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Chairperson Stephen Mncube  
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Dear Chairperson

**Broadband Infraco SOC Limited (Broadband Infraco): Submission on the draft Spectrum Assignment Plan and Invitation to Apply for the radio frequency range 790 – 862 (800 MHz) and 2500 – 2690 (MHz (2.6 GHz) - Issued for comment by the Independent Communications Authority of South Africa (ICASA).**

## 1. Introduction

Broadband Infraco thanks ICASA for publishing a draft plan for combined licensing of the 800MHz and 2.6GHz frequency bands for the clarity it aims to introduce to the assignment of these long-contested radio frequency spectrum (RFS) bands. We, further, welcome the opportunity to comment on this draft Spectrum Assignment Plan and Invitation to Apply gazetted on 15 December 2011 in Government Gazette No. 34872 (Draft Plan and ITA).

We will focus on making general comments reinforcing the suitability of the proposed spectrum licensing model to Broadband Infraco's current business model.

## 2. General comments

It must be noted, firstly, that ICASA's decision to pair the two spectrum bands must be applauded. Both bands are highly sought-after by operators wanting to build networks based on long-term evolution – LTE - the successor technology to the current wireless broadband networks. LTE promises better performance and speeds over time and will pave the way to 4G electronic communications systems. The 800MHz band is particularly well-suited to rural areas because of its characteristics: signals carry further, meaning fewer base stations need to be built, which reduces costs and helps bridge the digital divide. The 2.6GHz frequency is good for providing services in dense urban areas, where more towers are needed.

Secondly, by recognising the limited bandwidth available - particularly around 800MHz - ICASA has decided to encourage operators to share the allocations. This is expressed in the licensing philosophy of the Wholesale Open Access and Managed Spectrum Park models. For purposes of the Draft Plan and ITA, Wholesale Open Access model refers to a sharing model where licensed entities allows other entities to offer services using its network. It is defined with reference to "no locking", "no blocking" and "no retail". ICASA's intention to licence only some of the 800MHz spectrum on a wholesale basis shows further foresight as the licensing of a entire band on a wholesale basis can lead to the regulatory and business models being too inflexible to adapt to technological advances.

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### 3. Broadband Infraco's Business

Broadband Infraco is the second long-distance network operator in South Africa, but the only one exclusively focussed on providing wholesale services. As a carrier of carriers, Broadband Infraco sells high-capacity national long-distance and international transmission services to licensed fixed and mobile network operators, internet service providers and other value added electronic network service providers, which they can either use for expanding the reach and capacities of their own networks or resell on to their customers.

Broadband Infraco also focuses on providing long distance connectivity to projects that are of national interest, and which require affordable high capacity bandwidth. Broadband Infraco is a wholesale network services provider only. The services offered by Broadband Infraco enables licensed and regional operators and service providers to improve their cost structure as it allows them to do the following:

- provide national connectivity at much lower cost and negate the need to invest capital in building their own long distance networks and
- provide higher levels of service to their customers due to the addition of an alternative long distance service provider.

Broadband Infraco's services are currently based upon either Time Division Multiplex (TDM) technology measured in STM1 up to STM64 or IP-based technology. The services are based upon the provision of high capacity managed bandwidth from Point of Presence (POP) to POP within our National Long Distance DWDM fibre-optic network. The TDM based services are available to licensed operators and license exempt entities in the following capacities on a wholesale basis:

- STM-1 or 155 Megabits
- STM-4 or 622 Megabits
- STM-16 or 2.5 Gigabits
- STM-64 or 10 Gigabits

Broadband Infraco is in the process of rolling out an IP/MPLS core network between Johannesburg, Cape Town and Durban (as part of phase 1) in order to provide customers with the option of buying long distance IP/Ethernet services as an alternative to SDH or Ethernet/SDH. The benefit of this is that IP/Ethernet technology is not tied to SDH capacities and therefore allows for smaller increments of bandwidth such as 100Mbps. It also means that customers will require less expensive equipment to be connected to the Broadband Infraco network.

As a function of completing the connectivity framework, Broadband Infraco has also invested in The West Africa Cable System (WACS) which entails the building of a high capacity submarine cable system from Cape Town, South Africa to the United Kingdom with 12 intermediate landings in key markets along the African West Coast and Europe. WACS is an Open Access principle cable system, as all traffic terminating in South Africa, the United Kingdom and all other landings will terminate in open access co-located telecoms facilities, providing free choice amongst a number of backhaul providers to clients for onward connectivity.

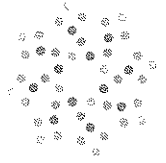
### 4. Alignment and Innovation with Wholesale Open Access model

The Wholesale Open Access model as a spectrum sharing mechanism is defined in the Draft Plan and ITA as a sharing model that allows other entities to offer services using the spectrum licensee's own network. Open access for this purpose means "no locking", "no blocking" and "no retail". "No locking" means that there shall be no prohibition against equipment that may be connected to the network as long as they are compatible with the network elements. "No blocking" means that no content, applications or services may be restricted, provided they are legitimate. Finally, "no retail" means that the licensee will not offer any retail services to end-users.

Broadband Infraco is currently the only wholesale electronic communications service provider. Our current network philosophy is based on an open wholesale access model as prescribed by our i-ECNS licence:

*3.1 The licensee shall provide other electronic communications network, electronic communications services and licence exempt persons open access to its network on non-discriminatory terms.*

Broadband Infraco perceives a strong alignment with the open access wholesale spectrum model as defined by the regulator. Broadband Infraco sees itself as an enabler in this regard, as the extension to a spectrum wholesaler will be a natural extension of its current long distance fibre based open access Broadband model. The spectrum wholesale



role which Broadband Infraco sees itself playing will address the need to ensure competition, access, BEE enablement, efficiencies, economies of scale and minimization of stranded assets via optimal deployment of infrastructure aligned with Broadband Infraco's own fibre infrastructure implementation.

Broadband Infraco has further identified a unique opportunity for innovation by leveraging its position on the value chain. The proposed innovation has two dimensions: implicit and explicit, where the former refers to the innovation driven by the accessibility and affordability of bandwidth in areas not previously accessible to such technologies. Explicit innovation will be driven by Broadband Infraco seeking alternate solutions to bridging the last-mile gap and providing consolidated solutions for an industry that leverages off economies of scale. Both areas of innovation will require access to spectrum, specifically the lower band spectrum (800MHz).

It is important to note, in conclusion, that licensing the entire spectrum allocation on a wholesale basis may prove to be unsustainable in the long run. In particular because it could lead to the structural rigidity of the regulatory model. This is undesirable, as the nature of technology requires business and regulatory models to be flexible and adaptable in a fast moving environment.

Broadband Infraco appreciates the opportunity to make this submission, and looks forward to engaging further as all the above-mentioned processes unfold.

Yours faithfully



Carmen Cupido  
Manager: Legal and Regulatory