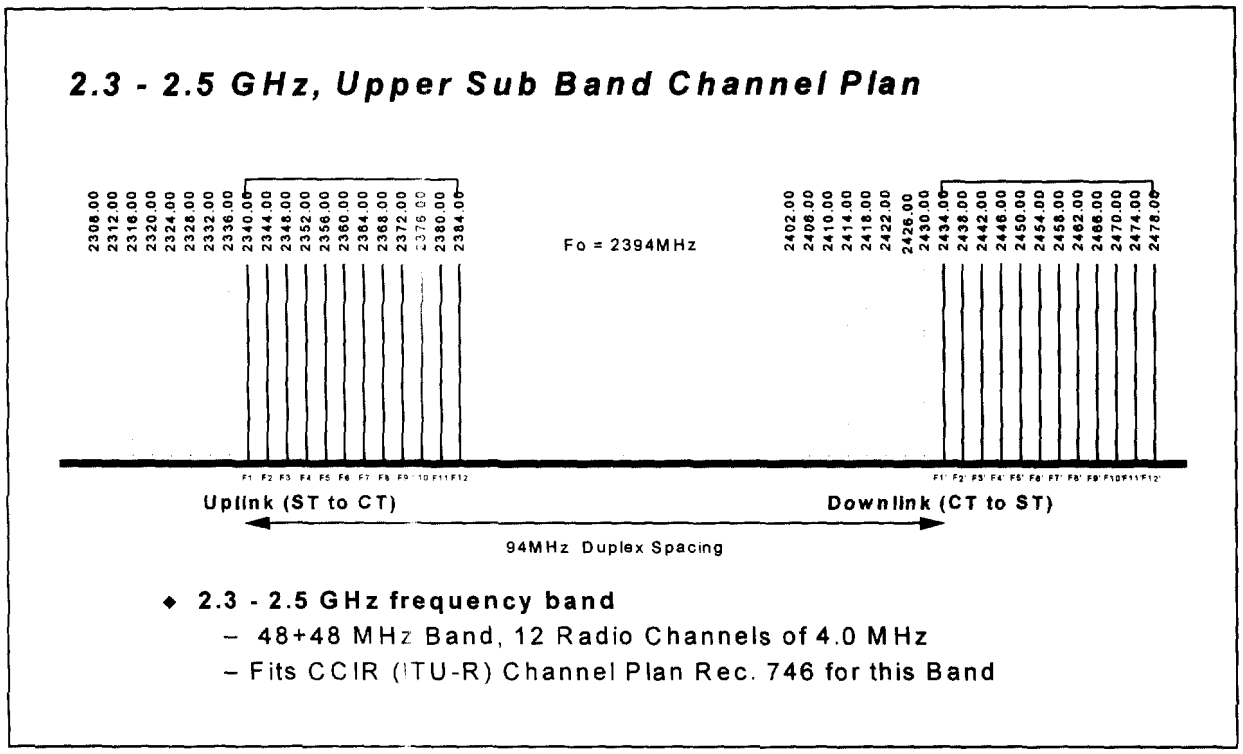


- **2.3 - 2.5 GHz frequency band**
  - 48+48 MHz Band, 12 Radio Channels of 4.0 MHz
  - Fits CCIR (ITU-R) Channel Plan Rec. 746 for this Band

2.3 - 2.5 GHz, Middle Sub Band Channel Plan



- **2.3 - 2.5 GHz frequency band**
  - 48+48 MHz Band, 12 Radio Channels of 4.0 MHz
  - Fits CCIR (ITU-R) Channel Plan Rec. 746 for this Band

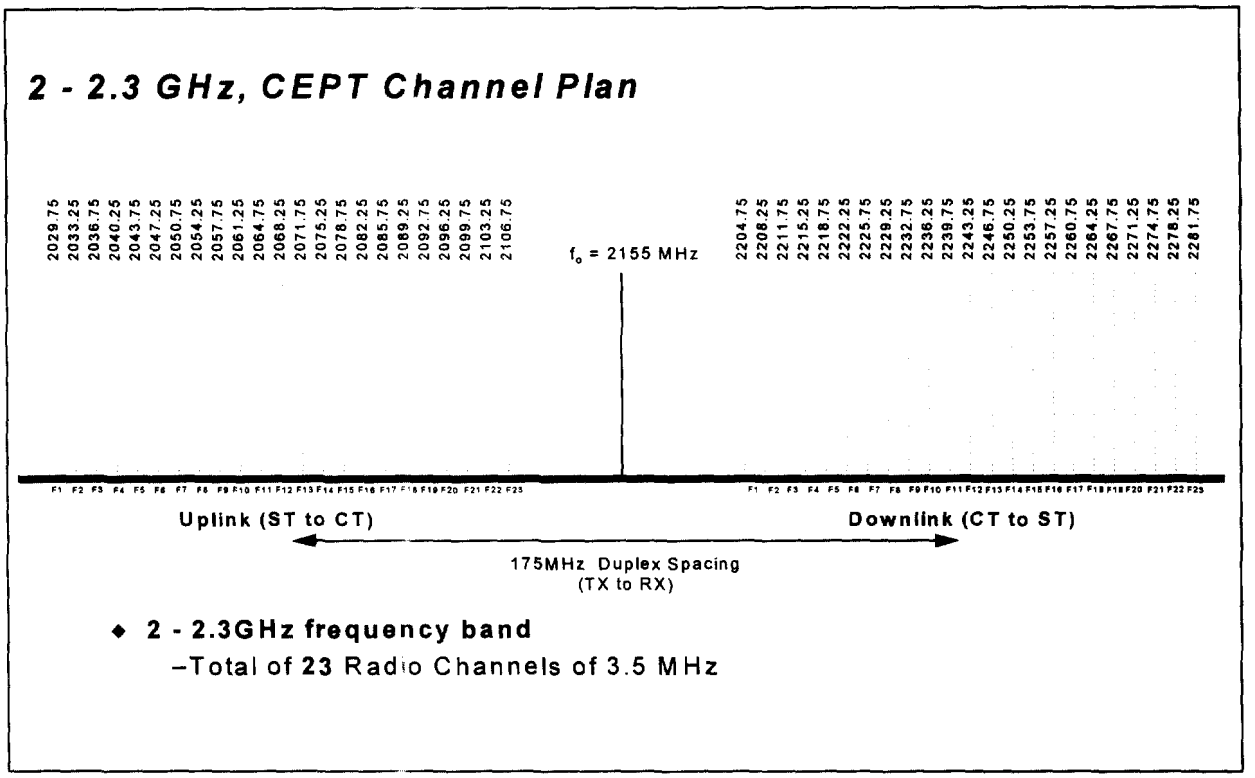


F. CEPT Plans

The CEPT plans cover the following bands:

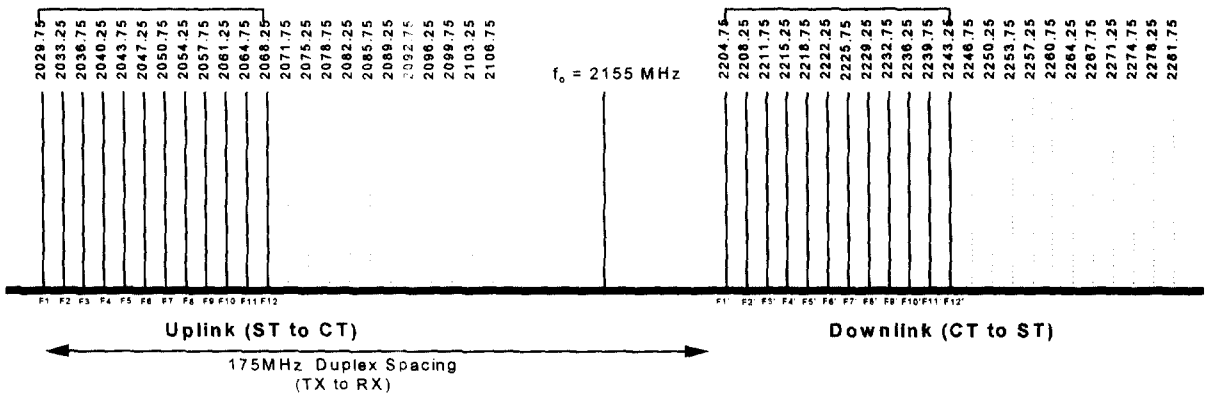
1350-1375/ 1492-1517 MHz Duplex 142 MHz
1375-1400/ 1427-1452 MHz Duplex 52 MHz
2025-2110/ 2200-2290 MHz Duplex 175 MHz
2520-2593/ 2597-2670 MHz Duplex 74 MHz
The CEPT plans are generally inputs to ITU-R. As mentioned above most of these have been incorporated into other recommendations.

The CEPT plan (also considered under ITU-R Rec.1098), 2025-2110/ 2200-2290 MHz with duplex spacing of 175 MHz and 3.5 MHz RF channels, is shown below:



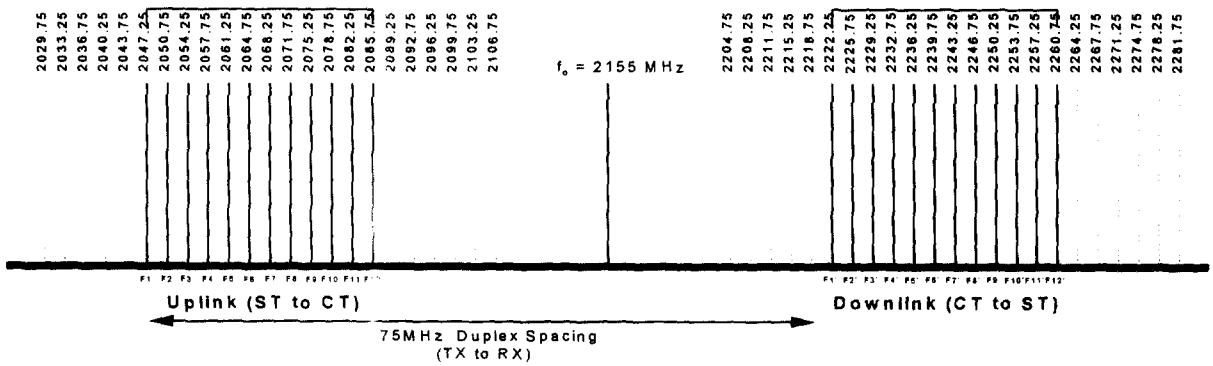
The three Figures below pertain to three sub-bands allocations which represent implementations of the 12 RF channel Airspan channel plans. The three sub-bands are designated Lower, Middle, and Upper.

2 - 2.3 GHz, Channel Plan (Lower)



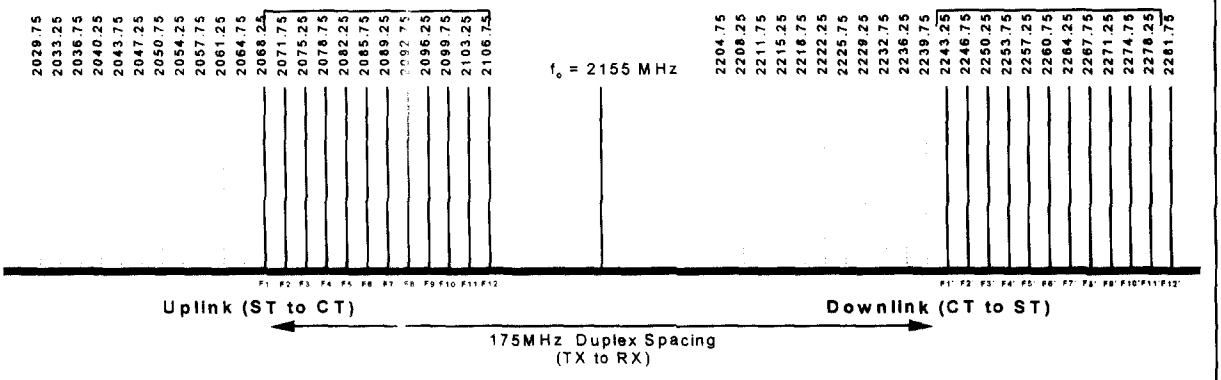
- **2 - 2.3GHz frequency band**
  - 42+42 MHz Band, 12 Radio Channels of 3.5 MHz

2 - 2.3 GHz, Channel Plan (Middle)



- **2 - 2.3GHz frequency band**
  - 42+42 MHz Band, 12 Radio Channels of 3.5 MHz

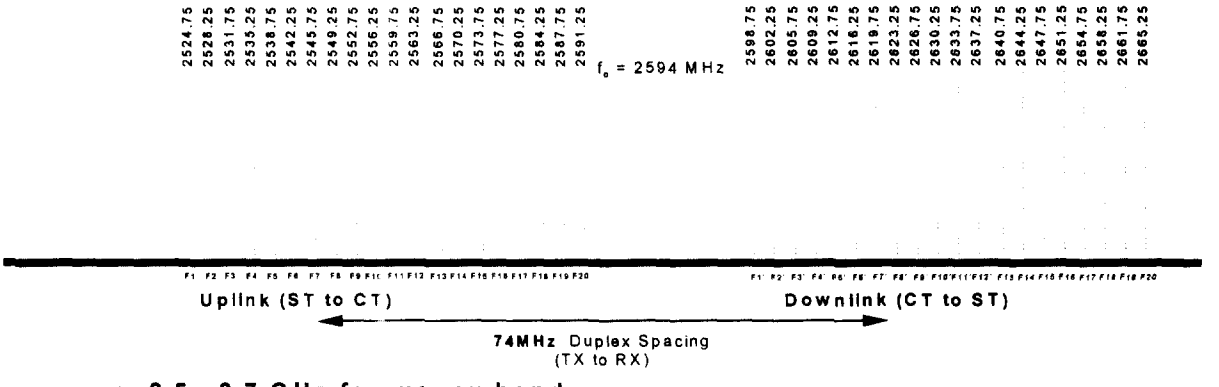
2 - 2.3 GHz, Channel Plan (Upper)



- **2 - 2.3GHz frequency band**
  - 42+42 MHz Band, 12 Radio Channels of 3.5 MHz

The CEPT plan (also considered under ITU-R Rec.1098), 2520-2593/ 2597-2670 MHz with duplex spacing of 74 MHz and 3.5 MHz RF channels, is shown below:

CEPT- Channel Plan 2.5 - 2.7 GHz



- **2.5 - 2.7 GHz frequency band**
  - Fits CEPT Recommendation