LS telcom
LS of South Africa Radio Communication Services (Pty) Ltd.

RADIO TELECOMMUNICATION SERVICES

DBS Presentation for ICASA Submission by LS of SA and RTS

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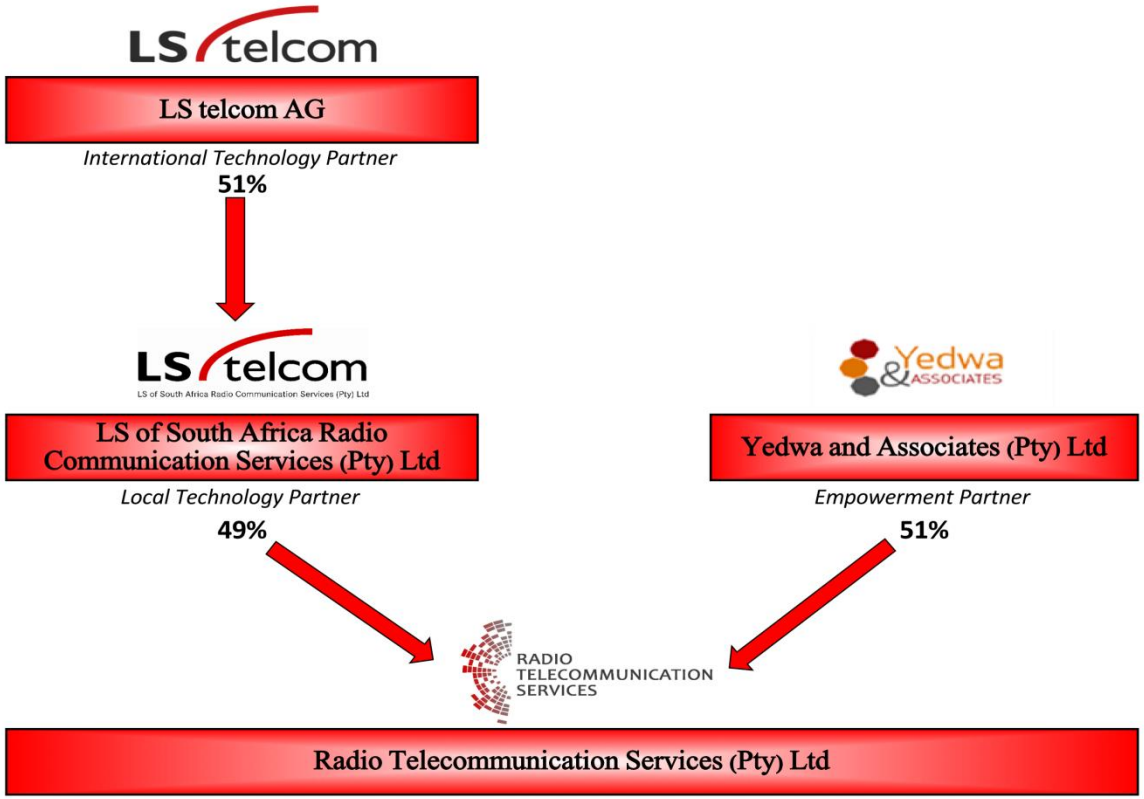
Company Organisational Structure



Introduction to Radio Telecommunication Services (Pty) Ltd.

- Radio Telecommunication Services (Pty) Ltd, or RTS is a Level I BBBEE Company with a 51% shareholding from Yedwa and Associates (a 100% black women owned company)
- 49% of RTS shares are owned by LS of South Africa Radio Communication Services (Pty) Ltd being a part of the LS telcom group of companies.

- Our Company Directors are
  - Yedwa Mbali Mjiako (Managing)
  - Koenie Schutte (Executive)

Core focus areas of business…

- Broadcast transmission solutions
- RF planning and consulting
- Spectrum management
- RF project management
- Remote Piloted Aircraft Solutions (RF Site audits, antenna measurements and aerial photography)
- Container solutions
- Turnkey projects and systems integration
- Training centre
- EMI/EMC testing

Some of our broadcast customers…

RADIO TELECOMMUNICATION SERVICES


Question one – Motivation for the need of DSB technologies…

Question 1

Is there a need for the introduction of DSB technologies in South Africa? Motivate your answer?

- DSB Technologies (DAB+) can provide suitable supplementary capacity for analogue FM (where present spectrum resources are depleted for example in primary markets).
- The future longevity of the MF/HF spectrum can be realised through migration to DRM30.
- Both digital technologies are considered to be spectrum efficient

Question two – Applicable DSB standards…

Question 2

Do you think the list of technical standards to which the DSB equipment must conform are exhaustive? Motivate your response and suggest other equipment technical standards?

- The list of standards as provided for meets the minimum requirements and therefore no edification is necessary. As appropriate – the applicable ETSI standards should provide the point of reference for any DSB standard.
- It is also important to ensure that the technologies which are considered have affordable reception equipment and that economies of scale will further result in cheaper reception equipment.

Question three – Policy directives towards DSB technologies…

Question 3

In the absence of a policy directive for providing standard for DSB, should the Authority provide licences for other DSB technologies? Please motivate your answer

- The Authority should only consider providing licenses for two DSB technologies – these being DRM30 and DAB+ respectively.
- The considerations for adopting DRM+ for the FM analogue spectrum cannot currently be considered as there exists no spectrum ‘real-estate’ in any of the primary markets that will offer significant protection between the existing FM analogue and future DRM+ (COFDM) signals.
- The current FM spectrum occupancy will also suffer from more interference should DRM+ now be considered for implementation together with FM in VHF Band II.

Question three…(continued)

- **The current FM spectrum occupancy will also suffer from more interference should DRM+ be considered for implementation together with FM in VHF Band II.**
- The concept of showing the ‘trade-offs’ between DSB technologies and the very successful analogue FM system should be avoided at all costs, as this could be construed as both ‘unnecessary and wasteful’.
- It could create an artificial resistance towards the introduction of the new technologies.
- In the case of analogue FM – DAB+ should be considered as a complementary sound broadcasting delivery platform.
- The ‘weight and social value’ of FM should continue to be seen as a universal sound broadcast access medium (which in SA – this presents a significantly more compelling argument, than in parts of Europe for example).
- For the present AM/HF service environments in SA – DRM30 presents the most logical upgrade path – i.e. where suitable TX infrastructure has been deployed and receiving sets are within the hands of consumers.

Question four – applicable DSB technologies for SA…

Question 4

South Africa through its international agreements at ITU and SADC level agreed on DAB+ and DRM systems. Please indicate which other digital sound broadcasting technology(ies) if any should be considered for South Africa? Please motivate.

- There are no alternate technologies for adoption other than DAB+ and DRM30. Please see comments re DRM+ under Question Three.

Question five – Use of SFNs for planning DSB networks…

Question 5

To use the spectrum efficiently, the digital sound broadcasting network can be planned on a Single Frequency Network. Do you think that it would be applicable for purposes of digital sound broadcasting? Please motivate.

- The use of SFN techniques has been well considered for DSB and applied as part of the trials for JHB and PTA respectively. It is an essential component of any digital transmission system and must be applicable for any commercial rollout.
- We have noted that the current published ICASA DAB+ frequency allotment plan in VHF band III include SFN frequencies per province. We also noted that should this plan be implemented per province there will be a good chance of interference between the Free State and Eastern Cape SFN networks

Question 6 – Consideration for future MUX operators and FM/AM switch-off…

Question 6

6.1 Should the Authority consider one or more mux operator(s) for DSB? Please motivate.

6.2 Would you propose a total switch – off of the traditional analogue AM and FM sound broadcasting? Please motivate.

- 6.1 The Authority should consider future (independent) MUX operators that may operate within the DSB landscape. One reason as considered is that one should also provide for low power MUXs (for example community broadcasters covering a particular geographical area).
- The current changes in the broadcast signal distribution environment and the convergence with telecommunication require liberalization of the signal distribution environment along with strategic public-private partnerships (as appropriate).

Question 6....(continued)

6.2 The commercialization of DSB should not signal the shutdown of traditional FM/AM analogue sound broadcasting in South Africa. However – the present AM/SW broadcast landscape should be encouraged to migrate to DRM (dependent on market forces with receivers and availability/readiness of transmission infrastructure).

Example of DRM-ready Medium Wave TX infrastructure…(Sentech Welgedacht)

Question seven – Appropriate strategies for DSB roll-out…

Question 7

Should the Authority adopt the strategy used in other international markets of licensing DSB services in the primary markets first and then a nationwide rollout? Please motivate.

- The strategy of creating additional capacity in the primary markets by way of DSB is appropriate**.**

Question eight – New DSB market entrants…

Question 8

Can the current sound broadcasting market afford new DSB licensees in community, commercial and public service? In your answer, explain your reasons and/or choice for any of your submission.

- The Authority should encourage the emergence of new licensees for the DSB landscape for several reasons, including;
  - Diversification of content providers (both community and commercial broadcasters)
  - Allowing the participation of smaller MUX providers, would be analogous to existing FM analogue community station operation, and
  - Commercial cross-subsidization over tiers (on a user level) as a license condition

Annexure A – Additional questions - For broadcasters…

1. ***What is your understanding, expectations and concerns as broadcasters with respect to DSB?***

- DSB presents the logical method to supplement the present FM analogue landscape which has now reached its point of saturation within the primary broadcast markets in South Africa.
- The primary concern around DSB (for DAB+) remains that the spectrum as identified for its application is still subject to use for analogue television. Until ASO occurs in SA – DSB (at least DAB+ primarily) will remain entrenched forever as a ‘trial’.
- For DRM30 to ultimately succeed in South Africa – the receiving sets will need have reached some critical mass for those broadcasters who are presently on MF/SW frequencies.

Annexure A…(continued)

RADIO TELECOMMUNICATION SERVICES

2. ***How will DSB impact your sound broadcasting services business***

   - New revenue ‘streams’ for the supply of transmission hardware, planning and implementation services…

3. ***What are the projected financial implications associated with DSB, considering that Digital Terrestrial Television (DTT) is to be implemented prior to DSB?***

- Until DTT is implemented and ASO is completed it would be premature to calculate costs for an entire DSB (DAB+) network roll-out. For DRM30 – existing facilities (channel diplexers and transmitters) should be upgraded for DRM30 operation

Annexure A…(continued)

4. What issues of concern should the Authority be wary of when implementing and planning for the regulation of DSB, with respect to competition, spectrum concerns, financial considerations etc.;

- The Authority must allow for multiple Multiplex (MUX) Operators and Transmission Service Providers within the DSB landscape – i.e. – It should not be limited to a single entity.
- MUXs should be implemented within the BIII spectrum that would become vacant under ASO. LSSA notes with concern that there are some issues around the identification of channels for DAB+ implementation – LSSA is prepared to share its views on this matter around the existing frequency plan that has been put forward.
- There should be minimum criteria established for usable bit rates and market-driven pricing – as opposed to one entity determining standards and pricing variables.

5. Do you believe DSB will encourage growth in your business or will it create unnecessary financial pressure on your business?

- The roll-out of DSB can done only on non-commercial business principles, with social counter-performance in the public and community sectors. We believe there exists commercial room for such initiatives, but provided that the DTT implementation may be fully realised.
- The formal introduction of DSB therefore bodes well for the stimulation of the industry.

6. Have you conducted research on DSB and the implementation and regulation of same that you can share with the Authority?

- We have not conducted such surveys before**.**

7. ***Please provide the Authority with any further information you deem necessary and asked herein.***

   - *LSSA/RTS undertakes to provide any further information to the Authority as may be necessary to support its views in this submission.*

8. ***How would the introduction of digital sound broadcasting benefit the service providers?***

   - The introduction of DSB will in the medium-to-longer term offer considerable savings in terms of operating and energy costs (one single transmitter carrying several programmes).
   - There will be further significant savings on the use of spectrum allowing an overall increase in access to scarce spectrum resources.

END OF SUBMISSION

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