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3 June 2022

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**Submission to NICTA's public inquiry into potential retail service determination in relation to voice and data**

Dear Mr Gulo Vui,

This submission is in response to the discussion paper issued on 18 March 2022 relating to voice and data provision for customers in Papua New Guinea. Thank you for the opportunity to contribute to this public inquiry. This submission has been prepared by the following three authors: Dr Amanda H A Watson of Australian National University, Mr Picky Airi of Divine Word University and Mr Moses Sakai of the University of Papua New Guinea.

Please note that this submission is made by the three joint authors listed above, based on their expertise, research and views, and is not to be interpreted as representing the position of Australian National University, Divine Word University, the University of Papua New Guinea or any part thereof.

This submission is seven pages long, including this cover page and the reference list. If you have any query regarding this submission, please contact the corresponding author Dr Amanda H A Watson using the contact details provided above.

Yours sincerely,

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## Overall position

We commend the National Information and Communications Technology Authority (NICTA) for undertaking a public inquiry into the important issue of pricing and service quality regarding voice and data offerings available to customers in Papua New Guinea (PNG). We thank the Minister for Information and Communications Technology, Hon. Timothy Masiu, for his interest in this critical topic as it has real-life impacts for everyday people across PNG. We regard this public inquiry as a valuable process and we look forward to reading other submissions with interest.

It is our position that NICTA should hold off for one or two years before introducing a potential retail service determination in relation to voice and data, given the major changes that are taking place in the telecommunication industry at present. Nonetheless, we hold the view that it may be necessary to introduce a retail service determination after a suitable period of delay and assessment, if pricing does not fall towards international affordability benchmarks in the interim.

## Answers to questions in discussion paper

### *Question 1*

In order for this process to move forward and in order for us to make a submission that uses the same definitions as other submissions, we are willing to adopt the approach that NICTA is taking. For the record, we note two issues with this approach.

Firstly, NICTA indicates here that it is treating voice and data separately, but later it discusses the use of 'combo bundles' that offer more than one service – for instance, a pricing package that offers a certain amount and type of voice calls and a set amount of data. We understand the logic for treating voice and data separately in the discussion paper, but note the complexities in price offerings, catalysed by the convergence of technology.

Secondly, NICTA indicates here that it is treating voice calls as one, irrespective of whether they commence or terminate on mobile telephones or fixed (landline) telephones. Given the likelihood that Telikom dominates the fixed line market for voice calls, we note that the combination of the two types of voice call technology in the discussion paper limits NICTA's ability to make a retail service determination in relation to fixed voice services.

### *Question 2*

We agree that the retail regulation criteria in Section 158 of the Act are satisfied in the case of retail voice service. NICTA indicates in section 6.3 that voice prices have reduced over the past three years, which does bring into question the need for a determination on voice services. Nonetheless, if voice prices remain above regional averages then the criteria do seem to be met. Although this is not the focus of our research, based on our experience and impressions, we have not noticed any change in the retail voice pricing provided by Digicel, which has been a major market player in the mobile telephone sector in PNG since it commenced operations on 1 July 2007. As per note 6.2 in the discussion paper and in line with our overall position as stated above, we acknowledge that imminent market changes may have a bearing on retail voice offerings.

### Question 3

We agree that Digicel has a substantial degree of power in the market for retail mobile data services. Indeed, its dominance of the mobile telecommunication market in the country has been documented in various publications in recent years (Foster, 2017; Highet, Nique, Watson, & Wilson, 2019; Howes, 2021; Logan & Forsyth, 2018; Watson, Airi, & Sakai, 2022; Watson & Fox, 2019). As “Digicel offers a wider coverage area” (World Bank, 2020, p. 61) than its competitors, this has allowed it to maintain market dominance. We consider that the other retail regulation criteria in Section 158 of the Act are satisfied in respect of retail mobile data services.

### Question 4

Our understanding is that Telikom and DataCo have a substantial share of the fixed infrastructure in the country. As DataCo is not mentioned in the discussion paper, we are not sure whether it is being included here in this question. We believe that Telikom has a large share of the fixed line (landline) telephone customers, although large organisations such as universities may tend to operate internal calls through an internal network. We are not sure whether fixed line voice call costs in PNG are higher than the global average. In addition, we acknowledge that provision of fixed line services in PNG might be expected to cost a great deal more than in other, more urbanised, countries.

The question specifically refers to retail fixed data services. As with our comment above about fixed voice services, we are unclear whether DataCo is included here with respect to Telikom’s market share. We also acknowledge that although there may be some market dominance due to historical reasons, the market is in a process of change. We are unable to determine whether the retail regulation criteria in Section 158 of the Act are satisfied in relation to retail fixed data services.

### Question 5

We disagree with NICTA’s preliminary conclusions that, in respect of price and quality terms and conditions of service, the retail regulation criteria in Section 158 of the Act are not met or are unlikely to be met for retail voice and data services. We feel that an argument could be made that the criteria have been met, particularly for mobile internet data. We note that the overall intention of the criteria is to ensure that “aggregate likely benefits of making that retail service determination outweigh any aggregate likely detriments” (p. 4 of the discussion paper). We believe that there would be likely benefits of a retail service determination, particularly regarding mobile internet data pricing. We have formed this view for four key reasons, as follows. Firstly, Digicel has market dominance. Secondly, Digicel’s dominance is likely to continue (subject to new entrants that are able to extend their networks to rural areas and can therefore operate in a truly competitive manner). Thirdly, Digicel’s mobile data pricing is likely to remain consistent, given our research findings thus far (for our analysis of single-service data bundles, see Watson et al., 2022). Fourthly, retail customers are already experiencing high prices, compared to global affordability benchmarks.

Aside from pricing, it may be possible for NICTA to make a retail service determination or set industry guidelines regarding service quality and terms and conditions of service. In Foster’s research (2017), he found a Facebook page of the ‘Digicel Complaints Group’, a public forum with more than 43,000 members from across PNG and he analysed the kind of complaints that mobile telephone users were making in the group. Further research could be undertaken to ascertain whether customers continue to have concerns. Any effort to ensure that services are effective and/or that terms and conditions are made clear and transparent for users would be to the benefit of the telecommunication sector as a whole.

### Question 6

We disagree with the fourth point with regard to data only bundles (also referred to in the discussion paper as single-service data bundles). Starting from the first week of 2020, we have been undertaking research to monitor the internet prices that are offered to mobile telephone users in PNG. Specifically, we have been noting the single-service data bundles offered by the mobile telecommunication companies each week. Along a similar vein to the minister's interest, a primary motivation for this research was to assess whether the launches of the Coral Sea Cable System (CS2) and the Kumul Submarine Cable would lead to any discernible decrease in the pricing offered to consumers.

Our research has involved systematically collecting pricing data using Unstructured Supplementary Service Data (USSD) menus in mobile telephones. Customers use these menus by selecting, for instance, '1' to 'Buy a plan' then '1' for 'Data plan' in the next list of options received and so on. The advantage of using USSD menus to collect data is that this method provides accurate, up-to-date information and can capture temporary promotions. By contrast, collecting newspaper advertisements or pricing information from company websites or other sources may not be as reliable.

This research does not capture the pricing structures of all internet service providers operating in PNG, such as those offering fixed services to businesses, households, universities and so on. Nonetheless, it captures the pricing structures relevant to a substantial portion of the country's internet users when they access the internet through mobile telephones. Over three quarters of mobile telephone connections in PNG are prepaid and less than a quarter are post-paid (Highet et al., 2019, p. 19). This research captures pricing available to prepaid customers, while post-paid clients may be offered different pricing structures.

The research has found that there has been no change in mobile internet pricing since the start of 2020. There have been no changes in the prices offered through single-service bundles during that period at the retail level. For details of findings, see Watson et al. (2022). We will continue to undertake weekly monitoring of mobile internet pricing using USSD menus and will report on this regularly. We added Amalgamated Telecom Holdings to our data collection process soon after they launched their network late in April, using Vodafone branding.

In short, we disagree with assertion 4 (p. 9 of the discussion paper), with regard to the value of data only mobile bundles. There has been no material improvement in these bundles since the start of 2020. We have no argument against any of the other assertions listed on p. 9 of the discussion paper.

### Question 7

As we mentioned in our overall position statement above, we do consider that the changes that are taking place at present are relevant matters for NICTA to take into account when determining the timing of any possible retail service determination. In addition to the two changes to the market alluded to in the discussion paper, there is also the ongoing merger of Telikom and bmobile that may have some impact on the prices and services offered to customers. Our view is that a determination should be held off for a set period of time (for example, one or two years) in order to ascertain whether the three changes to the market make any difference. This approach seems particularly pertinent, given that the act stipulates that leaving the situation to market forces is the preferred option.

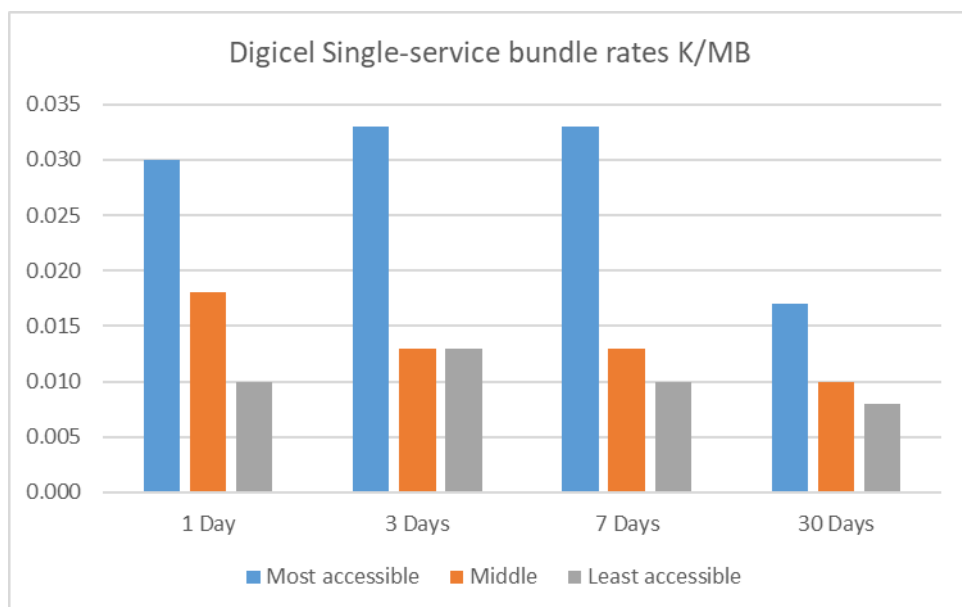
### Question 8

We agree that the retail regulation criteria in Section 158 of the Act are satisfied in relation to a retail service determination to prohibit on-net/off-net price discrimination of retail voice calls, or, at least, retail mobile voice calls. We note that there is some precedent for regulation of on-net/off-net call pricing in PNG, given

the regulatory involvement in the establishment of interconnection rates soon after Digicel first entered the country (Watson, 2011, pp. 49-50).

### Question 9

We disagree. We maintain that discrimination against low-income users is evident in pricing structures. Our research focuses on the single-service bundles offered by mobile network operators in PNG. As can be seen in the figure below, the bundles that we monitor offer better value to those users who can afford to outlay greater amounts of money. The chart represents Digicel's single-service bundles. Bundles that require a large initial outlay of money are shown in grey. The chart shows that these bundles (those in grey) offer users a better return on investment, in terms of value (measured in Kina per megabyte) in all categories (1 day bundles, 3 day bundles, 7 day bundles and 30 day bundles). Furthermore, it is possible to see from the chart that those users who can afford an initial outlay of a larger amount of money that would enable them to purchase a longer-lasting bundle (for example, a 30 day bundle) generally receive a better return in terms of value (measured in Kina per megabyte) than those who purchase bundles for shorter periods.



In addition to the pricing issue presented above, we feel that service issues and everyday realities deserve attention. In particular, we would like to see further consideration given to low-income customers, especially those living in rural and remote areas. People living in such places experience occasional mobile network outages and often have only very limited access to electricity. Therefore, we feel that it is worth giving further thought and attention to customers in such circumstances before the decision to take no action is settled upon.

Research conducted in the Autonomous Region of Bougainville found that people in central and south Bougainville frequently spoke about mobile “network coverage [that] is weak and inconsistent, with no coverage in some villages” (Watson, Miller, & Schmidt, 2020, p. 14). In addition, people reported difficulties with “keeping their handset batteries charged” (Watson et al., 2020, p. 17). While only a limited number of studies have been conducted in rural villages in PNG in recent years, a detailed study in a rural village in Solomon Islands found that people in that location did not use the internet but did make telephone calls with their mobile telephones, especially for organising family events and communicating about emergencies (Hobbis, 2020). The villagers had difficulty accessing electricity and purchasing mobile telephone credit (Hobbis, 2020).

For rural customers, our assessment is that use of short message service (SMS), also known as text messaging, can be important. We note that SMS was not discussed in any detail in the discussion paper and may warrant further attention. Another issue that could be investigated is the question of how soon a subscriber identity module (SIM) card is deactivated. Our concern is that if a person in a rural location has a SIM card deactivated due to lack of use over a certain time period, they will not be able to use the device during time critical emergencies such as childbirth complications and natural disasters. Any effort or regulation that could ensure that SIM cards are not deactivated too often would be a very good idea. In addition to use during emergencies, this would have benefits in the general lives of rural customers who may not live near a store or may not have a mobile telephone credit seller in their village. It would help to make mobile telephones more user-friendly for rural villagers than they are at present.

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