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## GENERAL NOTICE

NOTICE 1781 OF 1999

**SOUTH AFRICAN TELECOMMUNICATIONS REGULATORY AUTHORITY**



### **NOTICE IN RESPECT OF REQUIREMENTS AND POLICY FOR OPERATIONS IN THE 2.6 GHz BAND.**

1. In terms of the Telecommunications Act, (Act No.103 of 1996), and pursuant to Notice 759 of 1997 published in Government Gazette No.17983 on 6 May 1997, wherein notice is given of the revision of the South African Frequency Allocation Plans (Band Plan) and Migration Strategies, South African Telecommunications Authority (SATRA) hereby adopts and makes known the requirements and policy for operations in the 2.6 GHz frequency band.

**MR HNL MAEPA, PrEng, PE**  
**CHAIRPERSON: SATRA**

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**S.A.T.R.A****Detailed Policy / Requirements for Operations in the 2.6 GHz Band****NOTES:**

All aspects or implications of this policy should be referenced to the relevant sections of the Telecommunications Act (103 of 1996). In particular:

- In accordance with Sect. 41 of the Act, a private telecommunication network may only be provided using Telkom facilities, except where the network is on private property, or when Transnet or Eskom maintains it.
- In accordance with Sect. 43 and 44 of the Act, Telkom has the first right of refusal to provide telecommunication facilities to interconnect with the telecommunication system of another telecommunication service provider.
- In accordance with Sect. 30 of the Act, any user holding a radio frequency licence, which was valid immediately before the date of commencement of the Act, shall have certain rights to continue to utilise the radio spectrum.

In general, the Authority (SATRA) will discourage the use of radio for the provision of links having a narrow RF channel bandwidth. As far as the technical parameters of any new link/service are concerned, the Authority (SATRA), however, reserves the right to make exceptions on a case-by-case basis at its own discretion. In particular, where there is no other realistic alternative for providing the service.

Prior to the purchasing of fixed link equipment, users should approach the Authority (SATRA) to discuss the availability of suitable frequencies and, if appropriate, initiate the licensing process. The Authority (SATRA) cannot guarantee the availability of particular frequencies and the prior purchase of equipment cannot be used as motivation or an overriding reason to assign a frequency in a particular band.

**POLICY AND REQUIREMENTS**

1. In general, the design of systems or networks should be based on sound engineering and frequency management principles. In particular, the frequency spectrum must be utilised in an optimum and efficient manner at all times and thus allowing for maximum re-use and sharing capabilities.
2. The frequency band 2504 - 2593 MHz / 2597 - 2686 MHz will be known as the 2.6 GHz band and will be considered a shared band. Channel arrangement for the band 2523 - 2593 / 2597 - 2667 MHz is in accordance with CEPT Recommendation TR13-01, Annex D (detailed plan attached). New services will commence utilisation at channel 40 until fully saturated where after the next channel will be considered.

- 3 Channel 1, 2, 3 and 4 outside of the TR13-01 (D) recommendations to be utilised for services currently requiring 8MHz channel spacing/bandwidth.
- 4 Although the 2.6 GHz band will be considered a shared band, it will be used primarily for point-to-point and point-to-multipoint links as per Government Gazette No.17983, Notice 759, Item 3.10.3 of 6 May 1997.
- 5 Existing MMDS type services to migrate in accordance with the migration time schedules set out in Government Gazette No.19120, Notice 1535, item (2.7) of 31 July 1998. The 70% referred to in this Gazette will include 2504 - 2520 MHz, 2670 - 2686 MHz and 2523 - 2567.2 / 2597 - 2641.2 MHz for urban areas.
- 6 No new applications for MMDS type services will be considered in the band.
- 7 New applications will only be considered if in compliance/conformance with the rules and regulations stipulated herein.
- 8 Equipment type approval and conformance to approved standards will be obligatory
9. In general (i.e. for point-to-point links) the minimum link/hop length for operations in this band shall be 30 km.
10. Antenna beamwidths for point-to-point links as measured at the 3 dB points to be less than, but not exceeding, 6 degrees in total (i.e.  $\pm 3$  degrees from the nominal direction of the link). Wider beamwidths will be considered provided motivation can be submitted that such beamwidths will improve frequency reuse.
11. Transmitter power delivered to the antenna must be adjusted to the absolute minimum level for satisfactory overall system performance.
12. Diversity techniques to be employed in a spectrum efficient manner and to allow for maximum frequency reuse capabilities.
- 13 Systems or networks may only be installed or deployed after authority to proceed has been obtained from the Authority (SATRA).
14. With regards to 14 above, applicants are to;
  - 14.1 Initiate and fully complete the frequency co-ordination process with all co-users of the band to avoid/determine possible interference.
  - 14.2 Obtain formal and official consent/objections to the proposed new service/s or operations in writing from all co-users.
  - 14.3 Fully complete the applicant form/s as prescribed by the Authority (SATRA).

- 14.4 Timeously submit properly completed application form/s together with the original formal/official consents/objections obtained from the co-users (see point 15.2), to the following address for licensing consideration.

Head of Department  
Commercial Radio Licensing  
SATRA  
Private Bag X 1  
Marlboro, 2063  
South Africa.

15. The Authority (SATRA) reserves the right to request the implementation of modifications/changes to the final link/system design parameters should these not be in conformance with sound frequency management principles or the general requirements outlined in this document
16. Serious consideration be given to the possibility of exclusive spectrum users above 3 GHz releasing frequencies/channels for subdivision and sharing in order to accommodate narrower RF channel bandwidths should equipment become available.

CEPT	T/R13-01(D)		-	CEPT
Band	2.6 GHz		2.6 GHz	Band
Ctr.Freq	2595 MHz		-	Ctr.Freq
Ch.Width	1.75 MHz		8 MHz	Ch.Width
Separ.	74 MHz		-	Separ.
Ch.Spac.	1.75 MHz		8 MHz	Ch.Spac.
Ctr.Gap	4 MHz		-	Ctr.Gap
Ch.	Go	Return	Ch.	
1	2523.8750	2597.8750	1	2508.0000
2	2525.6250	2599.6250	2	2516.0000
3	2527.3750	2601.3750	3	2574.0000
4	2529.1250	2603.1250	4	2682.0000
5	2530.8750	2604.8750		
6	2532.6250	2606.6250		
7	2534.3750	2608.3750		
8	2536.1250	2610.1250		
9	2537.8750	2611.8750		
10	2539.6250	2613.6250		
11	2541.3750	2615.3750		
12	2543.1250	2617.1250		
13	2544.8750	2618.8750		
14	2546.6250	2620.6250		
15	2548.3750	2622.3750		
16	2550.1250	2624.1250		
17	2551.8750	2625.8750		
18	2553.6250	2627.6250		
19	2555.3750	2629.3750		
20	2557.1250	2631.1250		
21	2558.8750	2632.8750		
22	2560.6250	2634.6250		
23	2562.3750	2636.3750		
24	2564.1250	2638.1250		
25	2565.8750	2639.8750		
26	2567.6250	2641.6250		
27	2569.3750	2643.3750		
28	2571.1250	2645.1250		
29	2572.8750	2646.8750		
30	2574.6250	2648.6250		
31	2576.3750	2650.3750		
32	2578.1250	2652.1250		
33	2579.8750	2653.8750		
34	2581.6250	2655.6250		
35	2583.3750	2657.3750		
36	2585.1250	2659.1250		
37	2586.8750	2660.8750		
38	2588.6250	2662.6250		

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