



Smile Communications (Pty) Limited

Submission on the Information Memorandum
on the Licensing process for
International Mobile Telecommunications ("IMT") Spectrum

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1. Introduction

Smile Communications (Pty) Ltd (“Smile”) welcomes the opportunity to submit comments on the Information Memorandum (“IM”) issued by the Independent Communications Authority (“ICASA”) on the Licensing process for International Mobile Telecommunications (“IMT”) Spectrum (Government Gazette No 42820), dated 1 November 2019.

Smile is pleased to note ICASA’s efforts to align the licensing process with the Department of Communication’s Policy Direction on High Demand Spectrum and Policy Direction of the Licensing of Wireless Open Access Network (“WOAN”) (Government Gazette No 42597), dated 26 July 2019 which demonstrates a move toward policy certainty in the sector.

Spectrum is a scarce national resource and a public good which should be administered in a way that produces maximum socio-economic benefits associated with increased access to essential communications and digital technologies.

The establishment of a WOAN is a critical policy intervention to address issues which have stifled South Africa’s ability to leverage the ICT sector for economic gain. The WOAN will open up digital opportunities for the people and businesses of South Africa and ensure that South Africa is ready for challenges and opportunities presented by the Fourth Industrial Revolution (“4IR”). The people of South Africa need broadband and the delays in establishing a WOAN are becoming less justifiable in the face of high unemployment, inequality which, if not managed, will worsen in the face of rapid technological advancement. Smile believes that a sound approach to the implementation of the WOAN will enable its ability to lower the cost of data communication, reduce last mile infrastructure duplication and encourage service-based competition in order to promote access to broadband.

Properly constructed, the WOAN will be instrumental in transforming South Africa into an inclusive, innovative digital and knowledge society, bringing to life the objectives of the National Integrated ICT Policy White Paper, 2016 (“the ICT White Paper”). The WOAN will enhance the entry of small, micro and medium enterprises (SMME’s) and boost the role these entities play in creating employment opportunities and contributing to the country’s GDP. In addition, the WOAN will accelerate the realisation of South Africa’s national broadband policy targets outlined in its Broadband Policy (“SA Connect”) by ensuring broadband access at 10Mbps to 100% households by 2030 and create equality of opportunity by bridging the digital divide. The country’s ability to achieve these goals will be largely determined by ICASA’s approach to the licensing the WOAN.

Whilst South Africa is behind its global counterparts, ICASA is presented with an opportunity to introduce open access which will promote innovation and service-based competition. The people of South Africa need broadband access and delaying the process of licensing HDS and establishing a WOAN are becoming less justifiable in the face of high unemployment, inequality and the imminent disruption to be presented by the Fourth Industrial Revolution (“4IR”).

2. Executive Summary

Our submission is mainly focused on the strategic propellants that are necessary for the establishment of the WOAN and will respond to the relevant aspect in the IM using the following headings:

- The proposed spectrum assignment for the WOAN;
- The proposed licensing process and composition of the WOAN;
- The proposed obligations and incentives for the WOAN; and
- A brief commentary regarding the licensing for the industry.

In order to produce the best socio-economic and pro-competitive outcomes, the licensing process should, in summary, result in:

- **An adequate assignment of spectrum in order to deliver optimal data capacity underpinned by the 4IR and ensure as a minimum the realisation of 10Mbps to 100Mbps by 2030, the WOAN would require a minimum of:**
 - 2 x 25 MHz FDD in IMT 800;
 - 1 x 60 MHz (TDD) in the 2600 MHz; and
 - 100MHz in the IMT3500 band should be assigned to the WOAN and operators seeking to deploy technologies that are compatible with this band should procure that capacity from the WOAN.
- **Regulatory advantage for the WOAN:** In order to be commercially viable, the WOAN would have to secure:
 - a 30 % offtake commitment in urban areas from radio frequency licensees for a period of 10 years;
 - a 10 year obligation holiday following which the implementation of a maximum license fee between R50-100 million payable over 5 years;
 - a 50% offtake commitment from government;
 - Access to the passive and active infrastructure of operators on a cost-based basis;
 - Access to mandatory roaming services from operators for a period of 10 years.

- **The appointment of a credible, black-owned and woman-led consortium to operate the WOAN:** The introduction of a WOAN presents the opportunity to promote economic empowerment and the inclusive participation of historically disadvantaged individuals. The appointment of a representative consortium which comprises of members with demonstrated experience in rolling out network infrastructure in the sub 1GHz spectrum bands, will ensure the efficient use of the spectrum assigned to the WOAN and the effective participation of women, youth and persons with disabilities.
- **As regards the HDS licenses for the industry:**
 - The “Use it or lose it” principle must apply;
 - The reserve price set in the auction should aim to attract serious bidders and prioritise revenue for the fiscus;
 - Spectrum award should be conditional upon the roll-out of network infrastructure in rural areas and capacity in urban areas must be procured from the WOAN;
 - Failure to meet empowerment obligation should result in the withdrawal of spectrum licenses.

3. About Smile

Smile Communications (Pty) Limited (“Smile South Africa” or “Smile SA”) is an associate company of Smile Telecoms Holdings (“Smile Holdings” or “Smile group” or “Smile”), a Pan-African telecommunications company founded in 2007, with operations in Nigeria (“Smile Communications Nigeria”), Tanzania (“Smile Communications Tanzania”), Uganda (“Smile Communications Uganda”) and the Democratic Republic of Congo (“Smile Communications DRC”) (collectively, “Smile companies”). Smile’s vision and mission is to be the broadband provider of choice in each of its markets and enable its customers to fully benefit from the Internet world. Smile’s value proposition is speed, quality, and reliability.

Despite Smile SA’s application for spectrum in the 800MHz and 2.6GHz bands as early as 2008, Smile has not operated in South Africa due to the lack of policy and regulatory clarity with respect to the assignment of spectrum in the 800 MHz band. However, it has extensive broadband experience in that Smile launched East Africa’s first sub 1 GHz 4G LTE network, using the 800MHz and 2.6Ghz bands, in the Tanzanian market, starting in Dar es Salaam, offering its customers high quality broadband access and communication services since 2013. This was followed by the launch of its other operations in Uganda and Nigeria. Smile Communications DRC will be the first to launch an LTE network in the 800 MHz and 2.6 GHz bands in the Democratic Republic of Congo.

By delivering affordable, high-quality and easy-to-use broadband access and communication services to customers across its operations in Africa, Smile’s operations have been at the forefront of harnessing technologies to create innovative solutions that enable the cost-

effective deployment of advanced communication services. Smile group’s investment in broadband networks across these countries is having a positive impact on consumer welfare, job creation and economic output. Smile seeks to bring the same advantages and benefits that its sister companies have brought to other African countries, to South Africa. In light of the National Integrated ICT White Paper (“the White Paper”), Smile seeks to do this through promoting and participating as a key player in the WOAN.

4. Proposed Spectrum Assignment for the WOAN

In order to be an effective policy tool, the Regulator must ensure that the construct of the WOAN is technically as well as commercially viable.

The amount of spectrum assigned to the WOAN will have a direct impact on its ability deliver quality network access, support MVNOs that are meant to exert competitive pressure on dominant operators on the retail level and promote price competition to bring the cost of data down.

4.1. Analysis of Spectrum Availability: the status quo:

Smile conducted an analysis of the assigned and available spectrum in South Africa in the 800MHz, 900MHz, 1800MHz, 1900MHz (TDD an FDD), 2100MHz (TDD an FDD), 2600MHz an 3500MHz bands. The purpose of the exercise was to objectively understand the assignment of spectrum in South Africa, what spectrum is available and the best way to assign it to enable the WOAN to effectively and efficiently deliver national broadband network services.

The Radio Frequency Spectrum Assignment Plan (“RFSAP”) published in May 2015 is the formal source of assignments.

The current industry spectrum holdings per band are as follows:

Frequency band	Operators spectrum holding
900 MHz	100% assigned equitably to MTN, Cell C and Vodacom
2300 MHz	40% assigned to Telkom
2600 MHz	10% assigned to Rain Networks
3500 MHz band	42% assigned as follows: Liquid Telecoms (28%) and Telkom (14%).

To date, no assignments have been made in 700MHz and 800MHz frequency bands.

4.2. WOAN Assignment Proposal

The WOAN must be assigned low, medium and high-frequency spectrum (i.e. sub 1GHz and above 1GHz) and should have the largest carrier size possible i.e. a minimum of 40MHz spectrum. The Council for Scientific and Industrial Research Report commissioned by the, then, Department of Telecommunications and Postal Services (“the CSIR Report”) to determine the amount of spectrum needed for a WOAN to meet national objectives and targets for broadband delivery as set in the SA’s National Broadband Policy. The CSIR Reports findings indicate that the WOAN would have to achieve a 20% market share in order to be viable. The 800MHz, 2.6GHz and 3.5GHz bands will ensure that the WOAN is able to deliver sufficient data speeds and support high number of devices.

The table below outlines the recommended spectrum requirements for the WOAN.

Spectrum	Requirement	Range
700 MHz	2 x 20 MHz FDD	703-748/758-803
800 MHz	2 x 20 MHz FDD	791-821/832-862
850 MHz	2 x 25 MHz FDD	824-849/869-894
2,6 GHz	60 MHz - TDD	2500-2690
3.5 GHz	100 MHz - TDD	3.3-3.8 GHz
4.5 GHz	100 MHz - TDD	4.4-5 GHz
26 GHz	800-1000 MHz - TDD	24.25-27.5 GHz
28 GHz	800-1000 MHz - TDD	27.5-29.5 GHz
40 GHz	800-1000 MHz - TDD	GHz

To ensure that the WOAN is able to deliver optimal data outcomes and ensure the realisation of the SA Connect goal of 10Mbps for 100% of South African households, the WOAN would require a minimum of:

- 2 x 25 MHz FDD in the 800MHz band,
- 1 x 60 MHz (TDD) in the 2600MHz band; and
- 100MHz in the IMT3500 band should be assigned to the WOAN operator, seeking to deploy technologies that are compatible with this band should procure that capacity from the WOAN. Smile concurs with CSIR’s recommendation that a spectral efficiency study should be conducted at five-year intervals to assess the WOAN’s additional spectrum needs.

ICASA has indicated that 116MHz in the 3500MHz band is available for licensing to the industry. Smile does not agree with ICASA’s intention to license IMT 3500 to the industry. The importance of this band is crucial for a successful WOAN and also for the enablement of

frontier technologies such as artificial intelligence (AI), blockchain, big data, additive manufacturing, amongst others which are crucial for securing South Africa's place in 4IR. We reiterate the importance to issue 100MHz of spectrum in the 3500MHz band to the WOAN and the Regulator's intention to make this band available in Lots of 10MHz would be inefficient.

The frequency ranges required for 5G are as follows:

Low Frequency (Below 2 GHz) – which provides for wide-area and deep indoor coverage:

- Supports widespread coverage across urban, suburban and rural areas and help support Internet of Things (IoT) services.
- Massive Machine Type Communications (“mMTC”) and Ultra Reliable Low Latency Communication (“URLLC”) usage scenarios will also greatly benefit from the low frequencies' extended coverage.
- Allows operators to ensure faster and cost-effective deployment.

Medium Frequencies (2 - 6 GHz) – which provides for the best compromise between capacity and coverage:

At least 100 MHz contiguous spectrum bandwidth from the C-band should be assigned to each 5G network in order to support user experienced data at a rate of 100 Mbps anywhere anytime.

High Frequencies (Above 6 GHz) – which address specific use cases requiring extremely high data rates and provides for Urban (Hotspot) coverage.

- Ultra-high broadband speeds envisioned for 5G
- At least 800MHz- 1000MHz per network of contiguous spectrum bandwidth is required for the deployment of 5G.
- The assignment of contiguous wide spectrum bandwidth in each layer reduces system complexity associated with carrier aggregation, which will improve energy efficiency and reduce network cost.

Smile holds the view that the available spectrum in the 3500MHz frequency band should be assigned to the WOAN, which exists to provide affordable wholesale network access, level the playing field and promote competition for retail operators. Smile believes that licensing this spectrum to the industry would only serve to entrench the current uncompetitive market, skewed in favour of the two dominant operators.

5. The Proposed Obligations and Incentives for the WOAN

Smile is pleased to note ICASA's efforts to recognise that a new WOAN will require an asymmetric advantage and/or guarantees compared to established MNO's, at least for an initial period of their operation.

The WOAN will be a late entrant into the market and will be expected to compete against dominant, vertically integrated, well-entrenched incumbents. In order for the WOAN to successfully reduce the cost to communicate it is important to guard against it incurring administrative and regulatory costs which directly impact on wholesale pricing offered by the WOAN, retail pricing and ultimately the consumer.

This asymmetric framework for WOAN should include:

- Assignment of **adequate spectrum** at a reasonable or even zero cost.
- **Access to backhaul, metro and long-distance links** under reasonable conditions of interconnection and otherwise. The facilities leasing regulations should be enforced and access made available on cost based, transparent and non-discriminatory access basis. In addition, MNO's should be required to participate in the WOAN, including by contributing infrastructure.
- Limiting the amount of initial investment needed to launch services and the time-to-market by **enforcing a requirement for sharing of existing passive infrastructure** (e.g. towers, other base station locations and passive equipment) under reasonable conditions. Again, the facilities leasing regulations should be enforced and cost base, transparent and non-discriminatory access should be mandated.
- A special dispensation in respect of **rapid deployment roll-out obligations** – especially over public owned land and buildings
- Recognition of need to **target urban areas first**. Universal Service Obligations should not apply since the WOAN is inherently fulfilling universal access objectives through its very existence. If the WOAN is to have coverage obligations these must be explicitly conditional on the WOAN being provided with the benefit associated with reaching specified regulatory and licensing milestones.
- Access to USAF / Digital Dividend Fund to the extent that the WOAN is rolling out in qualifying underserved areas

5.1 Provision of wholesale access to national roaming, to MVNOs and mobile data services on a non-discriminatory, transparent, affordable prices and on a cost-oriented basis with reasonable rate of return

5.2 The Minimum offtake of 30% national capacity must be procured from the WOAN:

Smile agrees with the requirement that all radio frequency licensees should collectively procure a minimum of 30% of national capacity from the WOAN. This however should be for a period of 10 (not 5) years after it is operational. Smile believes, however, that this offtake obligation should be in urban areas so that the WOAN can leverage the already existing infrastructure in that area. This would then support the obligation that industry licensees should roll out in underserved areas before targeting urban areas.

Government should also be an anchor tenant of the WOAN and should commit to a minimum offtake of 50% percentage which would enable the realisation of SA Connect Target with respect to the provision of access to public health, education, government facilities and homes across. ICASA itself has indicated that the purpose of the licensing process is to realise Governments rollout targets for broadband services and achieve the articulated policy objectives articulated in the relevant policy instruments

5.3 Three to five-year license obligation holiday following the award of the license:

Smile holds the view that a minimum of a 10 (not 5) year obligation holiday will afford the WOAN sufficient time to be commercially viable. After the expiration of the 10-year period, ICASA should implement a maximum R50-100 million license fee payable over a period of 5 years a new fee at reasonable escalation will be payable over another 5 year period to properly take cognisance of the WOAN's late entrant status. The WOAN, as a wholesale data capacity provider, will require enough time to get its bearing in the sector to stand a chance of impacting competition.

5.4 The provision of wholesale access to national roaming, to MVNOs and mobile data services on a non-discriminatory, transparent, affordable prices and on a cost-oriented basis with reasonable rate of return:

Smile agrees that the WOAN should be a commercially viable entity and should accordingly have the discretion to provide wholesale access on a cost-plus model basis as outlined in the IM.

5.5 Wholesale access to passive and active infrastructure to be provided to the WOAN by Licensees for Lots B, C, D and E on a cost-oriented basis on reasonable terms:

Smile has long held the view that mandatory access to existing operator's passive infrastructure is essential in facilitating rapid network deployment at a low cost. We don't agree that this should be on a cost-oriented basis but on a cost-based basis in order for to provide network access at the lowest possible cost. This will translate into low data cost as envisioned in the ICT Whitepaper. Access should also be mandatory

in respect of active infrastructure subject to open access and cost-based pricing to fast track the rollout of infrastructure, reduce the cost of infrastructure deployment as well as operations in alignment with SA connect objectives to speed up infrastructure deployment of fixed broadband services.

Mandated infrastructure sharing seeks to remedy ineffective competition, infrastructure sharing bottlenecks, unnecessary duplication of infrastructure, and the inefficient use of scarce resources. Network deployment in South Africa, to date, has resulted in unnecessary network duplication across the country. Smile believes that the IM should be aligned with the ICT White Paper and make spectrum licensing conditional upon infrastructure sharing with not only the WOAN but across the industry on an open access basis. Arguments have been presented about the adverse effects of open access infrastructure sharing on investment in networks, Smile believes that this is outweighed by the positive commercial and socio-economic benefits it presents to the country.

Specifically:

Cost saving: The Competition Commission recently found that smaller networks in South Africa are at a disadvantage in the provision of the same subscriber coverage and network quality as the dominant operators. Smaller operators often have to fund expansion of their network through equity or debt funding whereas the dominant operators are able to rely on retained earnings. This position is not as a result of superior competition strategies but rather as a result of the market share these operators were able to capture through regulation-supported first-mover advantage. The cost savings that come with shared CAPEX, maintenance and reduced operational costs will give smaller operators and new operators' room to divert those to savings diversifying their services offering to meet consumer demands for bundled services.

Lower prices: These cost-saving can be passed down to consumers through lower data costs expanding consumer access to broadband.

Economic Benefits: The correlation between access to broadband and economic development are widely recognised. The WOAN will facilitate wider access to broadband and enable important 4IR technology which will further lead to informed societies, support financial services for the unbanked population, facilitate the collection of agricultural, health education data leading to data driven policy interventions

Expansion of access in rural areas: Infrastructure sharing can reduce the cost associated with network deployment in rural areas fast track fast track the bridging of the digital divide.

Positive environmental impact: Infrastructure sharing can help reduce energy consumption and radio emissions of networks reduction of the carbon footprint of telecommunications infrastructure and duplication. Duplication of infrastructure which have a negative effect on the environment.is bad

Competition: Infrastructure sharing will reduce the barriers to entry for new operators promoting service-based competition.

Impact of 5G: The objective of the WOAN is the promote service competition (refer to CSIR report), wholesale services and it would be uneconomical for all operators to roll out their own 5G infrastructure. Licensees should procure 5G capacity from the WOAN.

In addition, Government should guarantee:

- Access to public buildings and other types of public infrastructure (e.g. poles, ducts, towers, rights of way at reduced costs) [ICT White Paper Section 9.1.6].
- Allocation of some funds from the Digital Development Fund for underserved areas [ICT White Paper Sections 9.1.6].

5.6 **National Roaming services to be provided by the winners of licenses in Lots B, C, D and E:**

Smile agrees that that the WOAN should benefit from mandated roaming services from operators who obtain licenses through this process for a period of 10 (not 5) years.

5.7 **Open Access obligations for the industry to be implemented by way commercial negotiations:**

The WOAN will have various national interest objectives to meet and ought not be prevented from realising these objectives due a deadlock between the WOAN and operators who are obligated to procure capacity from the WOAN. Smile thus supports the development of a dispute resolution mechanism where the Authority will make a final determination on the terms to be imposed on the parties to resolve the impasse. Smile would, however, recommend that the dispute resolution process be subject to strict timelines to avoid unnecessary delays.

6. The Proposed Licensing Process for the WOAN

ICASA intends on licensing the WOAN by way of an administrative process. If this licensing mechanism is adopted, ICASA will need to apply strict criteria in order to ensure that

participants selected to operate the WOAN are able to extract the highest social as well as economic value from a scarce resource.

In addition, ICASA is presented with the opportunity to use this licensing process to facilitate radical economic transformation in the ICT sector by ensuring the meaningful participation of women, black people and other designated groups in the industry through the establishment of the WOAN. Attempts to address the lack of representation in the sector, over the past two decades, through interventions such as license conditions and BBBEE Codes have failed to facilitate transformation in respect of ownership and executive management in the sector.

Smile believes that the following aspects should be carried into the WOAN licensing framework:

- The Core Members of the leading consortium should include and comprise of persons with experience of rolling out network infrastructure in the sub-1GHz spectrum using LTE.
- Minimum 60% black ownership (as defined in the BBBEE code), of which 50% is women owned.
- Process to allow participation in the ownership model for key stakeholders, for example incumbent network operators, international operators and owners of infrastructure, OTT players, ISP's and other such contributing participant and international operators.
- Current incumbent operators must be encouraged to participate, but not control the vehicle. This will enable them to have access to new spectrum capacity through the WOAN on the same basis as new entrants and service providers.

7. Proposed Licensing Process for the Industry

7.1. Spectrum Available for Auction to the Industry

ICASA should auction the combination of bands that will generate revenue for the fiscus. Smile thus would support the selection of the lot arrangements in option 3 of the IM.

Smile is further pleased to note the incorporation of the requirement that an operator will be required to commence operations 3 years after acquiring licenses in the 700 MHz and 800 MHz or face the potential withdrawal of the license. The incorporation of the use it or lose it principle is in alignment with the principle underlying the spectrum policy in the ICT White Paper.

7.2. Auction Design

- **Reserve price:** ICASA should strike a balance between setting a reserve price which is high enough to attract serious bidders who are committed to rolling out network infrastructure and meeting the fiscus requirement. This is despite the current

incumbents not having to pay for their 3G spectrum and licenses and this never translated in the reduction of data prices.

- **Spectrum Caps:** No spectrum caps should be applied as they will lead to low-bidding activity and thus an uncompetitive auction.

7.3. Licensing Obligations for the Industry

7.3.1. Infrastructure Sharing

Smile agrees that licensees should be mandated to provide access to their infrastructure subject to an open access regime as envisioned in the ICT White Paper. ICASA must support this through enforcing a regulatory framework which adequately detects and deals with incidents where operators deny or adopt strategies which amount to constructive denials of access. Failure to compliment the obligation to share infrastructure with strong regulation, negates the benefits associated with infrastructure sharing and open access and drive up the cost to communicate.

7.3.2. Social Obligations and Empowerment Provisions for the Industry

Smile believes that licensees should be subjected to licensing conditions which require the realisation set targets for the transfer of digital skills to HDI's. Increased access to broadband is meaningless without enhanced digital skills which are increasingly essential to employment in many sectors in South Africa.

Smile agrees with the requirement that a licensee must be required to provide open access to MVNOs with a minimum of 51% HDI ownership. The requirement that a licensee must, within 36 months of being issued with a radio frequency spectrum license, reach a level 3 contributor (B-BBEE status) in terms of the Codes of Good Practice and maintain such status for the period of the license is a welcome intervention. The failure should, however, constitute a material breach of the licensing conditions in order to demonstrate a commitment to transformation.

Smile trusts that this submission comprehensively addresses the key issues and considerations for the successful and speedy implementation of the WOAN. Smile is available to address any aspects of this submission with ICASA.

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