

RECOMMENDATION ITU-R M.1826

Harmonized frequency channel plan for broadband public protection and disaster relief operations at 4 940-4 990 MHz in Regions 2 and 3

(2007)

Scope

This Recommendation addresses harmonized frequency channel plans in the band 4 940-4 990 MHz for broadband public protection and disaster relief radiocommunications in Regions 2 and 3.

The ITU Radiocommunication Assembly,

considering

- a) that growing telecommunication and radiocommunication needs of public protection and disaster relief (PPDR) agencies and organizations, are vital to the maintenance of law and order, protection of life and property, disaster relief and emergency response;
- b) that many administrations wish to promote interoperability and interworking between systems used for PPDR radiocommunication, both nationally and for cross-border operations in emergency situations and for disaster relief;
- c) that Resolution 646 (WRC-03) identifies particular bands/ranges, including the range 4 940-4 990 MHz in Regions 2 and 3, for the purposes of achieving regionally harmonized frequency bands/ranges for advanced PPDR solutions and encourages administrations to consider these bands/ranges when undertaking their national planning for PPDR radiocommunications;
- d) that Resolution 646 (WRC-03) does not identify the range 4 940-4 990 MHz for Region 1;
- e) that there will continue to be narrowband, wideband and broadband requirements for future applications;
- f) that in some cases, on-site broadband PPDR applications are used on a temporary basis by emergency service organizations during the event of a disaster;
- g) that commercial systems may serve and support PPDR organizations including, in particular, new systems/technologies;
- h) that some administrations may have different operational needs and spectrum requirements for PPDR applications depending on the circumstances;
- j) that national spectrum planning for PPDR radiocommunication systems needs to have regard for cooperation and bilateral consultation with other concerned administrations, in order to facilitate greater levels of spectrum harmonization;
- k) that usage of the same frequencies of the same allocation will enable administrations to benefit from harmonization while continuing to meet national planning requirements,

noting

- a) that the benefits of spectrum harmonization are:
- increased potential for interoperability;
 - a broader manufacturing base and increased volume of equipment resulting in economies of scale and expanded equipment availability;
 - improved spectrum management and planning; and
 - enhanced cross-border coordination and circulation of equipment;
- b) that spectrum planning for PPDR radiocommunication is done at the national level, taking into account the need for interoperability and benefits of neighbouring administrations using harmonized or common frequency bands;
- c) the benefits of cooperation between countries for the provision of effective and appropriate humanitarian assistance during disasters;
- d) the needs of countries, particularly the developing countries, for low-cost communication equipment;
- e) that not all frequencies within an identified common frequency range will be available within each country of the relevant Region;
- f) that flexibility must be afforded to administrations:
- to determine, at the national level, how much spectrum to make available for PPDR from the band identified in this Recommendation in order to meet their particular national requirements;
 - to have the ability for the band identified in this Recommendation to be used by all services having allocations according to the provisions of the Radio Regulations, taking into account the existing applications and their evolution; and
 - to determine the need and timing of availability as well as the conditions of usage of the band identified in this Recommendation for PPDR in order to meet specific national situations;
- g) that CITELE adopted a Recommendation (PCC.II/Rec.16(VII-06)) on the use of the 4 940-4 990 MHz band in Region 2 for PPDR, which includes the example frequency channel plan in Annex 1 of this Recommendation;
- h) that the APT adopted a Recommendation (No. APT/AWF/1(Edition 2005)) on use of the band 4 940-4 990 MHz for PPDR applications in Region 3, which includes the example frequency channel plan in Annex 2 of this Recommendation;
- j) that Resolution 646 (WRC-03) states “that the identification of the above frequency bands/ranges for public protection and disaster relief does not preclude the use of these bands/frequencies by any application within the services to which these bands/frequencies are allocated and does not preclude the use of nor establish priority over any other frequencies for public protection and disaster relief in accordance with the Radio Regulations”;

recommends

- 1** that harmonized bands for PPDR should be used to the maximum extent possible, taking into account the national and regional requirements and also having regard to any needed consultation and cooperation with other concerned countries;

2 that for the purposes of achieving harmonized frequency bands/ranges for PPDR, administrations in Regions 2 and 3 should consider the band 4 940-4 990 MHz, or parts thereof, when undertaking their national planning for broadband PPDR applications;

3 that administrations in Regions 2 and 3 should consider the frequency channelling plans indicated in Annexes 1 and 2 when allocating spectrum for use by users who are directly involved with PPDR.

Annex 1

Channelling plan A for the band 4 940-4 990 MHz for broadband public protection and disaster relief operations

This frequency channelling plan consists of ten 1 MHz channels, at the edges of the allocation, and eight 5 MHz channels in the centre of the allocation, as detailed below in Fig. 1 and Table 1. Channels may be aggregated into channel bandwidths of up to 20 MHz for higher capacity or higher bandwidth applications to allow maximum flexibility and implementation of broadband technologies.

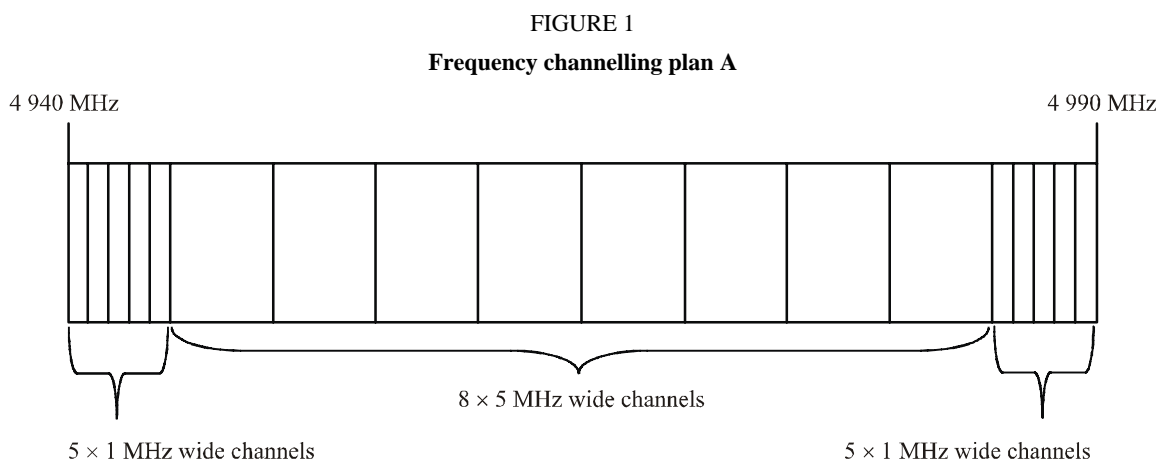


TABLE 1
Frequency channelling plan A

Channel	Lower frequency (MHz)	Upper frequency (MHz)
1	4 940	4 941
2	4 941	4 942
3	4 942	4 943
4	4 943	4 944
5	4 944	4 945
6	4 945	4 950
7	4 950	4 955
8	4 955	4 960
9	4 960	4 965
10	4 965	4 970
11	4 970	4 975
12	4 975	4 980
13	4 980	4 985
14	4 985	4 986
15	4 986	4 987
16	4 987	4 988
17	4 988	4 989
18	4 989	4 990

Annex 2

Channelling plan B for the band 4 940-4 990 MHz for broadband public protection and disaster relief operations

The following channelling plan (see Table 2), which supports channel widths from 5 MHz to 20 MHz, to provide the flexibility needed for administrations to support a variety of PPDR operational requirements. Because these channels overlap one another, administrations may take precautions in their assignment procedures to ensure that overlapping channels do not occur in close enough proximity to cause conflicts between multiple PPDR users. Note that not all of the channels are available in some countries.

TABLE 2

Example channelling plan B for 4 940-4 990 MHz

Channel numbers (n_{ch})	Channel centre 5 MHz	Channel centre 10 MHz	Channel centre 20 MHz
1	4 942.5		
2		4 945.0	
3	4 947.5		
4		4 950.0	4 950.0
5	4 952.5		
6		4 955.0	4 955.0
7	4 957.5		
8		4 960.0	4 960.0
9	4 962.5		
10		4 965.0	4 965.0
11	4 967.5		
12		4 970.0	4 970.0
13	4 972.5		
14		4 975.0	4 975.0
15	4 977.5		
16		4 980.0	4 980.0
17	4 982.5		
18		4 985.0	
19	4 987.5		