



DECISION AND INQUIRY REPORT

**In relation to NICTA's consideration of
the potential declaration of certain
wholesale mobile telecommunications
services**

29th April 2014

Contents

EXECUTIVE SUMMARY	2
BACKGROUND	3
The declaration criteria.....	3
The public inquiry process	4
THE INQUIRY FINDINGS.....	6
EXTENT TO WHICH THE DECLARATION CRITERIA ARE MET	9
Declaration criterion 1	9
Declaration criterion 2	9
Declaration criterion 3	10
Declaration criterion 4	10
Declaration criterion 5	11
Declaration criterion 6	11
CONCLUSION.....	13
ANNEX A: Inquiry Terms of REFERENCE	14
Annex B: LIST OF INQUIRY DOCUMENTS PUBLISHED BY NICTA	15

EXECUTIVE SUMMARY

1. Part VI of the National Information and Communications Technology Act 2009 (the Act) provides for the Minister, upon the recommendation of NICTA, to declare a wholesale service. Operator Licensees that supply a declared service are required to comply with statutory non-discrimination obligations in relation to that declared service. The pricing of a declared service must also be consistent with the General Pricing Principles and any relevant Service Specific Pricing Principles.
2. NICTA has held a public inquiry into whether or not certain wholesale services in the national market for wholesale mobile access and call origination services should be recommended to the Minister for declaration. As required under subsection 131(7) of the Act, NICTA gave particular consideration to the potential declaration of facilities access services associated with mobile network facilities (including telecommunications transmission towers) and domestic inter-network mobile roaming services.
3. NICTA has considered whether or not the declaration criteria specified in section 128 of the Act would be met by the declaration of both, or either, of those particular wholesale mobile services. NICTA is not satisfied that the declaration of both, or either, of those particular wholesale mobile services would satisfy the declaration criteria at this time. Accordingly, NICTA does not recommend the declaration of either service at this time.
4. In this report NICTA sets out:
 - a) the extent to which the declaration criteria are met, as NICTA is required to do under paragraph 129(2)(b) of the Act; and
 - b) NICTA's findings as a result of the public inquiry, as NICTA is required to do under subsection 235(1) of the Act.
5. As envisaged in subsection 129(4) of the Act, NICTA has consulted with the Independent Consumer and Competition Commission (ICCC) during the inquiry process.

BACKGROUND

6. Part VI of the National Information and Communications Technology Act 2009 (the Act) sets out the wholesale access regime for the ICT industry. Under that regime:
- a) NICTA may recommend to the Minister that certain wholesale services should be made declared services;
 - b) Access Providers (i.e. Operator Licensees) that supply a declared service are required to comply with certain non-discrimination obligations in relation to that declared service (unless exempted);
 - c) The terms and conditions on which Access Providers are required to comply with the non-discrimination obligations are subject to agreement between the Access Provider and the Access Seeker, which must be consistent with the General Pricing Principles and any relevant Service Specific Pricing Principles;
 - d) In the event that such an agreement cannot be reached, the terms and conditions of access will be as set out in any reference interconnection offer (RIO) that the Access Provider has submitted to NICTA and which NICTA has accepted. A RIO must also be consistent with the General Pricing Principles and any relevant Service Specific Pricing Principles. In the absence of both an agreement and a RIO, the terms and conditions of access are those determined by NICTA through arbitration.

THE DECLARATION CRITERIA

7. NICTA may only recommend that the Minister declare a particular wholesale service if NICTA is satisfied that such a declaration would satisfy all of the declaration criteria set out in section 128 of the Act as follows:

The “declaration criteria” are as follows –

(a) that declaration of the wholesale service will further the achievement of the objective of this Part [of the Act] as set out in Section 124; and

(b) specifically, in relation to the competition objective, that –

(i) access or increased access to the wholesale service (as a consequence of declaration) is necessary for the promotion of effective competition in at least one market other than the market for the wholesale service; and

(ii) the wholesale service is supplied in whole or in part via a facility that cannot feasibly be substituted, as a matter of commercial reality, via another facility in order to supply that wholesale service; and

(c) specifically, in relation to the efficiency objective, that –

(i) declaration would not materially compromise the incentives for efficient investment in any facility over which the wholesale service may be supplied; and

(ii) access or increased access to the wholesale service (as a consequence of declaration) is technically feasible having regard to the specific factors identified in Section 124(2) (a); and

(iii) in the case of wholesale services that are facilities access services, increased access to the wholesale service would avoid inefficient replication of underlying facilities that may be efficiently shared.

THE PUBLIC INQUIRY PROCESS

8. In June 2013 NICTA decided to hold a public inquiry to examine whether certain wholesale mobile telecommunications services should be recommended to the Minister for declaration. The terms of reference for the inquiry are provided at Annex A. The focus of the inquiry was on two services mentioned in subsection 1301(7) of the Act, namely:
 - a) facilities access services associated with mobile network facilities (including telecommunications transmission towers); and
 - b) domestic inter-network mobile roaming services.
9. As part of the inquiry process NICTA published a public discussion paper on 2nd August 2013 that set out NICTA staff's preliminary examination of relevant issues and consulted with stakeholders and interested parties between August and December 2013.
10. Submissions were received from:
 - a) Bemobile Limited (bemobile);
 - b) Digicel (PNG) Limited (Digicel);
 - c) Independent Competition and Consumer Commission ("ICCC")
 - d) PNG Air Services Limited (PASL); and
 - e) Telikom PNG Limited (Telikom).
11. NICTA also provided an opportunity for interested parties to review and submit comments on those submissions. Such cross-submissions were received from:
 - a) Digicel; and
 - b) Telikom.
12. The results of that consultation process were set out in a Response to Comments report, published on 2nd April 2014.
13. In general the consultation processes confirmed the tentative conclusions that NICTA staff had reached and identified in the discussion paper, namely that not all of the declaration criteria would be met by the declaration of either, or both, of the two wholesale mobile telecommunications services under consideration.
14. Pursuant to section 129 of the Act, NICTA determined on 14th March 2014 that it was not satisfied that all of the declaration criteria would be met by the declaration at this time of either, or both:
 - a) facilities access services associated with mobile network facilities (including telecommunications transmission towers); and

b) domestic inter-network mobile roaming services.

15. Accordingly, NICTA does not recommend that the Minister declare either or both of those services at this time.
16. A list of the inquiry documents published by NICTA is provided at Annex B. All documents were published on, and remain available from, NICTA's Public Register on its website.

THE INQUIRY FINDINGS

17. The public inquiry into the potential declaration of certain wholesale mobile telecommunications services led NICTA to make the following key findings:
18. There is a potential national market for wholesale mobile access and call origination (MACO) services, which includes access to voice, SMS and MMS services, and comprises all of the various means by which such services can be supplied over a mobile network and the facilities of a mobile network to which access can be feasibly provided, namely:
- a) Self-supply—The self-supply of wholesale mobile access and mobile call/SMS origination services by a vertically integrated mobile network operator (MNO);
 - b) Facilities access services associated with passive mobile network facilities— A potential facilities access service that enables one MNO to access certain passive elements of another MNO's radio access network;¹
 - c) Domestic mobile roaming services—A potential network service that enables a retail customer of one MNO in PNG to use the retail mobile services of another MNO in PNG when within the latter's network coverage area and beyond the network coverage area of the first MNO;
 - d) Facilities access services associated with active mobile network facilities—A potential facilities access service that enables one MNO to access certain active elements of another MNO's radio access network² (e.g. mobile access bundled with either wholesale mobile call origination or wholesale airtime); and
 - e) Wholesale mobile call origination—A potential network service that enables indirect access operators to supply mobile calls/SMS by way of pre-selection (assuming that mobile calls/SMS were made pre-selectable).
19. NICTA reached this conclusion through the application of the hypothetical monopolist test (HMT), which is a commonly used approach to identify close demand-side and supply-side substitutes. NICTA's analysis covered the forward-looking two-year period ending 31st December 2015.
20. The wholesale MACO market is not a fully operating market, as there is currently no wholesale supply of MACO services beyond self-supply by the three vertically integrated mobile network operators (bemobile, Digicel and Telikom) to their respective downstream operations. For the avoidance of doubt, access by mobile network operators to third party tower space has been negotiated in some areas but this is not wholesale provision within the industry as envisaged under the Act.
21. The wholesale MACO market is susceptible to ex ante regulation, at least within the two year period under consideration. This is because it is characterised by high barriers to entry, it is not trending towards effective competition, and ex post competition law is insufficient to resolve any market

¹ 'Passive elements' in this context are non-electronically active elements such as sites, buildings, towers, ducts and the like

² 'Active elements' in this context are network elements other than passive elements and include mobile switching, transmission and access to network systems and services

failure or anticompetitive behaviour issues that may arise. NICTA reached this conclusion after applying the so called “three criteria test”,³ which is not a statutory requirement in PNG but, in NICTA’s opinion, is an important filter for determining whether a market may warrant being subject to ex ante regulation of the sort provided for in Part VI of the Act. As such, NICTA considers it an important (if non-mandatory) part of its process for determining whether it is necessary to consider the potential declaration of a wholesale service against the statutory declaration criteria (which is not the same as determining whether or not a particular wholesale service declaration should be recommended to the Minister, which is a decision that can only be based on a consideration of the declaration criteria specified in section 128 of the Act).

22. The wholesale MACO market is not effectively competitive because Digicel has a position of significant market power (SMP), given that
- a) Digicel has a position of SMP in the downstream retail mobile services market;
 - b) Digicel is vertically integrated and has the largest mobile network in terms of coverage;
 - c) Digicel controls infrastructure that is not easily duplicated at a network level useful for the provision of wholesale services—although it is technically possible to duplicate the coverage of Digicel’s mobile network, and it is likely also commercially feasible to do so, it would nonetheless be a high cost venture to do so completely within the two year period under consideration;
 - d) There is an absence of any countervailing buying power—as Digicel has the largest mobile network, it has little need for wholesale MACO services that may be offered by other MNOs (e.g. reciprocal access to passive infrastructure);
23. Although a finding of ineffective competition in a relevant market is not required by the Act in order to recommend the declaration of a service to the Minister, NICTA believes that, consistent with international best practice in competition regulation, obligations such as those that flow from a declaration should only be imposed to address identified risks of market failure and/or anti-competitive consequences.
24. The recent changes in the ownership and, potentially, the strategy of bemobile, together with Telikom’s investment plans, may prove to be a catalyst for the development of effective competition in the wholesale MACO market. This may contribute to a different finding as to the competitiveness of the market in any future review.
25. The key sources of Digicel’s SMP in the wholesale MACO market means that it is arguable that there is potential that that SMP may impede the development of effective competition in the downstream retail mobile services market. Given its SMP and its control of the largest mobile network infrastructure in PNG, Digicel has the incentive and ability to strengthen unfairly its position in the downstream retail mobile services market by denying access (either outright or through delaying tactics) to wholesale MACO services to other licensees that compete against Digicel in the retail mobile services market, particularly in relation to those geographic areas where demand for

³ The application of this test has been documented by the European Commission and by the Body of European Regulators for Electronic Communications and has since been adopted widely and is applied in many countries outside of Europe, such as Oman, Saudi Arabia and the United Arab Emirates.

retail mobile services is very limited or fragile and it thus may be uneconomical for a MNO to duplicate certain mobile network infrastructure. This can have the effect of reinforcing a first mover advantage in favour of Digicel and impeding the development of competition in the retail mobile services market.

26. In these circumstances it is appropriate to consider whether the declaration criteria would be met by the declaration of either, or both, of the following two services:
 - a) domestic mobile roaming services; and
 - b) facilities access services associated with passive mobile network facilities.
27. Although the Act (at subsection 131(7)) envisaged that NICTA would consider the potential declaration of these service in any event, as NICTA found that the relevant market was not effectively competitive NICTA was satisfied that it was appropriate to consider the potential declaration of those services at this time. (That is, if the relevant market was effectively competitive, there would be no grounds for NICTA to contemplate ex ante regulatory intervention in the form of a wholesale service declaration.)
28. Although some limited demand for roaming and/or tower sharing had been indicated to NICTA prior to the inquiry, during the inquiry there was no demonstration of any significant or specific demand for either service (as a declared service).

EXTENT TO WHICH THE DECLARATION CRITERIA ARE MET

29. Following the inquiry, NICTA considered whether the declaration criteria in section 128 of the Act would be likely to be met by the Minister's declaration of either, or both, of the following wholesale mobile telecommunications services:

- a) domestic mobile roaming services (supplied by all mobile network operators); and
- b) facilities access services associated with passive mobile network facilities (supplied by all mobile network operators).

30. NICTA determined that the declaration of neither service would meet all of the declaration criteria at this time. This is, however, a conclusion that may change with time. NICTA's analysis of the extent to which the declaration would be met is summarised below.

Figure 1: Indication of NICTA's conclusions regarding the extent to which the declaration criteria would be met at this time

Wholesale service	Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5	Criterion 6
Domestic mobile roaming services	x	x	x	x	✓	n/a
Facilities access services associated with passive mobile network facilities	x	x	x	x	✓	✓

DECLARATION CRITERION 1

31. Under paragraph 128(a) of the Act, declaration criterion 1 is that declaration will further the achievement of the objectives set out in Section 124 of the Act (i.e. the competition objective subject to the efficiency objective). The competition objective is to 'promote effective competition in markets for ICT services in Papua New Guinea'. That objective is subject to the efficiency objective, which is to promote 'the economically efficient use of, and the economically efficient investment in, the facilities by which ICT services may be supplied'.

32. NICTA is not satisfied that the declaration of either service would meet this criterion at this time for the reasons identified and discussed below.

DECLARATION CRITERION 2

33. Under paragraph 128(b) (i) of the Act, declaration criterion 2 is that, with respect to the competition objective, access or increased access to the wholesale service (as a consequence of declaration) is necessary for the promotion of effective competition in at least one market other than the market for the wholesale service.

34. NICTA is not satisfied that the declaration of either service would meet this criterion at this time. The declaration of either service would in the short term likely facilitate greater service-based competition in the retail mobile services market in the geographic areas specified in Schedules 9 and 10 to the *Standard and Special Conditions of Individual Licences Rule, 2011* (which, pursuant to section 2 of Schedule 3, are the only mandatory areas where coverage obligations may be fulfilled via facilities sharing). However, NICTA was not satisfied that the declaration of either service was *necessary* to the development of effective competition in the retail mobile services market. Both bemobile and Telikom are currently in the process of expanding their networks pursuant to their

licence conditions which, together with a recent change in the ownership and management (and potentially strategy) of bemoible, will foster the development of greater infrastructure-based competition. NICTA considers it necessary to allow these market forces to play out without regulatory interference in the form of a wholesale service declaration.

DECLARATION CRITERION 3

35. Under paragraph 128(b)(ii) of the Act, declaration criterion 3 is that, with respect to the competition objective, the wholesale service is supplied in whole or in part via a facility that cannot feasibly be substituted, as a matter of commercial reality, via another facility in order to supply that wholesale service.
36. NICTA is not satisfied that the declaration of either service would meet this criterion at this time. Both services are supplied wholly by means of mobile network facilities. Although in some geographic areas the only mobile network facilities currently in existence are those owned and operated by Digicel, NICTA does not believe that it is commercially infeasible to replicate some or even all of those facilities at this time. Indeed as was noted in an inquiry submission from Mr Alex Sundakov commissioned by Digicel, government and international development institutions (and even private investors) have demonstrated a willingness to provide the debt and equity capital necessary to enable bemoible and Telikom to fund the replication of some, or possibly even all, of Digicel's mobile network facilities.⁴ Further, with respect to facilities access services associated with passive mobile network facilities, in some geographic areas there are other forms of substitutable facilities, such as the transmission towers of a broadcaster or the 58 open access communications towers in Western Province. NICTA believes that if there are particular types of facilities in particular geographic areas that are not commercially feasible to replicate, then it will not be possible to identify them until after both bemoible and Telikom have completed the rollout of their network infrastructure, including the fulfilment of their mandatory coverage obligations.

DECLARATION CRITERION 4

37. Under paragraph 128(c) (i) of the Act, declaration criterion 4 is that, with respect to the efficiency objective, declaration would not materially compromise the incentives for efficient investment in any facility over which the wholesale service may be supplied.
38. NICTA is not satisfied that the declaration of either service would meet this criterion at this time. Both services are supplied wholly by means of mobile network facilities. The declaration of either service has the potential to undermine the incentives of all mobile network operators to invest in such facilities, particularly as bemoible and Telikom are currently in the process of building out their network infrastructure (to at least the extent required by their licences) and establishing a basis for infrastructure-based competition in the long-term. Declaration may also distort others' incentives to invest in communications infrastructure, such as that which led to the establishment of 58 transmission towers under the Western Province Communications Project, which adds important diversity to the national infrastructure.

⁴Sundakov, A., Economic Analysis of the Proposal to Declare Certain Wholesale Mobile Telecommunications Services in Papua New Guinea, Submission to the public inquiry into the potential declaration of certain wholesale mobile telecommunications services, 24/10/13, p.16

39. Whether or not such affects would 'materially compromise' those investment incentives would depend substantially on the price and any other terms of access. However, NICTA considered that the declaration of:

- a) domestic mobile roaming services would reduce the need, and thus undermine the commercial incentives, to invest in competing mobile facilities in areas where such infrastructure already exists, thereby delaying or deterring the development of infrastructure-based competition (other than in areas specified in Schedules 7 and 8 to the *Standard and Special Conditions of Individual Licences Rule, 2011*, in which mandatory coverage obligations are not allowed to be achieved through facilities sharing);
- b) either service would (to different degrees) undermine the commercial incentives to invest in mobile facilities in areas in areas where such infrastructure already exists because the key benefits of such investments (for example, in terms of enhanced coverage or technology upgrades) would be accessible to competitors, thereby neutralising some of the strategic motivation for such commercial initiatives; and
- c) either service would (to different degrees) undermine the commercial incentives to invest in mobile facilities in areas where no such infrastructure currently exists because both the potential returns from such an investment, and the potential of such network expansion to help differentiate competitors, would be reduced significantly.

DECLARATION CRITERION 5

40. Under paragraph 128(c)(ii) of the Act, declaration criterion 5 is that, with respect to the efficiency objective, access or increased access to the wholesale service is technically feasible having regard to the technology available, the costs involved, and the effect of supply on the integrity, operation and performance of other ICT services and facilities.

41. NICTA is satisfied that the declaration of either service would meet this criterion as the technical feasibility of both roaming and tower sharing has been demonstrated in numerous countries over many years. Paragraphs 134(1) (do) and 136(4) (b) of the Act also provide for any capacity or similar constraints to be addressed. Although, as Digicel noted in its submission,⁵ there can be different requirements specified for a roaming service and they can have a bearing on the technical feasibility and costs of supplying the service, NICTA was satisfied that a roaming service that was technically feasible in PNG could be specified.

DECLARATION CRITERION 6

42. Under paragraph 128(c)(iii) of the Act, declaration criterion 6 is that, with respect to the efficiency objective, in the case of wholesale services that are facilities access services, increased access to the wholesale service would avoid inefficient replication of underlying facilities that may be efficiently shared.

43. The roaming service did not need to be considered against criterion 6 as it is a network service, not a facilities access service.

⁵At page 24

44. NICTA is satisfied that the declaration of facilities access services associated with passive mobile network facilities would meet this criterion. NICTA's view is that the efficiency criteria has a relatively low threshold and notes that it may be met by the avoidance of costs of inefficient replication through mandating access. The criterion is mainly directed at overall cost savings and therefore at sources of static inefficiency. However there may be some efficiency losses through reduced potential for dynamic efficiencies to be achieved as a result of sharing passive mobile network facilities. This is unlikely but has not been examined further by NICTA (as it was unnecessary to do so given that other declaration criteria were not satisfied).

CONCLUSION

45. Despite finding that the wholesale MACO market is susceptible to ex ante regulation for SMP and further that Digicel has a position of SMP in that market, NICTA was not satisfied that the statutory declaration criteria for the making of a wholesale service determination would be met in this case at this time. This raises a question as to what NICTA intends to do if it does not intend to recommend the declaration of a wholesale service.
46. Ex post competition remedies of course remain available to address any alleged abuse of a position of market power in a relevant market. Indeed, one of NICTA's functions under section 9 of the Act is to assist the ICCC to investigate any such complaints for the purposes of the ICCC enforcing such laws. NICTA staff have, in the course of preparing the discussion paper cast doubt on the adequacy of ex post competition law remedies in this case, but the remedies remain available and may act as a deterrent for anti-competitive behaviour.
47. NICTA therefore intends to monitor closely the developing situation in the wholesale MACO market and the impact, if any, of the new investment plans of bemoile and Telikom. In addition NICTA will be alert for immediate intervention in the event of any abuse of market power or other anti-competitive behaviour. Other stakeholders will undoubtedly also be on alert and will advise NICTA or the ICCC of any substantiated complaints in this regard.
48. Finally it is open to NICTA to conduct a further review of whether a wholesale services determination is appropriate if circumstances warrant that in the future.

ANNEX A: INQUIRY TERMS OF REFERENCE

Under the authority of section 127 of the *National Information and Communications Technology Act 2009* (the Act), NICTA has decided to inquire into and report on whether certain wholesale services relating to the supply of public cellular services in Papua New Guinea should be declared under section 130 of the Act. In doing so, NICTA will:

- (a) analyse the extent of competition in domestic mobile telecommunications markets;
- (b) consult with the Independent Consumer and Competition Commission, operator licensees, and any other relevant parties or government agencies;
- (c) form a view as to whether or not those markets are sufficiently competitive; and, if any is not sufficiently competitive,
- (d) consider whether the declaration by the Minister of any particular wholesale service or services in that market, in particular facilities access services associated with mobile network facilities and/or domestic inter-network mobile roaming services, would satisfy the declaration criteria specified in section 128 of the Act;
- (e) determine whether or not NICTA should recommend to the Minister that one or more wholesale services in that market be declared under section 130 of the Act; and, if such a recommendation should be made,
- (f) specify the recommended terms of the declaration(s) and the recommended expiry date(s) for the declaration(s); and
- (g) prepare for the purposes of section 135 of the Act draft service-specific pricing principles in relation to the wholesale service(s) recommended to be declared.

ANNEX B: LIST OF INQUIRY DOCUMENTS PUBLISHED BY NICTA

1. NOTICE OF PUBLIC INQUIRY: Published on August 2nd 2013
2. DISCUSSION PAPER: Published on 2nd August 2013
3. NICTA STAFF'S RESPONSE TO COMMENTS REPORT: Published on 02nd April 2014
4. DECISION AND INQUIRY REPORT (i.e. this report): To be Published on 30th April 2014
5. NOTICE OF PUBLIC INQUIRY REPORT & DECISION: To be Published on 30th April 2014