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19/08/2023

Mr Gibson Tito
Manager Licensing and Business Relations
National Information and Communications Technology Authority (NICTA)
P.O. Box 8444,
BOROKO, NCD,
Papua New Guinea

Dear Mr. Tito,

Subject: Democratising Internet Access in PNG with Starlink to Propel Economic Growth, Inclusion, and Innovation in PNG

Masalai Communications has been operating and innovating in the ICT sector for over 20 years. In that time we have seen the industry grow profoundly both locally and internationally. ICT has never been as exciting as it is today with the multitude of opportunities it brings and its ever decreasing costs. There are certainly risks that need to be managed but overall for the PNG market it is important that we add the nuances to global developments to maximise technology for our goals and aspirations.

I therefore write to you to present our perspective on the transformative potential of Starlink and its alignment with NICTA's goals for Papua New Guinea's (PNG) socio-economic advancement. We believe that by leveraging this innovative technology, we can address critical challenges related to universal access to ICT, gender inclusion, financial services, and support for small and medium-sized enterprises (SMEs).

Link between Economic Growth, Financial Services, and Universal Access in ICT:

In PNG, the correlation between economic growth and access to modern information and communication technologies is evident. A robust ICT infrastructure forms the bedrock upon which a nation's economic prosperity is built. At the same time, universal access to these services becomes pivotal in erasing disparities and fostering inclusive development. A crucial link exists between financial inclusion and universal access to ICT, as improved connectivity facilitates remote financial transactions, giving rise to greater financial participation and empowerment across demographic segments.

Challenges to Universal Access and Services (UAS) in PNG:

While the potential is vast, PNG faces several hurdles on the path to realizing comprehensive UAS. Gender imbalance in technology access, limited financial inclusion, and insufficient support for SMEs collectively dampen the full potential of ICT in driving economic growth and empowerment. PNG's unique geographical landscape and limited terrestrial infrastructure further exacerbate these challenges, making it imperative for us to seek innovative solutions.

NICTA's Goals and the Role of Starlink:

NICTA's vision for PNG resonates with our own aspirations. Starlink, with its globally accessible satellite internet, offers a promising solution to the UAS challenges that PNG encounters. By connecting even the most remote corners of the country, Starlink can play a pivotal role in driving economic growth, fostering gender inclusion, expanding financial services, and empowering SMEs.

Actionable Recommendations for NICTA:

We propose that NICTA undertake the following steps to harness the potential of Starlink for the betterment of PNG:

1. Policy Alignment and Inclusive Regulations: Implement regulations that incentivise Starlink's deployment and operation. Streamlined licensing procedures should be complemented by policies that encourage competitive pricing, affordability, and quality service standards.

   The truth is the majority of our population cannot develop individually or economically if we do not democratise access to information. We will continuously have a stunted population unless foundational access to information is implimented to allow people, ideas and business to grow. It is clearly evident today that the current regime of Telco's and ISP's cannot affordability service the entire country. Even if they do reach people around the country, the cost and quality of internet in PNG is still lagging behind many other similar developing countries.

   Whilst in our opinion the Starlink kit (user equipment) should be seen as a consumer device (like a mobile phone with a SIM card), with SpaceX registering a Starlink subsidiary in PNG as a Telco/Carrier as is the case in the majority of Starlink approved jurisdictions globally. We note that NICTA interprets LEO satellite services as network services under the Act and, accordingly, a network, service licence is required from NICTA.

   Therefore our recommendation, taking the network service interpretation, is to introduce **two (2) New Tiers of ISP Licenses** as detailed below. These licence recommendations are based on utilising two SpaceX companies; **Starlink** (https://www.starlink.com/) and **Swarm** (https://swarm.space/).

   These proposed licences could also be extended to O3B or Kacific if these or any other other LEO/MEO service providers also have affordable user equipment designed to establish a high-speed satellite internet connection similar to the Starlink Kit.

1. Existing ISP Licences	The existing ISP licenses remain, as undertaken by Telikom, DataCo, Datec, Digicel, Kacific, Speedcast and so on
2. New License, ISP for IOT Devices	• Name of the license: Internet Service Provider (ISP) License for IoT Devices • Requirements: - The ISP must be a legal entity that is registered in the country where the license is issued. - The ISP must have a technical team that is capable of managing and maintaining an IoT network. - The ISP must have a security plan that protects the data that is transmitted over its network. - The ISP must comply with all applicable laws and regulations. • Benefits: - The ISP can provide internet access to a wide range of IoT devices. - The ISP can generate revenue by charging for internet access or by providing other services, such as data analytics or security monitoring. - The ISP can help to improve the efficiency and productivity of businesses and organizations that use IoT devices. This is just an example of an IoT ISP license. The specific requirements and benefits will vary depending on NICTA.

3. New License, ISP for LLG Communities	• Name of the license: Micro Internet Service Provider (ISP) License • Requirements: - The ISP must be a legal entity that is registered in the country where the license is issued. - The ISP must have an appointed technical support team member that is capable of managing and maintaining a small-scale internet network. -The ISP must have a security plan that protects the data that is transmitted over its network. - The ISP must comply with all applicable laws and regulations. - The ISP must have a community engagement and awareness plan in all relevant languages. - The ISP's geographic area of operation will be limited to their appointed LLG location. - The ISP may hold more than 1 Micro ISP Licence for more than 1 LLG - The ISP must only use digital forms of payment. No cash or in kind payment can be used for the payment of services provided under this license. - The ISP must provide monthly data usage and financials to NICTA, BPNG & Department National Planning in digital form - The ISP may not require any prior experience in the telecommunications industry. • Benefits: - The ISP can provide internet access to a small number of users at the Ward Level, LLG Level and District Level. - The ISP can generate revenue by charging for internet access or by providing other data services, but with digital payments only. - The ISP can help to improve the efficiency and productivity of businesses and organizations that use the internet. - The ISP can help data collection and reporting at the Ward Level, LLG Level and District Level.

2. Collaboration for Financial Inclusion: Partner with financial institutions and fintech companies to develop innovative mobile banking solutions that leverage Starlink's connectivity to facilitate financial inclusion, especially among rural and underserved communities.

3. Education and Gender Empowerment: Collaborate with educational institutions and non-governmental organizations to ensure that women and girls have equal access to ICT and are empowered through digital literacy programs.

4. SME Support and Innovation: Establish initiatives that encourage SMEs to leverage Starlink's connectivity for e-commerce, digital marketing, and online presence, thereby fostering their growth and resilience.

Pilot Project Proposal - Enabling Non-Visa Payments for Starlink Services:

We would also like to propose a pilot project in collaboration with NICTA and Bank South Pacific to integrate with Starlink's payment system. This integration will enable non-Visa payments, facilitating seamless transactions for Starlink services through existing payment rails that PNG customers are already familiar with like SMS banking, BSP Pay and online banking. Customers will benefit from a simplified payment process, enhancing financial inclusion and access to the transformative capabilities of Starlink.

This is a conversation that Masalai has already begun with SpaceX and it is a business model that has already been deployed in Africa with Starlink. Nigeria is the first country to experience fintech payments for Starlink services. Due to limitations and restrictions with Nigerian banks debit cards, Nigerians are currently using Payday app to be able to buy the Starlink service. Many users online have testified using the Payday Virtual Card to order for Starlink. In a tweet earlier this year, Payday Founder, Favour Ori claims that “Payday has helped Starlink process over $300,000 so far”

Benefits of Enabling Non-Visa Payments for Starlink Services:

- Enhanced Financial Inclusion: By enabling non-Visa payments for Starlink services, more individuals, especially those without access to traditional banking services or credit cards, can easily subscribe to and utilize Starlink's transformative internet connectivity.

- Simplified Payment Process: Integrating with existing payment rails like SMS banking, BSP Pay, and online banking provides a familiar and user-friendly payment process for customers, reducing barriers to entry and improving overall customer experience.

- Wider Access to Starlink: The simplified payment process opens up Starlink's services to a broader customer base, including those who might have faced challenges using traditional Visa-based payment methods.

- Leveraging Fintech Innovation: Drawing from the success in Africa, this model taps into the capabilities of fintech platforms to provide innovative solutions for accessing essential services, making technology more accessible and adaptable to local contexts.

- Economic Empowerment: Facilitating non-Visa payments for Starlink services contributes to financial empowerment, as individuals can choose from a wider range of payment options that suit their preferences and financial circumstances.

- Reduced Dependency on Traditional Banking: The pilot project reduces the reliance on traditional banking channels, especially for those who may not have access to traditional banking infrastructure or debit cards.

- Operational Resilience: Diversification of payment options ensures operational resilience, as users can switch between different payment methods based on their needs and circumstances.

Additional Benefits of Data Collection for the Government:

- Informed Policy Making: The integration of payment systems can provide valuable data insights on customer behavior and preferences. The government can use this data to inform policies that support the digital economy and financial inclusion initiatives.

- Revenue Generation: The collection of transaction data can lead to potential revenue generation through insights-driven decisions, allowing the government to explore innovative revenue models.

- Resource Allocation: Accurate data on payment trends can aid in resource allocation for ICT infrastructure development, ensuring that investments are targeted towards areas with the highest demand for services.

- Strategic Partnerships: Collaborative initiatives between public and private sectors, such as the proposed pilot project, can foster strategic partnerships that align with government goals and drive socioeconomic growth.

- Digital Identity Advancement: Data collection through payments can contribute to building and enhancing digital identity systems, facilitating access to a wide range of services beyond connectivity.

- Security Enhancements: Data collected through payment systems can be utilized to improve cybersecurity measures and identify potential threats, safeguarding the digital ecosystem.

The proposed pilot project for enabling non-Visa payments for Starlink services not only enhances financial inclusion and accessibility but also presents an opportunity for the Government to harness data insights for informed decision-making, revenue generation, and the advancement of PNG's digital landscape.

In conclusion, we look forward to the opportunity to discuss these licencing recommendations and proposals further and explore potential avenues for collaboration. Your support in this endeavor would be invaluable in charting a new course for PNG's digital transformation.

Thank you for your time and consideration and please do not hesitate to contact me at +675 70528912 or via email at emmanuel@masalai.com.pg.

Yours sincerely,

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Emmanuel Narokobi
Managing Director
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