

WAPA: Lite-Licensing could improve wireless spectrum efficiency

The Wireless Access Providers' Association (WAPA) feels that the introduction of Lite-Licensing, which is currently being trialled and employed by progressive institutions internationally, as an alternative wireless spectrum management approach, could benefit South Africa.



The association has called on the Independent Communications Authority of South Africa (ICASA) to follow the example of other parts of the world by implementing Lite-Licensing in the local wireless access market.

"A Lite-Licensing regime would provide a sustainable frequency sharing model in South Africa that could help raise spectrum efficiency and provide opportunities for new entrants, thereby driving the economy by creating jobs and facilitating broadband access," says the association's chairperson, Christopher Geerdts. "These schemes provide the registration, coordination and interference protection benefits that a wireless license guarantees, but at a cost and application time significantly lower than traditional wireless licensing."

Willing to work with ICASA

The association is willing to work together with ICASA to implement the Lite-Licensing solution, as is uniquely positioned to facilitate the management of spectrum under a Lite-Licensing regime, without imposing undue financial or administrative burdens on the national regulator. In addition, should ICASA and the Department of Communications implement Lite-Licensing, with WAPA acting as an advisor on the regime, there is a possibility that South Africa could export its wireless access framework solution to other African countries in the future.

"A properly managed Lite-Licensing regime will increase spectral efficiency, promote faster network deployment, meet the needs of industry and take a load off the regulator. WAPA urges the Department of Communications to recognise its value in meeting policy objectives and for ICASA to implement it as part of the frequency management mix," adds WAPA regulatory advisor, Dominic Cull.

Limited access

Most wireless access providers in South Africa currently make use of licence exempt frequencies in accordance with the ICASA Frequency License Exemption Regulations of 2008. The industry is growing exponentially to meet the massive, pent-up demand for cost-effective, quality broadband across the country - from high-density suburbs to remote rural communities. However, it is recognised that this is not a sustainable solution due to the number of new entrants seeking access to spectrum and the congestion of these allocated bands.

"What our members have achieved is remarkable, given the limited frequency bands allocated and the minimal formal regulation of those bands. It shows both the hunger for internet services and the passion to meet this need," says Geerdts. Wireless access providers are in need of access to spectrum where they are afforded formal interference protection by means of frequency co-ordination, as would happen in a Lite-licensing regime.

Lite-licensing is better than the 'winner-takes-all' approach currently adopted, which leads to dominance of the market by a few, large players, stifling innovation and competition as well as the current problem, where over 90% of spectrum is not used. On the other hand, Lite-Licensing introduces much-needed formalisation of spectrum allocation and interference control, which is absent in the bands currently used by most players. Offering such protection will unlock the barriers to far more substantial growth in the sector.

Method of operation

A central database keeps track of all current users and also monitors interference readings at each site. When an operator wants to deploy a new site, the geographic coordinates of that site are entered into the database and a spectrum-band 'licence' is allocated automatically. The operator then registers that site and spectrum allocation and feeds back interference readings, which are used to verify the integrity of the solution. The licences can be free or attract a fee. The process is automated and objective, with interference monitoring taking place through built-in cognitive radios. Because the system is first-come, first serve, this approach favours the operators who are actually using the spectrum and leads to very efficient usage of spectrum.

According to Geerdts, the regulator in the USA has implemented this approach with strong participation by companies such as Microsoft and Google. There are numerous trials globally, ranging from the UK to Singapore, as well as the current trial in South Africa, in which WAPA is a participant.

WAPA is a self-regulated body that strives to ensure the sustainability of the wireless access services industry in South Africa, and represents a rapidly growing number of fixed wireless access providers, ISPs and equipment vendors currently using, or with an interest in using, license exempt bands.

Its membership is differentiated from other wireless providers by its focus on using open standard wireless technologies (Wi-Fi). It offers its members regulatory advice, a code of conduct, an enforcement process and a forum for sharing knowledge and resolving technical problems. For more information, go to <http://www.wapa.org.za>.

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