
Spectrum Management

Radio Systems Policy

Spectrum Utilization Policy on the Use of Certain Public Correspondence Bands in Canada

Related Documents

SMSE-001-05 Redeployment Plan (100-500 MHz) - Temporary Moratorium of Phase 2 Radio Equipment Certification and Licensing Requirements

SMSE-009-98 Redeployment Plan for Spectrum Efficient Land Mobile Equipment in the Frequency Range 100-500 Mhz (RDP 100-500 Mhz)

RP-019 Policy for the Provision of Cellular Services by New Parties

1. Intent

The purpose of this document is to specify the Spectrum Utilization Policy for current and future use of very high frequency (VHF) and ultra high frequency (UHF) radio frequency spectrum formerly licensed exclusively to telephone companies for public correspondence General Land Mobile Radiotelephone Service (GLMRS). General land mobile radiotelephone systems provide a low capacity two-way radiocommunication service originating from or terminating at a mobile radio transceiver, on groups of radio channels used exclusively for interconnection to the public switched network.

2. Introduction

In 1982, the Department authorized the establishment of two national cellular radio service providers while at the same time sub-allocating for their use 40 MHz of North American compatible spectrum in the band 806-890 MHz. Since its introduction at that time, cellular radio has shown significant public acceptance resulting in an appreciable, continuing rate of growth with every indication that cellular radio will eventually supercede the provision of radiotelephone services by GLMRS systems in terms of subscribers served and quality of service.

With regard to the designed GLMRS channels, it is worth noting that, while they are set aside on a Canada-wide basis for this purpose, there are some areas in the country where they are not utilized. There is also a significant demand in many areas (particularly rural) for their use for the replacement of local loops (copper wire circuits from the switching centre to the subscribers premises) to assist in the provision of basic telephone service in remote areas. Recently, applicants have been able to secure interconnection with the public switched network and have consequently shown interest in providing competitive GLMRS services. In light of the foregoing, it was timely to review the longer term need for the continuation of older and less efficient radiotelephone systems. With this objective in mind, a paper entitled "*Spectrum Utilization Policy on the Use of Certain Public Correspondence Bands in Canada*" (RP 013) was released for public comment as noted in the Canada Gazette in February, 1988. This paper raised a number of issues and made a number of policy proposals concerning the continuing operation of existing GLMRS systems.

Taking into account the comments received in response to RP 013, it has become apparent that there is a need to up-date and clarify the Department's policies with respect to the utilization of the spectrum which was dedicated to GLMRS. The policies outlined in this document will apply effective with the release of this document.

3. Policy

- 3.1 Use of the frequencies described in Annex 2, Part (b) is hereby withdrawn for GLMRS purposes. No further applications for the establishment of GLMRS systems on these frequencies will be authorized. Future disposition of these frequencies will be dealt within in the Department's project, currently underway, reviewing use of the radio frequency spectrum between 30-890 MHz.

- 3.2 In those areas where cellular radio has been, or will soon be implemented, the VHF GLMRS channels listed in Annex 2, Part (a) will continue to be authorized, but only to existing service providers. However, in those areas listed in Annex 1, Parts (a) and (b), where GLMRS has been or will be withdrawn, the Department will henceforth assign these channels for the expansion of large capacity land mobile systems and other spectrum efficient systems and, subject to channel availability, give preference to operations encompassing the widest possible service areas.
- 3.3 The Department wishes to encourage the provision of mobile radiotelephone service in areas which are underserved or which are currently not served with any radiotelephone services. Therefore, subject to technical availability of frequency channels, applications for authority to provide a mobile public correspondence radiotelephone service in unserved areas or areas not likely to receive cellular service in the near future, will be accepted from any party, including non-telephone company applicants on a first-come, first-served basis. Authority granted for such operation will be for the use of frequencies listed in Annex 2, Part (a). These channels may also be authorized for local loop replacement from rural or remote telephone subscribers to the public switched network. As these channels are allocated to the Mobile Service and local loop replacement is a fixed, not a mobile usage, the following priorities will be afforded each:
- within 60 km of the boundaries of the areas noted in Annex 1, Parts (a) and (b), the Fixed Service will have secondary status and the Mobile Service will have primary status. Local loop replacement will not generally be authorized in these areas, but if authorized, only at the discretion of the Regional Director General, and then on a secondary basis;
 - between 60 and 120 km of the boundaries of the areas noted in Annex 1, Parts (a) and (b), the fixed local loop replacement use will be secondary and the mobile use primary. However, if the local loop replacement applicant can demonstrate to the Department that the general level of loading can be achieved (customers per 25 kHz or 30 kHz channel) as usually is the case with Mobile Service use, the local loop replacement will be given co-equal primary status with any mobile service use;
 - Further than 120 km from the boundaries of the areas noted in Annex 1, Parts (a) and (b), Fixed and Mobile Service use will be afforded co-equal primary status in assignment.
- 3.4 The channels previously identified in Annex 2, Part (c) for use by GLMRS have already been withdrawn from GLMRS in areas where they were noted used, pursuant to the policy changes contained in Document SP 450 MHz (formerly SP 300.4). The spectrum utilization for those channels is given in detail in the principal document (SP 450 MHz), but it should be noted that they are generally to be used for wide area system employing spectrum efficient technologies.
- 3.5 While GLMRS systems were implemented in Canada on the channels identified in Annex 2, Part (d), they remained unused in some parts of the country. Furthermore, because of their GLMRS designation, other potential users were precluded from being licensed on these channels. Therefore, while the Department will permit existing

GLMRS systems on the channels noted in Annex 2, Part (d) to continue to operate and grow to their design potential, no new GLMRS systems will be authorized on them.

The Department will henceforth assign these channels for the expansion of large capacity land mobile systems and other spectrum efficient systems (i.e. trunked) and, subject to channel availability, give preference to operations encompassing the widest possible service areas.

At locations inside the boundaries of the areas listed in Annex 1 Parts (a) and (b), the frequencies listed in Part (d) of Annex 2 will be available to Mobile Services on a primary basis and to Fixed Services on a secondary basis. At locations outside of and extending to 60 km beyond those boundaries the same set of frequencies will be available to fixed systems used for the replacement of "local loop" systems for the extension of basic telephone service to rural and remote subscribers. While such fixed assignments will normally have secondary status in this zone, if it can be demonstrated to the Department that the number of subscriber main station terminals (Fixed Service) approximates or exceeds prescribed conventional mobile loading criteria, they could, at the discretion of the Regional Director General be given co-equal primary status with Mobile Services. At the present time, the prescribed conventional mobile system loading criteria is generally 75 mobiles per 25 kHz duplex channel. Other Fixed Services not associated with the extending of basic telephone service will only be authorized with secondary status in this zone. At distance beyond 60 km from the areas listed in Annex 1, Parts (a) and (b), Mobile and Fixed Services will be afforded co-equal primary status and assignments will be made on a first-come, first-served basis.

At the discretion of the Regional Director General, consideration may be given to requests to modify any of the provisions of the foregoing to meet particular local needs.

The licensing of all such services, which require interconnection to the public switched network would be subject to prior decisions and approvals of the appropriate regulatory authority and is intended to provide a basic form of mobile or fixed subscriber radiotelephone communications.

Annex 1

The following areas describe in general terms those areas of spectrum utilization against which alternate users of current VHF and UHF GLMRS radio frequency spectrum will be evaluated:

(a) Areas of Intensive Use

Golden Horseshoe Area (Metro Toronto, Hamilton, Brampton, Newmarket, St. Catharines), Vancouver/Victoria area, Metro Montreal area, Metro Edmonton and Metro Calgary.

(b) Areas of Moderate Use

Kitchener, Brantford, London, Windsor, Ottawa-Hull, Sudbury, Thunder Bay, St. John's, Quebec, Saint John, Regina, Saskatoon, Halifax, Sherbrooke, Winnipeg, Chicoutimi-Jonquière, Trois-Rivières and zones immediately surrounding the areas of intensive use.

(c) Areas of Light Use

This includes all areas not specified in (a) or (b) above.

For further information, consult the Department's District or Regional offices.

Annex 2

Frequencies which have, up to the coming into effect of this policy, been available for General Land Mobile Radio Service, are as follows:

Part (a)		Part (b)	
Base Transmit	Mobile Transmit	Base Transmit	Mobile Transmit
MHz	MHz	MHz	MHz
152,480	157,740	35,260	43,260
152,510	157,770	35,300	43,300
152,540	157,800	35,340	43,340
152,570	157,830	35,380	43,380
152,600	157,860	35,420	43,420
152,630	157,890	35,460	43,460
152,660	157,920	35,500	43,500
152,690	157,950	35,540	43,540
152,720	157,980	35,620	43,620
152,750	158,010	35,660	43,660
152,780	158,040		
152,810	158,070		
152,840	158,100		

Part (c)		Part (d)	
Base Transmit	Mobile Transmit	Base Transmit	Mobile Transmit
MHz	MHz	MHz	MHz
420,0125	409,0125	454,375	459,375
420,0375	409,0375	454,400	459,400
420,0625	409,0625	454,425	459,425
420,0875	409,0875	454,450	459,450
420,1125	409,1125	454,475	459,475
430,1375	409,1375	454,500	459,500
420,1625	409,1625	454,525	459,525
420,1875	409,1875	454,550	459,550
420,2125	409,2125	454,575	459,575
420,2375	409,2375	454,600	459,600
420,2625	409,2625	454,625	459,625
420,2875	409,2875	454,650	459,650
420,3125	409,3125		
420,3375	409,3375		
420,3625	409,3625		
420,3875	409,3875		
420,4125	409,4125		
420,4375	409,4375		
420,4625	409,4625		
420,4875	409,4875		
420,5125	409,5125		
420,5375	409,5375		
420,5625	409,5625		
420,5875	409,5875		
420,6125	409,6125		
420,6375	409,6375		
420,6625	409,6625		
420,6875	409,6875		
420,7125	409,7125		
420,7375	409,7375		
420,7625	409,7625		
420,7875	409,7875		
420,8125	409,8125		
420,8375	409,8375		
420,8625	409,8625		
420,8875	409,8875		
420,9125	409,9125		
420,9375	409,9375		
420,9625	409,9625		
420,9875	409,9875		