



GROUP EXECUTIVE: REGULATORY AFFAIRS

Telkom SA Limited
Private Bag X780
Pretoria, 0001, South Africa

Tel +27 12 311 3598
Fax +27 12 311 2456
E-mail BarenAJ1@telkom.co.za
Our Ref 11/15/02/2013

15 February 2013

Mr Manyapelo Richard Makgotlho
ICASA
Block A
Pinmill Farm
164 Katherine Street
Sandton

Per email : rmakgotlho@icasa.org.za

Dear Mr Makgotlho,

RE: TELKOM'S WRITTEN SUBMISSION ON THE DRAFT NATIONAL RADIO FREQUENCY PLAN

Telkom thanks the Authority for the opportunity to provide comments on the draft National Radio Frequency Plan as published in Government Gazette No. 36025 (Notice 1060 of 2012) of 21 December 2012.

Telkom's comments pertaining to the draft National Radio Frequency Plan are attached. We trust that our contribution will facilitate the further development of the National Radio Frequency Plan.

Yours sincerely

pp DR ANDREW BARENDSE
GROUP EXECUTIVE: REGULATORY AFFAIRS

Telkom SA SOC Limited: Reg no 1991/005476/30

Directors: JA Mabuza (Chairman), NT Moholi (Group Chief Executive Officer), JH Schindehütte (Chief Financial Officer), S Botha, B du Plessis, Dr. CA Fynn, N Kapila*, I Kgaboesele, K Kweyama, L Maasdorp, J Molobela, K Mzondeki, F Petersen, LL Von Zeuner.

Act: Company Secretary: A Ditle

*India

This page left intentionally blank

**TELKOM'S SUBMISSION ON THE DRAFT NATIONAL RADIO FREQUENCY PLAN
AS PUBLISHED 21 DECEMBER 2012 IN GOVERNMENT GAZETTE No. 36025
(NOTICE 1060 OF 2012)**

1 INTRODUCTION

Telkom SA SOC Limited (“**Telkom**”) welcomes the opportunity to provide comments on the draft National Radio Frequency Plan (“**NRFP**”) as published in Government Gazette No. 36025 (Notice 1060 of 2012) of 21 December 2012. The due date for written submissions was extended to 15 February 2013 in Government Gazette No. 36134, dated 4 February 2013.

The submission is structured as follows: Section 2 provides an Executive Summary of Telkom’s main arguments whereas Section 3 presents general remarks with regard to the draft NRFP. This is followed by general and band specific comments on the table of frequency allocations in sections 4 and 5, respectively. Finally, Section 6 concludes the submission with comments of an editorial nature.

Table of Contents

1	INTRODUCTION	3
2	EXECUTIVE SUMMARY	6
3	GENERAL COMMENTS	7
3.1	Terms and definitions (Section 1.1 of draft NRFP)	7
3.2	Legislative framework (Section 2.1 of draft NRFP).....	7
3.2.1	Incorporation of documents referred to in the NRFP	7
3.2.2	Annual review of the NRFP	9
3.2.3	Updating of frequency bands for spectrum licence exempt use	9
3.2.4	Use of frequency ranges and band segmentation (section 2.3.6 of draft NRFP) ..	10
3.2.5	Preamble	10
4	TABLE OF FREQUENCY ALLOCATIONS – GENERAL COMMENTS	11
4.1	References to Government Gazettes	11
4.2	Inclusion of RFID frequency bands in the NRFP	11
4.3	Inclusion of amateur services in the NRFP	11
4.4	Telkom Maritime data	11
4.5	Inclusion of references to relevant ITU Resolutions, Articles and Recommendations..	12
4.6	Inclusion of additional tables listing frequency bands for specific services	12
5	Band specific comments	13
5.1	148 – 152 MHz (wildlife telemetry tracking).....	13
5.2	156.4875 – 156.5625 MHz.....	13
5.3	156.7625 – 156.7875 MHz.....	13
5.4	390 – 399.9 MHz	13
5.5	430 – 440 MHz	13

5.6	862 – 890 MHz	13
5.7	1350 - 1375 MHz // 1492 – 1517 MHz and 1375 – 1400 MHz // 1427 – 1452 MHz	13
5.8	1517 - 1525 MHz	14
5.9	1525 - 1559 MHz	14
5.10	1559 - 1610 MHz	14
5.11	2025 - 2110 MHz and 2200 – 2290 MHz.....	14
5.12	2500 - 2690 MHz	14
5.13	2655 - 2690 MHz	15
5.14	4400 - 4800 MHz	15
5.15	5010 - 5030 MHz	15
5.16	5470 - 5725 MHz	15
5.17	12.5 – 12.75 GHz.....	15
5.18	14 – 14.5 GHz.....	15
5.19	Ka-band.....	16
5.20	21.4 – 22 GHz.....	16
5.21	24.25 – 24.45 GHz.....	16
5.22	40.5 – 43.5 GHz.....	16
5.23	55.78 – 59 GHz.....	16
5.24	81 - 86 GHz	16
5.25	92 - 95 GHz	16
5.26	NF14 (Channel arrangements for FS PTP systems)	17
6	COMMENTS OF AN EDITORIAL NATURE	18
6.1	Definitions.....	18
7	Annexure A: List of frequency bands used for Maritime services	19

2 EXECUTIVE SUMMARY

Telkom congratulates the Authority on a document well drafted and in line with international standards and developments with regard to the use of radio frequency spectrum. Telkom's contributions towards the further development of the NRFP can be summarised in the following points:

Suggestions to further enhance the NRFP

- Incorporation and references to ITU related documents such as ITU RR Articles, ITU Resolutions, ITU-R Recommendations, ITU RR footnotes and definitions from the ITU RR
- Verification of applications pertaining to the maritime services
- Additional tables to list frequency bands to be used for specific services such as PMR/PAMR, satellite, radio astronomy, etc
- Inclusion of references to the Government Gazette pertaining to RFID.

Additions to the NRFP pertaining to new applications

- Adding Ka-band satellite services (17.7 – 19.7 GHz and 27.5 – 31.0 GHz)
- Adding new PTP terrestrial frequency bands (i.e. 42 GHz, 57 GHz and 94 GHz)

Amendments of an editorial nature

- Band specific comments
- General comments

3 GENERAL COMMENTS

3.1 Terms and definitions (Section 1.1 of draft NRFP)

Telkom supports the inclusion of the International Telecommunication Union (“ITU”) definitions of the various radiocommunication services, stations and terms as also contained in the ITU Radio Regulations (“RR”) since these are crucial for interpretation and application of the NRFP, which is based on the ITU RR.

In order to complete the list of terms and definitions, Telkom recommends that general terms such as “*administration*”, “*radiocommunication*”, “*telecommunication*”, “*radio*”, “*space radiocommunications*”, etc. also be added to the list of definitions since these terms are used extensively within the NRFP, in particular the ITU footnotes contained in section 6 of the draft NRFP. Telkom also recommends that terms defined in Article 1 of the ITU RR in sections V (“Operational terms”), VI (“Characteristics of emissions and radio equipment”), VII (“Frequency sharing”) and VIII (“Technical terms relating to space”), where such terms are used in the NRFP, also be added to the NRFP. It is noted that some terms are used within ITU provisions other than Article 5 (“Frequency allocations”) and may therefore be omitted from the NRFP.

Additionally, since some of these ITU definitions addressed above, are also used in the Electronic Communication Act, Act 36 of 2005 (“ECA”) either directly (e.g. “*radio*”) or with similar meaning (e.g. “*telecommunication*” in the ITU RR versus “*electronic communications*” in the ECA), Telkom respectfully recommends that a suitable introductory paragraph be added to subsection 1.1 of the NRFP to stipulate that these terms and definitions are to be used in the application of the NRFP and do not necessarily apply elsewhere.

3.2 Legislative framework (Section 2.1 of draft NRFP)

3.2.1 Incorporation of documents referred to in the NRFP

A document containing ITU – R and all other relevant Resolutions and Recommendations referred to in this document can be found on the Authority’s website. This document contains a list of all ITU – R Footnotes for information purposes.

Telkom wishes to make a few comments with regard to the above extract from section 2.1 of the draft NRFP.

- a. Telkom agrees that documents such as ITU Resolutions, ITU-R Recommendations, etc. are part and parcel to the NRFP and need to be read in conjunction with the NRFP. Also, considering the number and size of these documents, it is reasonable that these documents are not included in the NRFP but be made available in another form, for example, on the Authority’s website. Another option could be to provide a hyperlink to

the ITU RR published on the ITU website, since the electronic version is available free of charge. This will eliminate the need to compile the relevant documents and publish same on the Authority's website. Furthermore, in this case the ITU footnotes as contained in section 6 of the draft NRFP could also be eliminated since these are contained in Article 5 of the ITU RR. This will reduce the size of the NRFP substantially, which will cut down production costs, taking also into account the proposed annual updating of the NRFP. If this proposal is adopted, it will be required to add suitable references in the NRFP to the specific ITU Articles. Documents other than the ITU RR, if any, may still need to be published on the Authority's website.

- b. As indicated above, some of these documents are part and parcel of the NRFP and should therefore not be treated as "information documents". For example, certain ITU-R Recommendations are incorporated by reference (Volume 4 of the ITU RR); these recommendations are part of the table of frequency allocations and should be treated as treaty text. Also, some ITU Resolutions contains mandatory text and should therefore be adhered to in relation to the use of the relevant radiocommunication services as applicable.
- c. The reference to "*this document*" in the last sentence could be misinterpreted since it could be read as referring to either the NRFP or the document to be placed on the Authority's website. Also, it is not clear why it is indicated that the ITU footnotes are included "*for information purposes*" since these footnotes form an integral part of the table of frequency allocations; these could either provide additional allocations, alternative allocations, a different category of service for the band or provide regulatory provisions to be applied to some or all of the radiocommunications services in the relevant frequency band.

Considering the above, Telkom recommends that this section be replaced with the following:

"A document containing all relevant ITU Resolutions, ITU-R Recommendations and other related documents referred to in the NRFP 2013, can be found on the Authority's website. These Resolutions, Recommendations and other documents are incorporated by reference in the NRFP 2013 and must be read in conjunction with the NRFP."

Or

"All relevant documents such as ITU Resolutions and ITU-R Recommendations are available on the ITU website. Other related documents referred to in the NRFP 2013, can be found on the Authority's website. These Resolutions, Recommendations and other documents are incorporated by reference in the NRFP 2013 and must be read in conjunction with the NRFP."

3.2.2 Annual review of the NRFP

In view of the above, it is the intention of the Authority to issue new editions of the national radio frequency plan annually, taking account the introduction of new radiocommunication services, the phasing out of older services and the pressure placed on this limited resource.

Whereas Telkom could agree with the annual updating of the NRFP, in order to keep the plan relevant, amongst others for the reasons as indicated in the above extract from section 2.1 of the draft NRFP, Telkom respectfully request the Authority to also acknowledge the consideration of current usage of the radio frequency spectrum, as also enshrined in section 34(5) of the ECA. Whereas technologies and spectrum use are constantly changing, it is also important to create stability in the ICT sector through the NRFP; spectrum users should have confidence in the use of spectrum in order to support large investments in national networks, which must be recouped over several years. This is aligned with the ECA objectives.

3.2.3 Updating of frequency bands for spectrum licence exempt use

- Updated ISM frequency bands in line with GG No. 34172, dated 31 March 2011 (Radio Frequency Spectrum Regulations and as amended from time to time).

Telkom notes that updating of the NRFP in accordance with GG No. 34172 is more comprehensive than only with regard to the ISM frequency bands. Telkom also recommends that reference be made to the inclusion of RFID applications in the NRFP, which are based on Government Gazette No. 31127 (dated 5 June 2008). Telkom therefore recommends the following amendment to this sentence:

“Updated ISM use of frequency bands for radio apparatus exempted from radio frequency spectrum licences in line with Government Gazette No. 34172, dated 31 March 2011 (Radio Frequency Spectrum Regulations) and as amended from time to time) and Government Gazette No. 31127, dated 5 June 2008 (Spectrum Re-allocation for Radio Frequency Identification (RFID) Systems).”

3.2.4 Use of frequency ranges and band segmentation (section 2.3.6 of draft NRFP)

Frequencies are expressed as follows:

- in kilohertz (kHz), up to and including 3 000 kHz;
- in megahertz (MHz), above 3 MHz, up to and including 3 000 MHz;
- in gigahertz (GHz), above 3 GHz, up to and including 3000 GHz.

- a. This section is aligned with Article 2 (“nomenclature”) of the ITU RR. However, it should be noted that Article 5 (Frequency Allocations) of the ITU RR does not follow this convention and as such the NRFP is also not aligned with this convention (NRFP uses kHz up to 27 500 kHz and MHz up to 10 000 MHz). According to footnote 2.1.1 of Article 2 of the ITU RR, the Radiocommunication Bureau does not follow the above convention in the application of the RR. Telkom therefore recommends that this part be deleted from the NRFP since it is not applicable to the NRFP.
- b. In accordance with Article 2 of the ITU RR, VLF is used for the frequency range 3 to 30 kHz (not 9 – 30 kHz) and this should be amended accordingly.
- c. In addition, Telkom recommends adding the symbol “THF” or “Tremendously High Frequency” for the band 300 GHz to 3000 GHz. Although this term is not yet used by the ITU in Article 2, the term is used by some members in the industry.

3.2.5 Preamble

Telkom recommends that this version of the NRFP be referred to as NRFP 2013 (and not 2012) since it will be prescribed in 2013.

4 TABLE OF FREQUENCY ALLOCATIONS – GENERAL COMMENTS

4.1 References to Government Gazettes

Telkom acknowledges that the references to Government Gazettes may become obsolete due to amendments of these Gazettes in the periods between updates of the NRFP. Telkom would however recommend a short editorial amendment to the relevant text, throughout the draft NRFP, as follows:

“GG No. 34172, dated 31 March 2011 (Annex B) ~~as-is~~ or as amended”

This amendment will also apply to references to other Government Gazette’s.

4.2 Inclusion of RFID frequency bands in the NRFP

Telkom agrees that the use of radio frequency spectrum by apparatus exempted from having a radio frequency spectrum licence should be reflected in the NRFP and therefore agrees with the references, in the relevant frequency bands, to Government Gazette No. 34172 dated 31 March 2011. Telkom therefore also recommends that references to Government Gazette No. 31127 dated 5 June 2008 (“*Spectrum Re-allocation for Radio Frequency Identification (RFID) Systems*”) be added to the relevant frequency bands. This Regulation has not been incorporated in the RFSR, 2011 and has also not been repealed and as such should be included in the NRFP.

4.3 Inclusion of amateur services in the NRFP

Telkom supports the references, in the relevant frequency bands, to GG No. 34172 as it relates to the amateur services. Nevertheless, Telkom respectfully recommends that this information be limited to referencing the Government Gazette number and not adding details (e.g. Class A1) as this information, and much more, is contained in the relevant Gazette. It is noted that in some cases there are discrepancies between the information contained in the draft NRFP versus that contained in the RFSR, 2011, which could lead to misinterpretation. At most, limitations in frequency band usage should be included in the table of frequency allocations.

4.4 Telkom Maritime data

The current entries in the draft NRFP pertaining to maritime services, as it relates to Telkom’s provisioning of both commercial services and those services provided on behalf of the Department of Transport relating to SOLAS / GMDSS are out of date and need to be updated. See Annexure A to this submission for a summary of the use of frequencies for maritime services as currently provided by Telkom. This information is also contained on the ITU website. Telkom recommends that the NRFP be updated in order to reflect the current use of these bands. It should however be noted that Telkom has not commented on the use of maritime frequencies by other entities.

4.5 Inclusion of references to relevant ITU Resolutions, Articles and Recommendations

Telkom recommends that references be added in the NRFP (“Comments” column) to relevant ITU Resolutions and Articles as well as relevant ITU-R Recommendations, as was also done with SADC FAP 2010. This will assist the reader to better understand the relevant main provisions relating to the use of the radio frequency spectrum. These should include, amongst others, references to ITU Appendices 15, 17, 18, 25, 26, 27, 28, 30, 30A and 30B. References to Articles could include, amongst others, Articles 21, 22, 23, 24, 25, 26, etc. The relevant ITU Resolutions, related to the NRFP, should also be identified and referenced in the NRFP.

This is an enormous exercise but will assist users of the radio frequency spectrum to comply with the relevant provisions of the ITU RR as it relates to the NRFP. Telkom respectfully recommends that this matter be addressed before the NRFP 2013 is concluded. It is also foreseen that the RFSR, 2011 be amended in order to ensure compliance with certain provisions of the ITU RR.

4.6 Inclusion of additional tables listing frequency bands for specific services

Telkom supports the inclusion of tables to list frequency bands associated with a particular service such as was done for IMT (NF9) or FS PTP (NF14). In line with this methodology, Telkom recommends that additional tables be created to list a number of specific services including PMR/PAMR, satellite, radio astronomy (as used at the Hartebeesthoek observatory), broadcasting, etc.

5 Band specific comments

5.1 148 – 152 MHz (wildlife telemetry tracking)

This entry, which is also contained in the RFSR, should be added to the “Typical Applications” column of sub-band 149.9 – 150.05 MHz.

5.2 156.4875 – 156.5625 MHz

The application “*Maritime Radionavigation and location (Radar)*” within this frequency band needs to be confirmed considering that this band is reserved for digital selective calling for distress, safety and calling (channel 70 as per ITU RR Appendix 18).

5.3 156.7625 – 156.7875 MHz

The application “*Maritime Radionavigation and location (Radar)*” within this frequency band needs to be confirmed considering that this channel (channel 75 as per ITU RR Appendix 18) is to be used for single frequency port operations and, in particular, there is also the need to protect channel 16 (Distress, safety and calling).

5.4 390 – 399.9 MHz

The reference to Public Protection Digital Radio (PPDR) in column 3 of the table should be Public Protection and Disaster Relief (PPDR).

5.5 430 – 440 MHz

The reference to GG No. 34172 (Annex I) in relation to the amateur service needs to be verified since this Gazette includes frequency bands up to 30 MHz only.

5.6 862 – 890 MHz

Whereas the band 864.1 – 868.1 MHz is used for CT2 cordless telephones (on a spectrum licence exempted basis in accordance with the RFSR, 2011) as reflected in the draft NRFP, this band is also used for CT2 FWA systems on a licensed basis. Telkom therefore requests the addition of the following entry in the fixed allocation (column 3):

“CT2 FWA (864.1 – 868.1 MHz)”

5.7 1350 - 1375 MHz // 1492 – 1517 MHz and 1375 – 1400 MHz // 1427 – 1452 MHz

This band is allocated to the fixed services and is used for low capacity PTP links. It is therefore recommended that this band be added to the table in NF14 and that the necessary references to NF14 be added to the NRFP as required.

In addition, Telkom recommends that the reference to CEPT T/R 13-01 (Annex A) be replaced with a reference to ITU-R Recommendation F.1242. Also, reference to the ITU-R Recommendation should be used in the table in NF14.

5.8 1517 - 1525 MHz

The draft NRFP indicates that this band is to be used for Single frequency links in accordance with CEPT T/R 13-01. Telkom wishes to highlight the fact that this CEPT Recommendation does not include this frequency band. T/R 13-01 deals with three frequency bands namely 1350 - 1375 MHz // 1492 - 1517 MHz, 1375 - 1400 MHz // 1427 - 1452 MHz and 2025 - 2110 MHz // 2200 - 2290 MHz. Considering also the use possible use of this band by MSS, including IMT, Telkom recommends that the band should not be used for single frequency links.

5.9 1525 - 1559 MHz

The sub-division of this frequency range into sub-bands dedicated for GMDSS maritime satellite, mobile satellite, aeronautical mobile satellite and land mobile satellite is questionable and needs further analysis and/or explanation. An MSS system operating in the L-band, for example Inmarsat, will probably serve all the markets listed above (aeronautical, land and maritime, including GMDSS); it is not clear why (and how) the allocated spectrum will be subdivided as indicated above. This sub-division seems to be impractical from a technical, commercial and regulatory perspective. Telkom recommends that the entire band be open for MSS including applications to land, aeronautical and maritime. Due protection of GMDSS services is required in accordance with 5.353A. This subdivision of MSS is also applied to the frequency range 1626.5 – 1660.5 MHz and should be amended accordingly.

5.10 1559 - 1610 MHz

The application “*Aeronautical (R) (1545-1555 MHz)*” in this band must be verified because “R” (Route) and “OR” (Off-route) is by definition associated with the aeronautical mobile and aeronautical mobile satellite services and not with the aeronautical radionavigation service.

5.11 2025 - 2110 MHz and 2200 – 2290 MHz

The reference to NF15 in the band 2025 – 2110 MHz should be NF14. Also, reference to NF14 should be added to the band 2200 – 2290 MHz.

5.12 2500 - 2690 MHz

The reference to “FIXED 5.410” as a South African allocation in this band must be verified. Whereas this band is earmarked for mobile services and in particular for IMT, the use of this band for tropospheric scatter systems under the fixed service could result in harmful interference to the mobile systems.

5.13 2655 - 2690 MHz

The reference to MTX in the bands 2655-2670 MHz and 2670-2690 MHz are incorrect; the band 2620 – 2690 MHz is indeed the BTX band.

5.14 4400 - 4800 MHz

The reference to NF15 in the band 4400 – 4500 MHz should be NF14. Furthermore, a reference to NF14 should be added to the band 4500 – 4800 MHz.

5.15 5010 - 5030 MHz

The ITU allocations for this band should be added. These allocations should be the same as the South African allocations.

5.16 5470 - 5725 MHz

In accordance with ITU Resolution 229 (Rev. WRC-15), this band is not limited to indoor use and this restriction should therefore be removed. It is also critical that reference be made to ITU Resolution 229 (Rev. WRC-12) as it contains substantial technical and regulatory conditions pertaining to the use of this band.

It should also be noted that, according to the same resolution, for the frequency band 5250 – 5350 MHz, the predominant number of stations in the mobile service should be operated in an indoor environment; it is therefore possible to revisit the current restrictions to indoor use only in the band 5250 – 5350 MHz, if needed.

5.17 12.5 – 12.75 GHz

Telkom recommends that the use of Ku-band satellite services be added to this band in the “Typical applications” column considering that this band is used for VSAT services. Telkom recommends the following text: “*Ku-band downlink (VSAT)*” to be added as the typical application.

5.18 14 – 14.5 GHz

According to ITU footnote 5.504B, aircraft stations operating in the aeronautical-mobile service in this band, shall comply with certain parts of ITU-R Recommendation M.1643 in order to protect radio astronomy services operating in the band 14.47 – 14.5 GHz in the listed countries, which includes South Africa. Whereas the mobile-satellite allocation has been retained for the band 14 – 14.3 GHz, it has been deleted from the band 14.3 – 14.5 GHz. This apparent discrepancy must be addressed and amended, as required. Also, it is not clear why the secondary radio astronomy allocation in the band 14.47 – 14.5 GHz has not been included for South Africa since South Africa added its name to footnote 5.504B at WRC-03 (which indicates the need to protect radio astronomy in this band in South Africa). Telkom therefore recommends that the secondary allocation to radio astronomy be added, even if this is a future requirement.

5.19 Ka-band

Telkom recommends that the use of Ka-band satellite services be added to the NRFP since space segment on various Ka-band satellites are now available from international satellite operators. Telkom therefore propose the following additions to the NRFP:

- “Ka-band (VSAT Gateway downlink)” to the frequency band 17.7 – 19.7 GHz
- “Ka-band (VSAT terminal downlink)” to be added to the band 19.7 – 21.2 GHz
- “Ka-band (VSAT Gateway uplink)” to be added to the band 27.5 – 29.5 GHz
- “Ka-band (VSAT terminal uplink)” to be added to the band 29.5 – 31 GHz

5.20 21.4 – 22 GHz

A reference to NF14 should be added to the fixed service in this band (part of the 23 GHz band).

5.21 24.25 – 24.45 GHz

The reference to “*Fixed Links (26 GHz) (24.5 – 26.5 GHz)*” should be deleted from this band since the 26 GHz band starts at 24.5 GHz.

5.22 40.5 – 43.5 GHz

Telkom recommends that the 42 GHz band (40.5 – 43.5 GHz) be added to the NRFP. This band could be used for fixed links and/or BFWA in accordance with ITU-R Recommendation F.2005. This band should also be added to NF14 and the appropriate references to NF14 be added in the table. An additional note should be added regarding the use of this band for PTP or BFWA or both. This may need further investigation.

5.23 55.78 – 59 GHz

Telkom recommends that the 57 GHz band (55.78 – 59 GHz) be added to the NRFP. This band could be used for fixed links in accordance with ITU-R Recommendation F.1497. This band should also be added to NF14 and the appropriate references to NF14 be added in the table.

5.24 81 - 86 GHz

The reference to “*Fixed Links (80 GHz) (81 – 66 GHz)*” should be amended to reflect the band 81 – 86 GHz. Also, this entry should therefore be added to the frequency band 84 – 86 GHz including the associated reference to NF14.

5.25 92 - 95 GHz

Telkom recommends that within this frequency range, the sub-bands 92 – 94 GHz and 94.1 – 95 GHz be allocated to fixed services in South African (94 GHz band). The relevant channelling plan is outlined in ITU-R Recommendation F.2004 and in particular Annex 2 (FDD

arrangement). This band should be added to NF14 with the relevant references to NF14 added to the table.

5.26 NF14 (Channel arrangements for FS PTP systems)

The relevant channelling plan for the 80 GHz band is ITU-R Recommendation F.2006.

6 COMMENTS OF AN EDITORIAL NATURE

6.1 Definitions

AGA Astronomy Geographic Advantage Act, 2007 (Act No. 21 of 2007)

BRAN Broadband Radio Access Network

CISPR ~~The international Radio Interference Committee~~ Special international committee on radio interference

Telkom also notes that several acronyms contained in section 1.2 the draft NRFP are either no longer in use (e.g. “DSI”, “CCIR”, etc.) or are not used in the draft NRFP (e.g. “BRAN”, “DME”, etc.). Telkom respectfully recommends that these unused terms be deleted.

The terms “BST” and “BTX” has similar meanings and one should therefore be deleted; it is recommended that “BST” be deleted since it is not used in the draft NRFP.

7 Annexure A: List of frequency bands used for Maritime services

Frequency Band as per draft NRFP	Frequency Used	Services
505-526.5 kHz	518 kHz	Transmission of meteorological bulletins; Notices to navigators
2 173.5-2 190.5 kHz	2 182 kHz	Public correspondence
4 063-4 438 kHz	4 077 kHz	Public correspondence
	4 083 kHz	Public correspondence
	4 125 kHz	Public correspondence
	4 207.5 kHz	DSC watchkeeping
	4 369 kHz	Public correspondence
	4 375 kHz	Transmission of meteorological bulletins; notices to navigators; Public correspondence
	4 417 kHz	Public correspondence
6 200-6 525 kHz	6 203 kHz	Public correspondence
	6 312 kHz	DSC watchkeeping
	6 504 kHz	Public correspondence
8 195-8 815 kHz	8 207 kHz	Public correspondence
	8 216 kHz	Public correspondence
	8 255 kHz	Public correspondence
	8 731 kHz	Public correspondence
	8 740 kHz	Transmission of meteorological bulletins; notices to navigators; Public correspondence
	8 779 kHz	Public correspondence
	8 414.5 kHz	DSC watchkeeping
12 230-13 200 kHz	12 254 kHz	Public correspondence
	12 290 kHz	Public correspondence
	12 299 kHz	Public correspondence
	12 359 kHz	Public correspondence
	12 577 kHz	DSC watchkeeping
	13 101 kHz	Public correspondence
	13 146 kHz	Transmission of meteorological bulletins; notices to navigators; Public correspondence
16 360-17 410 kHz	16 381 kHz	Public correspondence
	16 420 kHz	Public correspondence
	16 456 kHz	Public correspondence
	16 537 kHz	Public correspondence
	16 804.5 kHz	DSC watchkeeping
	17 263 kHz	Public correspondence
	17 338 kHz	Public correspondence

Frequency Band as per draft NRFP	Frequency Used	Services
22 000-22 855 kHz	22 009 kHz	Public correspondence
	22 015 kHz	Public correspondence
	22 060 kHz	Public correspondence
	22 705 kHz	Public correspondence
	22 711 kHz	Public correspondence
	22 756 kHz	Public correspondence
154-156.4875 MHz	Several channels used within this range in accordance with Appendix 18 of the ITU RR	Public correspondence
156.7875-156.8125 MHz	Channel 16 in accordance with Appendix 18	Public Correspondence
156.8375-161.9625 MHz	Several channels used within this range in accordance with Appendix 18 of the ITU RR	Transmission of meteorological bulletins; Notices to navigators; Public correspondence
161.9875-162.0125 MHz	Channel 28 in accordance with Appendix 18	Transmission of meteorological bulletins; Notices to navigators