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Registration no. CK:2017/344838/07

**Attention: Independent Communications Authority of South Africa (ICASA):**

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**WRITTEN REPRESENTATION BY EC INTERNET (Pty) Ltd: RESPONSE TO ICASA INFORMATION**

**MEMORANDUM**

**ON THE LICENSING OF HIGH DEMAND SPECTRUM.**

Luvo Grey

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**1. INTRODUCTION**

1.1. The Government Gazette No. 42820 dated 1 November 2019, the independent Communications Authority of South Africa ("ICASA") published the Notice on the licensing process for International Mobile Telecommunications ("IMT") spectrum, inviting comments in respect of the provisioning of wireless open access services for urban and rural areas using the complementary bands IMT700, IMT800, IMT2300, IMT2600, and IMT3500 . The date for submission of written comments is the 31<sup>st</sup> of January 2020.

1.2. These written submissions are made by EC Internet, a member of the Information and Communications Technology Small, Medium and Micro Enterprise Chamber (ICT SMME CHAMBER). EC INTERNET is based and is a world class Internet Service Provider (ISP) Company. We have been able to secure a standard and well positioned office facility in a central business district of east London in the Eastern Cape. We are an internet service provider (ISP) company that is competing in





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the highly competitive Internet Service Providers (ISPs) industry not only in East London, but also in the Eastern Cape market. EC Internet provides services such as wireless broadband services, fibre, wired broadband internet access, wired narrowband internet access, internet backbone and carrier services, hardware and software consulting, web hosting, Voice over internet protocol, residential broadband services and business broadband services.

We are a level 1 BBBEE, 100% youth owned company with a staff complement of 3 permanent, and 7 part time employees. Currently we have a network that covers 10% of the Buffalo City region in the Eastern Cape. We have been granted an Electronic Communication Service (ECS) license by ICASA, and are currently operating with a third party electronic and communications network service (ECNS) license.

EC Internet is founded by Luvo Grey, Sikelela Sovasi, and Xolisa Ndzishe are products of Nelson Mandela University and they have combined qualifications and experience in the ICT industry and business management et al that are helping them build the business to be favorable to compete in the Internet Service Providers (ISPs) industry.

1.3. The submission is broken into sections:

1.3.1. This **introduction**;

1.3.2. **Section two** (Outlining EC Internet's vision of connecting the marginalised communities.)

1.3.3. **Section three** (Outlining EC internet's view on why an economically viable WOAN is required.)

1.3.4. **Section five** (Outlining our view WOAN on Key Obligations)

1.3.5. **Section Six** (Specific comments/questions)

1.3.6. **Section Seven** (Conclusion and Recommendations)



### 1.3.2. EC INTERNET'S VISION OF CONNECTING THE MARGINALISED COMMUNITIES

Affordable and free Internet access remains a critical challenge. Significant digital divides between and within countries still exist and are, in some cases, widening, hindering the achievement of the African Telecommunications Union's mission "to achieve universal service and access to broadband". This has a negative effect on the cross-cutting contribution that information and communication technologies (ICTs) can make to the achievement of the Sustainable Development Goals, including and poverty eradication.

Historically, rural South Africa has been underserved in terms of telecommunication services. As a response to close the digital divide, as EC Internet we are building community based networks targeting the marginalised communities using unlicensed spectrum in the 2.4GHZ and 5GHZ frequencies.

Our vision is to take a similar approach to Mexico ( with the majority of the spectrum allocated to the WOAN, which will allow small enterprises like EC internet to provide high speed internet services at affordable prices, in doing so assisting rural and township people to connect to the world and it's vast opportunities). Mexico is the only country in the world where a fraction of the spectrum is dedicated to mobile network services has been set aside specifically for the use of small operators and community networks in underserved regions. After a successful pilot by Rhizomatica, the Mexican communication regulator (IFETEL) analysed the assignments in the 850 MHz band and concluded that there was a small amount of spectrum that remained unassigned. The modest amount of spectrum available meant that it was of little value to commercial operators. As a result, in IFETEL's Annual Programme for the Use and Exploitation of Frequency Bands 201543, it assigned different slots per region for "social use"<sup>44</sup>, in particular, 2 x 5 MHz of the 850 MHz spectrum in seven regions (excluding the urban areas of Guadalajara and Monterrey) and 2 x 2,54 MHz of spectrum in another region, provided that the spectrum is used in rural settlements with a population smaller than 2 500 people, and that the operator accepts that the regulator has the right to assign the spectrum for commercial use in the future.

### 1.3.3. BACKGROUND ON WHY AN ECONOMICALLY VIABLE WOAN IS REQUIRED

If we are to use the under-served area licenses (USALs) as a case study and learn from it's mistakes, the WOAN will be economically viable. While the intent of the under-served area licenses (USALs) was undoubtedly commendable, that is to broaden access to communications into historically neglected regions through the empowerment of black SMEs, industry largely scoffed at the idea that these companies would survive. And industry was mostly right; it just had the reasons for failure wrong.

Few of the sustainability issues that USALs faced were actually of their own making, below is a list of the issues faced by the USAL's which we can learn from and avoid;



#### 1.3.3.1. The funding that the USALs had received was not nearly enough.

- As at March 2006, the seven USALs had received a total of R35 million from the USF. That's R5 million each. The six participating licensees had accessed a total of R6.2 million in shareholder contributions and one had received bridging finance to the tune of R1.1 million. As working capital was not generally available, most of them have had to use the USF (universal service fund) subsidy to fund operations,". (Source: BMI-TechKnowledge)

#### 1.3.3.2. Lack of spectrum

- USALs had little additional funding and did not manage because spectrum was never allocated. Most of the future funding for the USALs was coming from the Industrial Development Corporation [IDC] and Lucent Technologies. However, this funding was contingent on various issues, particularly spectrum allocation. Due to the unfolding process of allocating spectrum at the time, the more unlikely funding became. The result? Hazardous financial health which led to the failure of USALs.

#### 1.3.3.3. USALs did not build up a large enough subscriber base to fund their operations.

According to the BMI-T report there were only a total of 17 000 subscribers across the USALs with very little repeat business. Additionally, the average revenue per user for the first six months was calculated at approximately R20, which was hardly bank breaking stuff.

#### 1.3.1.3. Lack of infrastructure

As none of the first USALs have were able to roll out their own infrastructure, network operators realised additional benefits by bringing these players on as resellers. The biggest loser in the reseller equation was not the consumer, but the USALs. Due to USALs not owning their own infrastructure the USALs had to establish costly interconnection agreements with the operators. Due to lack of significant interventions most, if not all, of the USALs did not survive. These interventions required the Minister of Communications, ICASA, the universal service agency, the USALs themselves and other stakeholders to address the many problems that existed. We therefore appreciate the regulator and the department of Communications in taking note of why the USALs failed and have decisively proposed for a WOAN which will acquire its own spectrum and not rely on third party operators in order to survive thus decreasing the chances of failure. When the WOAN is operating, it could serve a useful role in supporting community networks. We propose that the WOAN receives priority in the assignment of high-demand spectrum. In this regard a social purpose licence for community networks to access part of the spectrum in the bands targeted by the WOAN would make it possible for communities to set up their own mobile broadband infrastructure. It is therefore recommended that 2 x 5 MHz of spectrum in the 800 MHz band should be set aside for non-profit, black-owned, small operators when high-demand spectrum is assigned.



With key strategic partnerships formed with community based black owned Internet Service Providers, the infrastructure problem USAs faced should not occur with the WOAN. The biggest hindrance in acquiring finance was due to not owning the key asset which is spectrum, with the WOAN obtaining 70% of the spectrum, getting access to finance shouldn't be a mammoth task to whichever entity/s which end up being allocated spectrum through the WOAN.

According to the "The Telecommunications Industry and the Market for Mobile Devices in South Africa 2019" report South African telecommunications operators experienced positive growth in 2018 as total subscriptions, device ownership, internet penetration, and data usage continue to increase. The South African telecommunications sector grew by over 14% and was worth R187bn in 2018. Mobile subscriptions, device ownership, and internet penetration continues to grow and the majority of service revenue growth is due to double-digit increases in the value of data. South Africa's fibre and data center markets are expanding rapidly. SA Connects recommendation is to consider a minimum of 20% of user population to ensure viability of the WOAN, with the current demand for connectivity in South Africa, catering for the 20% at affordable rates should not be a mammoth task. South Africa has 54% internet penetration, which is predicted to increase to 83.3% by 2023(source; Statista), these statistics alone provide us with not only an opportunity, but also an economically viable business case for the WOAN.

### **Need for increased Black ownership and control of the industry**

Mobile Operators in South Africa:

- MTN and Vodacom, launched in 1994, between them hold over 80% of the South African mobile market. They have offered 3G data services since 2005
- Cell C launched in 2001, and has only recently launched wireless broadband, while Telkom's mobile division 8ta entered the market in October 2010
- There are a handful of MVNOs in South Africa, notably Virgin Mobile

If you are to look at the ownership patterns in South African telecommunications market, in particular MNO's, one finds that the ownership does not reflect the demographics of this country, and this needs to drastically change. When spectrum negotiations and talks began in 1993 to Vodacom and MTN, black people were not afforded an equal opportunity to participate; hence we have the ownership patterns we are subjected to today. By licensing spectrum to the WOAN, government will be directly fixing the historical mistake of not allowing black people to participate in the allocation of such a lucrative resource. Nobody can sufficiently argue against the need for a fully black owned spectrum licensed telecommunications company in South Africa with a clear mandate of connecting the unconnected and marginalised who have been excluded because they're tax brackets don't fit the customer demographic of the current mobile network operators.



This process has the potential of cementing government's vision of a transformed South Africa, where black people are provided with a fair chance to prove themselves able enough to build a sustainable entity out of the WOAN.

### **Affordable Broadband is a basic need to participate in the 4<sup>th</sup> Industrial Revolution**

As a result of the internet traffic which is growing in huge numbers as a country we are faced with a challenge of not having enough spectrum in order to cater for this great demand. Spectrum scarcity in the International Mobile Telecommunications (IMT) poses us with the challenge of providing reliable broadband services which are in line with our SA Connect targets. To address the current bandwidth deficiency, the current assigned bandwidth of 566 MHZ spectrum needs to be increased to 958 MHZ in order for us to achieve our SA connect ambitions of universal service access.

When we look at the dominant technologies of the fourth industrial revolution we find that most of them will be driven by data which is mined from data bases on platforms that need internet connectivity to be able to function, this therefore directly supports our argument which stipulates that the fourth industrial revolution will have no real impact if there is no affordable broadband. Affordable internet connectivity can position us to be one of the most data rich countries in the world, and data being the "new oil" means that we would be able to solve some of our socio economic problems.

### **Alternative wholesaler for approximately four hundred ECNS licensees**

There are approximately 400+ class electronic communication network service licensees in South Africa covering the entire South Africa. These 400+ licensees stand to benefit as clients of the WOAN, which will ultimately sell to them at competitive rates.

#### **1.3.5. Section five (Outlining our view on the WOAN on Key Obligations)**

Uplink and throughput obligations for the industry

- The nature and the complexing of the 4IR technologies ( IoT, AI, edge computing and Machine to Machine learning etc) require a stable, fast and reliable internet connectivity so that we can enjoy the benefit of 4IR Coverage.

Wireless Open Access Network Obligations.

- We are in full support of WOAN obligations as outlined by the regulator in the Information Memorandum. The obligation will assist in reducing the digital dividend, collaboration ,
- Infrastructure sharing and reduce the price of data ,which allows WOAN (LOT A) to be fully supported by LOT B to E.

We support the authority's intention to impose obligations to the holder of the LoT A to ensure the following Wholesale.

Empowerment Provision for the Industry





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Lower barriers to entry for smaller players

- Improve the ownership of the ICT sector by Historically Disadvantaged Individuals
- Promote service-based competition

Our Broadband availability In South Africa and Recommendation

In November 2018, the Council for Scientific & Industrial Research (CSIR) conducted the most comprehensive broadband gap analysis in South Africa to date. It found:

- 22% of the population live in areas without 4G/LTE coverage.
- Extensive 3G population coverage (only 3.5% lack coverage)
- Still, approximately two million people, out of the total population of 55.8 million, do not have coverage from a 3G or 4G network.
- **What happened to the Liquid Telecom spectrum in the 800 MHz band?**

Our view is that 800MHz should be made available to WOAN; Open access networks will allow multiple ISPs to offer service over the same infrastructure. The WOAN builds and owns the actual infrastructure. For example, the city of Ammon, Idaho built the infrastructure and multiple providers offer services to residents using this infrastructure. Open access networks allow for subscribers to have multiple options, which can drive down cost and drive up the quality of service while encouraging innovation in services available.

- **When will digital migration be completed and the 700 MHz and 800 MHz spectrum become available?**

In 2006, in Geneva, an agreement was reached that the region consisting of Africa, the Middle East (up to Iran) and Europe (including Russia) would switch off analogue television services and migrate to Digital Terrestrial Television (DTT) by the 17th of June 2015. The opportunity that this switch-over would create is the freeing up of spectrum in the 700 and 800MHz bands, commonly known as the



“digital dividend”. The next deadline agreed in Geneva in 2006 was for the 17th of June 2020, when the countries that requested an extension would be required to switch to using the VHF2 band.

- We agree with the proposal to require rural coverage before licensees are allowed to use the spectrum in urban areas.

ICASA should prioritise digital Inclusion and create a digital inclusion plan

WOAN will put community interest and support of high-speed internet which is imperative when attempting to attract investment and competition, and is critical to the long-term sustainability of local projects. When the spectrum is granted to WOAN the below will be the positive impact ;

- Youth staying in/returning to the community
- Improved opportunities for local businesses
- Making our community more attractive for new businesses
- Educational opportunities
- Telehealth applications
- Improved real estate values
- Elevated civic engagement
- Resources available for elderly population to age in place

#### 1.3.1.6. Conclusion and recommendations

Despite some weaknesses and problem areas, the ICASA roadmap marks a crucial first step in getting spectrum rubber out on the ICT road. We'd like to understand the determination of the lots for the first round of the auction, if there is to be, and on the public policy obligations to be attached to the ITA. ICASA will need to focus on attaching an appropriate value to the spectrum on offer in order to set realistic reserve prices, and on developing the parameters of the simultaneous multi-round ascending auction it says it favours, in order to minimise gaming strategies from bidders and achieve a fair auction price that balances monetary value with social objectives. We are interested to see what determination of under-serviced areas ICASA will adopt, and how it intends to proceed with the second round of the auction (for IMT2300 and IMT3500 spectrum) since the outcomes of the WRC-19 are now known either as an add on to the current process or as a separate second stage.





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EC Internet thanks ICASA for giving us the opportunity to make this submission. We are happy to answer any further questions or to provide further arguments or explanations if required, and **we hereby submit our intention to deliver an oral submission.**

Yours Sincerely,



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Luvo Grey

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