

30 July 2018

Mr Charles Punaha
Chief Executive Officer
Level 4 and 5, Tower 1
Stratos Building
Savannah Heights
Waigani NCD

RECEIVED
31 JUL 2018BY: OCED

Dear Sir,

**SUBJECT: SUBMISSION OF RESPONSE TO PUBLIC INQUIRY INTO THE POTENTIAL
DECLARATION OF CERTAIN WHOLESALE TELECOMMUNICATIONS
SERVICES (PUBLIC INQUIRY)**

We refer to your letter of 13 June 2018 and now formally submit our response to NICTA's consultation paper regarding above captioned matter.

If there be any query, please do not hesitate to contact me on phone: 313 3902/76997579 or email: pkomboi@pngdataco.com.

Sincerely,




PAUL KOMBOI
Managing Director

Encl.


DECLARATION OF CERTAIN WHOLESALE TELECOMMUNICATIONS SERVICES

For your attention


OCED
2/8/18

yes, you'll be covered





KUMUL TELIKOM HOLDINGS LIMITED (KTHL)

NICTA - POTENTIAL DECLARATION OF CERTAIN WHOLESALE SERVICES

Executive Summary

This response to NICTA's consultation paper is made on behalf of Kumul Telikom Holdings (**KTH**). KTH is in agreement with much of NICTA's preliminary position:

- 1) KTH agrees that the termination of fixed and mobile calls and SMS should continue to be declared services.
- 2) KTH agrees that the definition of mobile call termination should include inbound international calls.
- 3) KTH expected that the international submarine cable services and associated gateways would be re-declared – but fails to see the benefit of now including beach manholes and associated ducts.
- 4) KTH agrees that infrastructure supported by universal access funds should be declared – but KTH also believes that this should be extended to include all facilities aided by public funds.
- 5) KTH agrees that the miscellaneous services considered in Chapter 6 and wholesale leased lines (Chapter 8) of the consultation paper should not be declared.

KTH has only one disagreement:

- 6) KTH believes that optical fibre domestic transmission services should not be declared at this time.

1 Fixed and mobile call termination

KTH has no objections to the continuation of fixed and mobile call and SMS termination. NICTA put it simply: *"should a calling party wish to contact a particular user on a particular fixed or mobile number, then the originating network operator still has no choice but to use the wholesale FTAS or MTAS service. And this applies whether the call originates in PNG or overseas"* (4.2.6).

2 Inbound calls and mobile call termination

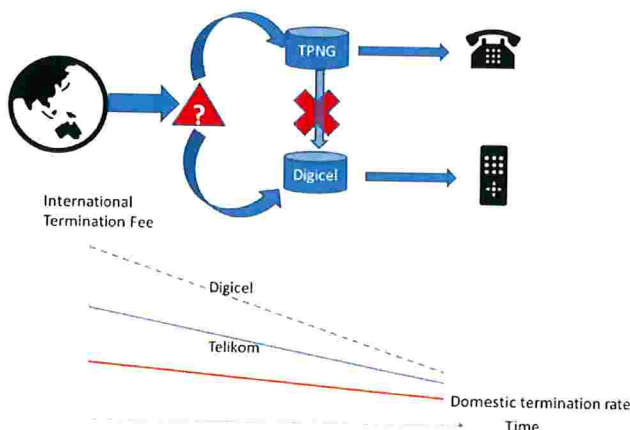
KTH agrees that the definition of call termination should include inbound international calls.

As NICTA notes, retail charges for calls into and out of PNG are very high by world standards and this is largely the function of lack of competition in domestic services for international calls in PNG. (see chart).

Telstra's per minute rate is A\$4.83 (K1.98 for both fixed and mobile calls); which is 60 times higher than the domestic termination rate.

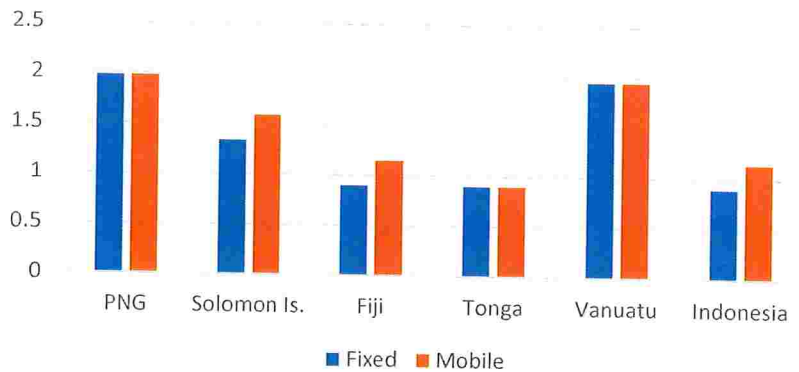
KTH agrees that: *"The simplest and most direct way to address the problem of high prices for inbound international calls is for NICTA to include both domestic and international calls in the declaration of FTAS and MTAS, and then to require all termination rates, both national and international, to be cost-based. Such an approach is widely adopted internationally and in many countries this effectively means the same termination rates apply for national and for inbound international calls"*. (4.3.4)

Digicel has flatly refused to discuss accepting inbound international calls from Telikom¹. Inbound calls to Digicel users are ignored unless they come directly to Digicel from the overseas carrier. So, Telikom currently receives only inbound calls for termination on its fixed network and calls for Digicel users have to go first to Digicel. This situation seems to be against the principle of any-to-any connectivity and substantially reduces competition.



bound traffic towards either Digicel or Telikom. This would force them to compete down towards the domestic termination rate.

Telstra Standard Rates
\$A per min (plus \$0.55 flagfall) 8 July 2018



The convergence of international and domestic termination rates will be driven by competition. As NICTA points out: *"if the operator of the called party attempts to set excessive inbound international termination rates, the international correspondent may instead choose the international call termination service of another licensee which will in turn purchase (domestic) MTAS or FTAS from the operator of the called party"* (4.5.12 (a)). No regulatory intervention is needed once the proposed declaration is implemented.

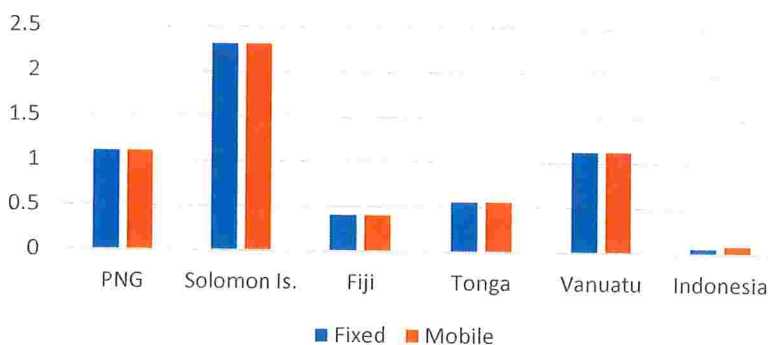
Including inbound calls in MTAS and FTAS would unleash competition. International carriers can easily and quickly switch out-

¹ In 2008, Telikom had an agreement with Digicel which excluded the "termination of any calls originating from a network overseas" (clause g of Schedule 10). But, that agreement lapsed in June 2015. In 2014 Telikom tried to discuss the matter of inbound calls with Digicel but was ignored.

Also, more competition will be stimulated as NICTA points out: *“One of the main sources of competition and constraints on inbound international call prices is usually provided by OTT players such as Skype. Typically Skype carries traffic into the destination country on the Internet and then presents it for local call termination at local rates. This has not happened to date in PNG because cost-based termination rates have been reserved for domestically generated traffic” (4.5.12 (b)).*

Skype’s per minute rate for calls into PNG is Kina 2.71 (at A\$0.41 per 1 Kina); which is over 30 times higher than current domestic termination rates – half the multiple found for Telstra above. It would be lower still with lower termination rates into PNG. In Indonesia, it is just K0.15 (A\$0.06).

Skype Pay as You Go
\$A per min (plus \$0.121 flagfall) 8 July 2018



3 International cable and associated gateway services

KTH agrees that international submarine cable services and associated gateways should be declared services – even though nobody currently seeks access to unbundled access to international gateway service. But, KTH fails to see the benefit of including access to the:

“beach manhole” means an underground chamber in which a sea cable is jointed to a terrestrial cable; and

“duct” means an underground conduit that is used, installed ready to be used, or intended to be used to hold a terrestrial cable that connects a Beach Manhole to a Cable Landing Station;

Currently, customers of wholesale international capacity purchase either:

- International Private Leased Circuits (**IPLCs**) sourced from Telikom (now DataCo) which chooses the overseas carrier for domestic transmission on the far side. On APNG2 which has half circuits, the IPLC can be sourced from an international carrier; which then purchases an IPLC from Telikom/DataCo). For PPC1 and APNG2, the IPLC is paired with domestic leased line capacity in PNG for backhaul from the international gateway to the customer's POI.

Or

- Basic international connectivity at one of the two Tiare exchanges. Like IPLCs, this is charged per Mbps purchased. This option is for ISPs only. ISPs also have an option to buy IP transit provided via a dedicated IPLC; which is not through a Tiare exchange.

No wholesale customer is connecting its own independent domestic capacity at the international gateway exchange. So, it is hard to see why anyone would by-pass the gateway to connect at the beach and take traffic to a new gateway. A competing submarine cable is extremely unlikely.

4 Mobile tower infrastructure

KTH agrees that more sharing of mobile towers in PNG should occur.

Mobile Tower means any physical structure in Papua New Guinea, be it a tower, pole, mast or other structure, upon which antennae and other active electronic components of a mobile communications network are situated. (Annex E)

Co-location means access to power, keys to the site, installation on the tower and shared/own shed.

It should be noted that there has been co-location between Telikom and bmobile/Vodafone for almost 10 years; but not with Digicel which refuses to share its towers. This refusal might be tolerable in metro areas where it is efficient to duplicate towers because the level of demand will justify it. But, in remote areas, where it is not economic to duplicate investment, there should be open access and a requirement that facilities subsidised with public funds should be built to allow sharing.

NICTA notes that *“Open access is a condition of USF funding, and Digicel has constructed a number of towers using the USF, but in none of these cases have the other operators sought access to the towers. It is recognised though that this may be a reflection of the location of the USF funded towers and the availability of wholesale backhaul options to those sites”*. (5.5.2)

KTH believes mandated sharing should be extended to include all towers that were built using World Bank Funds, DSIP Funds, PSIP Funds and Treasury Funds. These are all in remote areas which would allow competition and reduce pricing for villages.

A fall-back option is national roaming on these publicly subsidised sites; which would require such a roaming service to be declared.

5 Fixed and mobile call origination

KTH agrees that the potential declared services discussed in chapters 6 and 8 (leased lines) should not be pursued.

“NICTA notes that the merger and recapitalisation of bmobile and Telikom into a single entity (KTH), coupled with the continuation of its branding agreement with Vodafone, has the potential to stimulate effective competition without declaration of MACO services” (5.5.3)

And,

“Based on the available evidence, NICTA is not able to conclude that there is any market at all for wholesale leased lines in PNG beyond self-supply, whether for voice, data or multimode usage. It is likely that service providers such as independent ISPs are taking services that incorporate non-dedicated transmission characteristics, and that operators (other than KTH (Telikom)) are not offering retail leased line services at all or retail services that are based on wholesale leased lines” (8.2.3).

The NICTA paper asks KTH and other respondents to *“consider whether there are other wholesale services, or alternative wholesale service definitions, that NICTA should have considered and whether those services should be declared or not”*.

There is no mention of Mobile Number Portability (**MNP**); which we understand NICTA had put to the Minister many months ago. KTH looks forward to the Minister releasing the proposed declaration for public comment.

6 Optical fibre domestic transmission (OFDT) services

KTH believes that it would be premature to declare OFDT services.

The proposed declaration defines OFDT as: *“The wholesale broadband capacity service is a Network Service for the carriage of broadband traffic on a Network within Papua New Guinea and involves the*

provision of a Layer 2 bitstream service or a Layer 3 network service from a Point of Interconnection, or potential Point of Interconnection, to either a second Point of Interconnection or potential Point of Interconnection" (**Annex F**).

An actual or potential point of interconnection "is a location in Papua New Guinea which is a physical point of demarcation between the access seeker's network and the access provider's network" (**Annex F**).

6.1 What is the relevant wholesale market?

Applying NICTA's *Market Analysis Guidelines (MAG)*, there are three dimensions which are used to define the relevant market: customer, product and geography.

*"The **customer dimension** defines a market in terms of a group of consumers that have a common set of requirements that are satisfied by services/products. Distinct sub-sets of consumers may be identifiable because they have different service requirements, because they are served through different channels, or because price discrimination can be observed. NICTA expects that it will typically be possible to distinguish between wholesale and retail customers for these reasons"*(**MAG 4.2**).

Having a licence is a necessary but not a sufficient condition for access to a declared service. The NICTA Act says *"'wholesale customer' means an operator licensee, but excluding circumstances where that operator licensee acquires an ICT service for that operator licensee's own personal use rather than to facilitate the supply of an ICT service by that operator licensee"* (**Section 4, p12**). This is very similar to how KTH will view its own definition of wholesale customers as *"companies whose primary business is to provide communications and ICT services to end users"* (KTH).

In the context of OFDT and the POI to POI definition, wholesale customers are ISPs or carriers who need OFDT to build a communications service for end users.

The **product dimension** *"consists of all the products/services that customers perceive as being substitutable for each another because they have equivalent characteristics, functionality, pricing or uses"*(**MAG 4.3**).

KTH agrees that microwave and satellite transmission links should not be included as part of any declared transmission service not only because they are imperfect substitutes for OF transmission but also because it is efficient to replicate such links.

In terms of the **geographic dimension**, *"there is a general pre-disposition to define markets as national unless there are demonstrable regional variations in supply or demand"*(**MAG 4.4**). In the case of OFDT, there are differences in both supply and demand by geography.

Telikom and DataCo segment demand by metro (sometimes local or same zone), adjacent zone and non-adjacent zone. This reflects differences in (unknown) supply costs. OF transmission between two points of actual (or potential) interconnection is not homogeneous. Costs are driven by capacity and distance.

6.2 Triggers for declaration

NICTA uses the three criteria test (**3CT**) to consider if a market is suitable for ex-ante regulation:

- 1) the market shows high and non-transitory barriers to entry, and
- 2) market structures do not tend towards effective competition in a relevant time horizon; and
- 3) the ex-post application of competition law alone would not adequately address the market failure in a suitable timeframe.

NICTA says that applying the 3CT will help it to “*minimise the costs associated with regulatory error; that is, the efficiency costs of incorrect decisions on whether or not to intervene in a market...* (so that ex-ante intervention is) *limited to circumstances where such intervention is necessary.*” (**MAG 5.8**).

Is such intervention necessary for the **promotion of competition** (NICTA Act, Section 128 (b)(i))? Nobody has been refused access to such facilities or raised concerns about the terms of access. As NICTA notes, it is in the interests of DataCo to supply these services. In the process of restructuring KTH, the pricing of transmission capacity will be transparent and non-discriminatory.

KTH proposes that NICTA forbears declaration of OFDT while monitoring the development of that market and knowing that there is always the threat of ex-post intervention by the ICCC.

While KTH argues that declaration will make little or no contribution to the competition efficiency objective, it is extremely concerned that such ex-ante intervention would have a deleterious impact on the **efficiency objective**. Section 124, (2) says that “*In determining the extent to which a particular thing is likely to further the achievement of the efficiency objective, regard shall be had (without limitation) to all of the following matters*” which include:

- a) *the legitimate commercial interests of the access provider in supplying the ICT services, including the ability of the access provider to exploit economies of scale and scope; and*
- b) *the incentives for investment in the facilities by which the ICT services may be supplied, including the risks involved in making the investment.*

“As the competition objective is ‘subject to’ the efficiency objective, the Act gives greater weight to ensuring efficient infrastructure investments above greater competition for its own sake” (**MAG 3.4**).

6.3 Real Options

NICTA says that: “*The commercial interest of access providers such as DataCo, which has a wholesale mandate from the PNG Government, will necessarily be enhanced, because its business case rests upon exploiting economies of scale and scope in the provision of wholesale broadband to provide such services efficiently on a national basis. Declaration of wholesale broadband services, far from compromising the incentives for investment, is fully consistent with sustaining investment incentives in this instance*’ (**7.5.5**).

DataCo (and KTH) agree that selling more wholesale transmission is good for business and PNG. But, declaring OFDT will distort investment incentives. The biggest single issue is the proposed coastal fibre where declaration of OFDT “*would automatically include carriage over a national submarine cable system in the event that DataCo’s public plans for such a system are realised*” (NICTA discussion paper **7.5.1**).

NICTA may believe that if the regulated return is sufficient, there is no reason not to proceed with regulated investments. However, using the weighted average cost of capital (**WACC**) does not recognise that the value of a “call option” to delay irreversible investment due to uncertainty. This concept comes from real option theory (Dixit and Pindyck, Investment under Uncertainty, 1994).

The risk adjustment is not addressed with the WACC. As the regulated firm is a price taker in the capital market, real option theory does not have any impact on the WACC because it does not influence either the return on equity or debt. But, it does affect the hurdle rate of return that is used to decide on an investment. So, the call option is made by applying a mark-up to the WACC.

Neither NICTA nor KTH can manage the complexity of calculating the value of real options. But, the brutal fact remains that KTH will probably not invest in the national submarine cable system if it is regulated.

The first-best option is to forbear from declaring all OFDT; as suggested above. The second-best option is to declare OFDT without the proposed national submarine cable system.

6.4 Second best

There are a couple of issues: avoidance and complexity.

If OFDT (without the coastal cable) is declared, DataCo may prefer to invest in future in unregulated microwave or satellite transmission; which is not in the long-term interests of PNG. The answer is not to extend the declaration to include these others because the reason they are not there is that it is efficient to deploy competing microwave and satellite services: *“Importantly, satellite and microwave capacity can be installed in manageable increments and are economic to replicate. In addition, they are capable of relocation at affordable cost, which may not be an option for fibre.” (7.2.2)*

Australia has found pricing domestic transmission to be complex. That will be worse for PNG which cannot employ the benchmarking approach used by the ACCC.

The domestic transmission capacity service (DTCS) was deemed by the ACCC to be a declared service in 1997 because it was recognised to be an essential input for other services that included bottleneck infrastructure. In its report² earlier this year, various rounds of consultation and analysis were summarised.

The ACCC did not attempt cost modelling. It assumed that prices on competitive routes would be driven towards cost. In Australia, the DTCS market is dominated by four vertically integrated transmission providers - Telstra, Optus, TPG and Vocus (although they continue to offer wholesale transmission services through some of their subsidiary companies). The ACCC had detailed statistical analysis done for prices on competitive routes to estimate cost-based prices. This approach cannot be applied in PNG.

If NICTA declares OFDT (excluding the coastal cable), it will have to develop cost models for different zones reflecting the influence of capacity and distance. Or, it could forbear from declaration and require monitoring of the market and prices knowing that ex-post regulation by the ICCC will be there.

Summary

KTH supports most of what NICTA proposes. But, it has major reservations about the declaration of OFDT services. KTH suggests that for the reasons argued above, it would be in the long term interests of PNG to forbear from declaration of OFDT services at this time.

SUBMITTED ON BEHALF OF KTH:



PAUL KOMBOI
Managing Director
PNG DataCo Limited (**DataCo**)

² March 2018 ACCC Discussion Paper reviewing the declaration of the Domestic Transmission Capacity Service (DTCS): <https://www.accc.gov.au/regulated-infrastructure/communications/transmission-services-facilities-access/domestic-transmission-capacity-service-declaration-inquiry-2018-2019/discussion-paper>