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Cayman Islands
Chamber of Commerce

The Pros and Cons of Local Number Portability

Chamber of Commerce Briefing on pros and cons of Local Number Portability

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Introduction and Summary

1. Briefly defined, "local number portability" [LNP] is the ability to change domestic telephone service providers and still keep your telephone number. The actual definition is found at s. 71 of the ICTA Law.[1]

2. However, adopting LNP changes one of the fundamental assumptions underlying the use of telephone numbers – that they identify a specific element of a specific network of a specific service provider. Implementation requires changes to the networks of all participating carriers, to ensure the calls to that number go to the correct carrier serving the customer.

Three different implementation "modes"

3. There are three typical implementations – portability among fixed networks only, portability among fixed and mobile networks separately, and portability within and between fixed and mobile networks ("wireline", "wireless" and "intermodal"). There are also many different technological solutions for implementing LNP, some of which are more or less efficient or practical for small island nations.

Law requires ICTA to analyze costs and benefits

4. LNP clearly brings benefits to a local phone market, but it also imposes many costs, and the ICTA Law requires the ICTA to fully analyze those costs and benefits before deciding whether to impose it. Many practical details have yet to be worked out before it can be determined whether LNP would be an overall positive for the Islands.

5. In defending the wording of its Public Consultation, which C&W suggests gives some indication that the ICTA may have already decided that LNP must be implemented, the Authority appears to be arguing[2] that its interpretation of the law is that the Authority is only obligated to determine the *type* of LNP solution.

Summary of Paper

6. This paper sets out several "pros and cons" of LNP, it examines incorrect assumptions that may have influenced the ICTA, and it suggests practical alternatives to LNP. In conclusion it recommends that Chamber members examine these issues and make their views known to the ICTA.

[1] "Number portability" relates to the ability of customers to change licensee without having to change their telephone numbers.
[2] Para. 90, ICTA Decision 2005-1

Perceived pros:

Greater choice of service provider without having to change number

7. Clearly, the major benefit of LNP is to allow customers greater choice of service provider without the inconvenience, confusion or cost of losing the telephone number. In particular, LNP allows customers to respond to price and service changes without the cost and constraint of changing telephone numbers. Some of these costs of switching telephone service provider include non-telecommunications costs like reprinting stationery, changing phone listings, and the time spent advising contacts/associates/friends of new telephone numbers. This is especially beneficial to those customers who would have switched even in the absence of LNP.

Efficiency and price improvements due to competition

8. LNP is also said to bring incremental efficiency improvements and associated price reductions, and to stimulate demand for telecommunications services and overall economic growth, as a result of increased competitive pressures due to the presence of LNP in the market.

9. Wireless LNP encourages competition among wireless carriers, and intermodal LNP encourages adoption of wireless by wireline consumers (or vice versa) who do not want to give up their telephone number.

10. Intermodal LNP in particular enhances these benefits, as it brings the greatest flexibility to customers in terms of choice of service provider and in terms of choice of service. Intermodal LNP also brings the greatest competition and the greatest pressures to be efficient throughout all parts of the domestic telecommunications market, because competition or better service/prices in one part of the market will impact other parts .

Efficient use of telephone number resources

11. LNP also allows increased efficient use of scarce public resources, such as telephone numbers.

Cons:

Increased costs passed on to all consumers

12. However, while LNP can reduce certain costs to customers associated with switching service providers, it will increase certain costs to service providers, and these costs are likely to be passed on to consumers. In practice some of those costs will very likely impact all consumers, not just those who choose to switch service providers.

13. The ICTA has acknowledged that, should LNP be mandated, service providers "should be free to pass … costs on directly to consumers"[3] and "it would would be appropriate for licensees to introduce a new line item on monthly bills to pass through common costs proportionately …"[4]

14. The overall incremental costs to service providers to implement LNP are going to be onerous – this is because LNP is at odds with the fundamental assumptions underlying the telephone numbering system used for decades, and requires significant network adjustments to overcome those assumptions.

15. These costs will include network costs, including switch upgrades to accommodate this functionality (and the associated depreciation of those capital costs), as well as general administrative costs for the management and operation of the database of ported numbers. There may also be additional call conveyance costs and/or database "look-up" costs, depending upon the technical solution adopted, as each call requires an extra process behind the scenes to ensure it is sent to the appropriate service provider.

Per-subscriber cost will be high due to small size of market

16. The other countries cited in ICTA Decision 2005-1 where LNP has been introduced, have telecommunication markets hundreds or thousands of times the size of the market in the Cayman Islands. Given the relatively tiny scale of the subscriber base in the Cayman Islands, per-subscriber costs are likely to be high, and service providers will bear increased costs of customer acquisition (e.g., direct porting costs, and costs of increased churn). It is also difficult to ensure these costs are borne in an equitable manner by consumers. One of the outstanding issues is whether only customers who "port" their phone numbers should bear the costs of portability, not customers who do not want to use the service. It is also difficult to equitably charge current and future porting customers. Even if the costs of LNP are not imposed directly on consumers, ultimately they will still pay through higher rates because the carriers must eventually recover the additional operational and capital costs.

17. It has been argued that common LNP system setup and recurring costs should be shared by / imposed on all subscribers, whether or not they switch carriers. Carrier internal system set-up and one-off porting specific costs should be charged to the "porting" customer or to the new "recipient" network. Internal recurring costs should be recovered as any other recurring overhead.

Diversion of service provider resources and investment

18. It is also not clear that implementing LNP in the Cayman Islands is the best use of service provider resources, and LNP might not create the greatest value for a given level of investment. In other words, is LNP the most beneficial way for service providers to be spending their time, attention, expertise and funds at this time?

[3] Para. 123.b, ICTA Decision 2005-1
[4] Para. 123.c, ICTA Decision 2005-1

Demand for LNP is unknown

19. First, the level of demand for the service is unknown, especially in such a small market. The ICTA received submissions from only seven companies or individuals other than the Chamber of Commerce and telecommunication service providers. The ICTA has not conducted any proper surveys or analysis to estimate the number of customers who would actually want to exercise number portability by changing carriers. Furthermore based on ICTA Decision 2005-1 it appears that the ICTA has not yet identified any market anywhere near as small as Cayman where number portability has been introduced.

Lack of LNP has not hindered development of robust competition in Cayman

20. Second, lack of LNP has not hindered competitive entry, price reductions and improved choice and quality of services to consumers in cellular mobile markets.

LNP is not necessary for number conservation in the Cayman Islands

21. Third, the Cayman Islands are not likely to run out of telephone numbers anytime soon, so LNP is not necessary to conserve numbers or to avoid the costs of changing the telephone number system to create new telephone numbers.

LNP will impair reliability, usefulness and development of "value-added" services

22. The introduction of LNP would impair the operation or development of value-added store-and-forward services, like text messaging, photo messaging and mobile mail (and eventually fixed-line SMS), which do not support LNP and so would not send messages to the customer that has switched to a different carrier, nor will these services advise the sender of undeliverable messages. LNP is designed to enable voice services portability only. Customer uncertainty about whether a message was received would inhibit customer reliance on such means of communication and hence create unwillingness to use the value-added store-and-forward services. This will seriously impair the usefulness of such services. In turn that will erode carriers' incentives to invest in developing or enhancing such services.

Customers won't know in advance the price of their calls

23. LNP will also increase customer confusion in terms of the price of calls. Today, cost-conscious customers can identify in advance whether calls would be "on-net" or "off-net", and fixed or mobile, just by knowing the telephone number. Thus they can make conscious decisions as to call cost.

24. Therefore knowing only the number, the customer can easily ascertain the type of pricing that will apply to each call, so for example mobile customers can easily know whether the type of call being made will be included in the "package" they have bought.

25. With LNP, that will no longer be possible, and customers would never be quite sure what a local call will cost: for example, for a postpaid mobile customer, the actual incremental cost of making a three-minute local call could vary from zero (if the customer is on a package in which they do not exceed their allowed minutes) to over $1.05[5].

Call Accounting Systems will charge for the highest possible call type

26. Many commercial customers such as hotels, tourist condominiums, law firms, and other professional services, have their own Call Accounting systems so that they can track the cost of each call and bill their clients accordingly.

27. Presently these systems can distinguish between prices to be charged, by analyzing the prefix of the number called.

28. With LNP, number prefix analysis will not discriminate between local call types, so to avoid losses such firms will likely program their Call Accounting systems to charge clients according to the highest possible price of local call types e.g. fixed to off-net mobile. Their clients will end up paying more for local calls under LNP. It is not clear whether this issue was taken into account in the ICTA's deliberations.

Payphones will charge for the highest possible call type

29. The same holds true for payphones, therefore payphone users will end up paying more for local calls under LNP. It is not clear whether this issue was taken into account in the ICTA's deliberations.

All service providers will incur LNP costs

30. Finally, all service providers in the Cayman Islands will be affected by the introduction of LNP, and will bear some or all of the increased costs, whether or not they are required to port numbers. All networks must know where to send calls, and with LNP, operators can no longer rely on the telephone number to identify the destination network of the call.

"Investor unfriendliness"

31. In ICTA Decision 2005-1 at least one service provider stated that "the introduction of number portability so soon after market liberalization may to some extent create uncertainty around the regulatory regime's investor friendliness and this may have some implications for investment incentives"[6]. In other words, LNP could cause existing or future licensees to be reluctant to invest in developing the telecommunications

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[5] Based on a three minute daytime call from a DigiSELECT customer to an "off-net" mobile customer, using the rates posted on www.digicelcayman.com on 9 May 2005. The equivalent call by a C&W postpaid customer would cost 75 cents. Similar calls by DigiFLEX, Cingular EZEE, and C&W bFree prepaid customers to off-net mobiles would be $1.20, $1.08 and $1.05, respectively.

[6] Para. 80, ICTA Decision 2005-1

infrastructure of the Cayman Islands, due to diminished certainty of returns on investment given the various effects of LNP.

Incorrect assumptions

Relative scale of cited examples of countries that have implemented LNP

32. The ICTA cited some examples[7] of countries that have implemented LNP, and appears to assume that the arguments for LNP in those countries are equally valid in the Cayman Islands. However all of those instances were in telecommunication markets that are hundreds or thousands of times the size of the telecommunication market in the Cayman Islands.

Pricing structure of countries that have implemented LNP

33. The ICTA in its justification of full LNP (wireline, wireless, and intermodal) relied heavily on regulators' statements in other large countries such as the USA and Canada, whereas customers in the Cayman Islands have very different pricing, price packaging and tariff structures for telecommunication services than in the USA or Canada. The ICTA either has not realized this major factor, or made the choice not to mention this important factor at all in ICTA Decision 2005-1. Following are examples of such differences.

34. In the Cayman Islands we have Calling Party Pays such that calls to Mobile numbers are a very different price than calls to a Landline; in Canada and the USA calls to Mobile numbers are typically at the same rate as a call to a Landline if the Mobile number is in the caller's "LCA" (Local Calling Area).

35. In the Cayman Islands presently there is only one LCA across the entire country, whereas in Canada and the USA there are many different LCAs in each state or province: in the USA alone there are over 200 of them. Thus in the USA for example, carriers can use these several LCAs to distinguish between pricing for various types of calls.

"Ownership" of numbers

36. Subscribers do not "own" their numbers, and there is no long-term certainty of retaining the same entire number even in jurisdictions that have implemented LNP! Those numbers, particularly their prefixes (such as "Area Codes" and/or "Central Office Codes" that form part of the number), are subject to change in the event that the number administrator for that jurisdiction finds that such a change is necessary. Therefore the public should be made aware that LNP still would not give any guarantee that they will retain the same number for the long term.

[7] Paras. 5, 8, 61, 92, 93, 95, 96, 97, 111, ICTA Decision 2005-1

37. Well-publicised examples from recent years are the code changes that customers in London, England experienced in 1990, 1995, and 2000, and in the USA there continue to be many new Area Codes introduced to serve locations where the existing number ranges are near exhaustion.

38. Right here in the Cayman Islands, in the past few years paging customers experienced a change in their 7-digit customer numbers, landline customers who changed location between the eastern districts and western districts experienced a change in their 7-digit customer numbers, and all customers experienced a change from 809 to 345 Area Code.

Network readiness for LNP

39. The ICTA has incorrectly assumed that just because "all Licensees in the Cayman Islands have … digital networks", that therefore those networks are "the latest technology" and that they should be able to easily accommodate local number portability[8].

40. Although this may be true for some of the new entrants, the fact is that C&W has digital landline exchanges that are between 9 and 25 years old and a TDMA digital mobile switch that is some 5 years old, and neither of those switches are capable of handling LNP without considerable investment and upgrading. Even the newest switches will require substantial investment to enable LNP functionality, with current estimates running in the millions of dollars.

Alternatives to LNP

41. The ICTA received suggestions of very practical alternatives, but apparently dismissed them "out of hand"[9] with little real consideration having been given as to their feasibility. Two such suggestions are outlined below.

Changed Number Interception

42. Changed Number Interception would automatically announce the new number for customers who switched to a different carrier, instantly each time the old number is called. Over time, callers would learn the new number to reach the customer, such that eventually the Changed Number Interception would no longer be needed and would be removed after the transition period.

Similar COC's

43. The ICTA could assign Central Office Codes to licensees such that customers moving from one service provider to another would experience only a minor change in their number.

[8] Para. 105, ICTA Decision 2005-1
[9] Para. 103, ICTA Decision 2005-1

44. For example when mobile competition was introduced in 2004, customers who wanted to switch from C&W mobile service to Cingular mobile service could do so and have only the first digit change i.e. from 9xx-xxxx to 5xx-xxxx.

Next steps

Service Providers to submit anticipated cost information

45. In the initial Public Consultation, the service providers differed widely as to the anticipated costs of implementing LNP. The ICTA has called on all service providers to submit information as to the anticipated costs by 27th June 2005[10], so that the Authority can better estimate the pure cost impact on telecommunication users.

46. One explicit danger however is that the ICTA will only base its decision[11] on the "hard" costs that will be quantified in this exercise, whereas there are other "cons" and alternatives to LNP that should be fully considered.

ICTA should conduct a survey of customers once costs are better known

47. The ICTA endorsed the view that service providers should be free to pass on the costs of LNP "directly to consumers if they so wish, either included in the price of their services or as a separate line item on their bills"[12]. The ICTA acknowledged that it could not "conclude unequivocally that the majority of the public has wholeheartedly endorsed local number portability"[13]. The ICTA went on to acknowledge that "even the businesses that submitted comments had no idea of the costs that the introduction of LNP might add to their telecommunications bills"[14]. Once the ICTA has obtained firm estimates of costs, the Authority should calculate the estimated cost impacts on customers' bills, inform the public of this estimated cost, and then survey telecommunication users to determine whether they would be willing to pay that amount for the country to introduce LNP. It should be made clear to customers that the costs will likely impact all customers, not just those who choose to switch carriers.

Opportunity for Chamber of Commerce to make further submissions

48. The ICTA appears to have decided that once it has established the costs of implementing and operating LNP, it will "conduct a further round of consultation so that the general public in particular can make informed comment", or initiate "some other method of

[10] Para. 120, ICTA Decision 2005-1
[11] Para.123.a, ICTA Decision 2005-1
[12] Para. 104, ICTA Decision 2005-1
[13] Para. 100, ICTA Decision 2005-1
[14] Para. 100, ICTA Decision 2005-1

assessing the views of the public, prior to making its final determination on Local Number Portability"[15].

49. The Chamber Council and its Members should therefore be proactive in examining this issue and letting their views be known to the ICTA.

[15] Paras. 116, 121, ICTA Decision 2005-1