

Cable & Wireless
Comments submitted in response to the ICTA's
public consultation interrogatories on
Indirect Access
(Ref: CD (2003)7)

21 December 2004

Questions from ICTA Consultative Document

1. The Authority posed a number of questions in its Consultative Document, and C&W will address each in turn below. C&W emphasizes that, as stated earlier, it does not believe the evidence shows that implementation of Indirect Access is required in the Cayman Islands and involves could harm the market by discourage investment in access networks.

Question 1. Schedule 1 to the Liberalisation Agreement defines “Indirect Access” as “the method whereby a Subscriber is able to access international ICT services provided by another Licensee, through the ICT network and ICT services of the Licensee with whom the Subscriber is directly and physically connected.”

There are a number of potential technical means to enable a subscriber “to access international ICT services provided by another Licensee, through the ICT network and ICT services of the Licensee with whom the Subscriber is directly and physically connected.”

These means include:

- i) **“equal access” or “Feature Group D” [i.e., carrier pre-selection (1+ dialling) and call-by-call selection (101XXXX, plus the called number, where XXXX is the carrier identification code of the alternate carrier)]);**
- ii) **line-side access (i.e., access to the network of another IDD provider by dialling a standard local/domestic PSTN telephone number, combined with over-dialling for purposes of entering account numbers/PINs and destination telephone numbers); and**
- iii) **use of dedicated access lines (“DALs”) (i.e., a wireline or fixed wireless access, functionally equivalent to a private line, separate from the subscriber’s regular PSTN or high-speed Internet access, which connects the subscriber’s equipment to an IDD provider’s switch and is dedicated to IDD calling) provided by a licensee other than the IDD provider.**

- A) **Provide, for each of i) to iii) above, your company’s views, with justification, as to whether the method of access in question falls within the definition of Indirect Access (“IA”).**

2. The Authority has identified three methods of accessing international services provided by a licensee other than the one with whom the Subscriber is directly and physically connected: (i)

Feature Group D, (ii) Feature Group B, and (iii) DALs. While Feature Group D and Feature Group B are relatively standard international methods of obtaining indirect access, DALs do not represent a method of indirect access. Recall that the definition of Indirect Access states that the international services must be obtained *through* the network of the licensee with whom the Subscriber is directly and physically connected. The use of a DAL does not require accessing international services through another licensee's network. It is simply accessing international services from another carrier through a direct connection to that carrier's network. In fact, this service is already available in the Cayman Islands, and already provides a competitive option for international services.

- B) Identify and describe all current regulatory or tariff barriers to the use of access methods ii) and iii).**
- 3. We are not aware of any regulatory or tariff restrictions on Feature Group B, Feature Group D or DALs. Indeed, carriers are free to develop Feature Group B services to meet market demand. For example, C&W employs Feature Group B services for its own customers to obtain pre-paid card-based international calling services. C&W also offers Feature Group B services to AT&T, for example, for the Home Country Direct services it provides to its US-based customers. Regarding DALs, customers may currently purchase DALs from any facilities-based competitor in the Cayman Islands. This method of obtaining international services continues to be a competitive alternative today. As far as C&W is aware, carriers simply do not currently offer Feature Group D services.
- C) Provide your company's views, with justification, as to the relative disadvantages/costs and benefits of the following scenarios for mandated IA:**
 - I) access method ii) is implemented alone;**
 - II) access method iii) is implemented alone;**
 - III) access method iii) is implemented alone and mandated only for DALs provided by C&W;**
 - IV) access methods ii) and iii) are implemented together;**
 - V) access methods ii) and iii) are implemented together, with iii) being mandated only for DALs provided by C&W;**
 - VI) access method i) is mandated for C&W fixed switched local exchange accesses only;¹**

¹ For the purposes of the interrogatories, the terms "fixed-access" and "fixed-line" shall include both wireline and fixed-wireless accesses.

- VII) access method i) is mandated for fixed switched local exchange accesses provided by any licensee;**
- VIII) access method i) is mandated for all (i.e., fixed and mobile) providers of switched local exchange accesses;**
- IX) scenarios V and VI combined;**
- X) scenarios IV and VII combined; and**
- XI) scenarios V and VII combined.**

D) List all disadvantages/costs and benefits of each of scenarios I) to III) and VI) to VIII) in part C) above and provide your company's views, with justification, as to whether each such disadvantage/cost or benefit is reliably and cost-effectively quantifiable. In all cases in which the disadvantage/cost or benefit, other than those costs covered by question 16 below, is considered to be reliably and cost-effectively quantifiable:

- **provide a quantitative estimate;**
- **indicate the time period(s) to which the estimate pertains; and**
- **provide a detailed description of all methodologies, assumptions, models, data sources and other inputs used to arrive at the estimate.**

E) Provide your company's views, with justification, as to which, if any, of the scenarios set out in part C) above should be mandated.

4. We are pleased to provide a consolidated response to subparts C, D and E of question 1. We provide a consolidated response because this proceeding involves the general question of regulatory intervention to require firms to interconnect with others in circumstances where there would be no commercial justification for interconnecting in those circumstances (i.e., mandating Feature Group D or Feature Group B services to other carriers). Such intervention can be justified in only two circumstances: (1) when there is an antitrust concern with evidence of monopoly power created or enhanced by the absence of interconnection (in this case, interconnection to facilitate indirect access); or (2) there is an externality problem such that the absence of government intervention will lead competitors to make systematically incorrect decisions with respect to interconnection. Regarding the latter, there would have to be a demonstration, for example, that the direction of standardization with respect to interconnection has taken an adverse turn in the absence of indirect access. No one has claimed that such a problem exists, or will exist, in this industry, and therefore there is no need to address this issue.

5. Regarding the former, there are two types of antitrust problems that may be relevant. The first is the “essential facilities” case in which a monopoly provider with control over a facility that competitors require in order to compete in a downstream market. The second problem involves a collusive arrangement where certain competitors collude to exclude other competitors from the market, or raise rivals costs by denying access to facilities. No one has argued that a collusive arrangement exists and therefore there is no need to address this issue.
6. Therefore, the only issue remaining is the essential facilities case that government intervention is necessary because there exists a monopoly provider with control over a facility that competitors require in order to compete in a downstream market. However, the facts indicate that there is no such monopoly provider in the Cayman Islands in the relevant market. As discussed below, a competitive analysis of the relevant market indicates that there is no monopoly provider controlling a bottleneck facility; and therefore, there is no justification for mandating any type of “indirect access”.
7. The first step in the competitive analysis to determine the presence of an essential facility is determining the relevant market for the analysis. Generally speaking, the relevant market is defined by a specific set of transactions through which competition takes place. More specifically, the relevant market has geographic- and product-specific dimensions. Market definition approaches used in antitrust or merger matters are useful tools in determining how to define a relevant market. In particular, the *Horizontal Merger Guidelines* in the US state that:

"the Agency will delineate the product market to be a product or group of products such that a hypothetical profit-maximizing firm that was the only present and future seller of those products likely would impose at least a small but significant and non-transitory increase in price."²
8. That is, a product market contains products that are close substitutes and excludes products that are not close substitutes. In practice, determining the products in a market involves starting with a very narrow definition, and adding groups of products to a portfolio and asking whether or not the products are sufficiently similar as to be close substitutes from the consumer’s perspective, or more

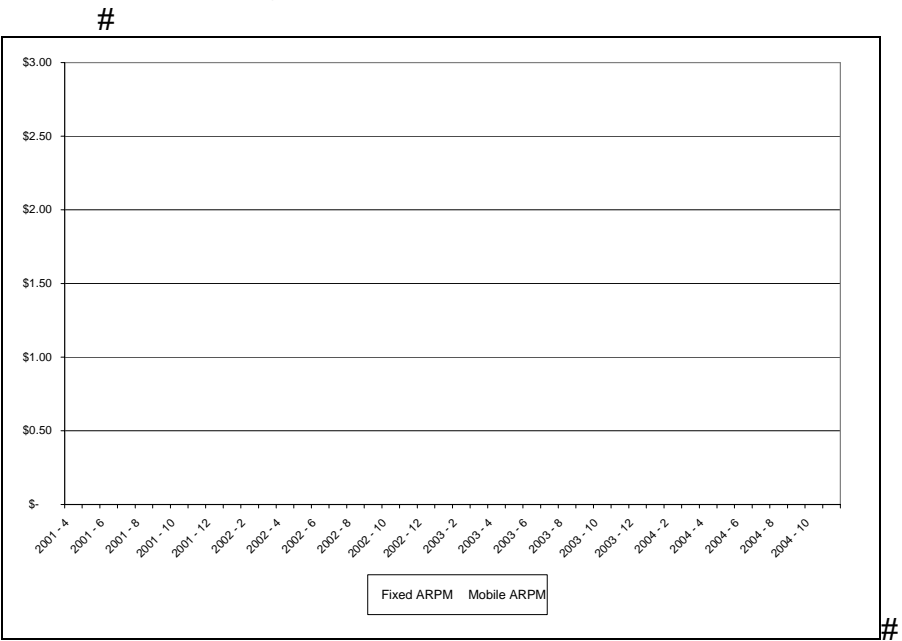
² http://www.usdoj.gov/atr/public/guidelines/horiz_book/toc.html

specifically, close enough to make a “small but significant and non-transitory increase in price” unprofitable.

9. For example, consider a monopolist with two products, A and B, and consider the question of whether A and B are in the same relevant market. In order to answer that question with a “no”, the monopolist would have to be able to profitably raise its price significantly for product A. However, if consumers responded to a significant price increase in product A by moving quickly and in sufficient numbers to product B such that the price increase in product A would not be profitable – then the two products are considered in the same relevant market.
10. Applying this market analysis to the issue at hand, we have to answer two questions (1) what is the relevant geographic market, and (2) what is the relevant product market – i.e., what services are included in the relevant product market. The relevant geographic market is clearly the Cayman Islands. Turning our focus to the relevant product market – let us apply the test discussed above. That is, let us start with a narrow definition of the relevant product market and add services to that market if they meet the requirement discussed above. Since indirect access is meant to provide customers with the option of choosing a different carrier for fixed international calling services other than the one they subscribe to for local services, we will start our relevant product market with one service: fixed international calling. Now we will try to add another service (mobile international calling) to the relevant product market, and ask the question: is mobile international calling in the same relevant product market as fixed international calling? To answer this question we apply the test discussed above, and we pose a different question: hypothetically, if a fixed line customer were faced with an increase in international calling rates, to which services would the customer turn? The answer invariably includes mobile international services. In fact, if you continue to apply this test you arrive at a product market that includes DALs, international call-back services, and will include VOIP-based international services when those services become available in the near future. An increase in fixed international rates will drive customers to DALs, call-back services, mobile international services, and VOIP international services. At a minimum, therefore, the market for international calling includes both fixed and mobile services. An application of standard economic analysis principles provides this result.
11. There is also empirical evidence supporting the conclusion that mobile international calling is in the same relevant product market as fixed international calling. The following graph illustrates, for

example, the effect that mobile competition has had on C&W's fixed international calling rates in the Cayman Islands:

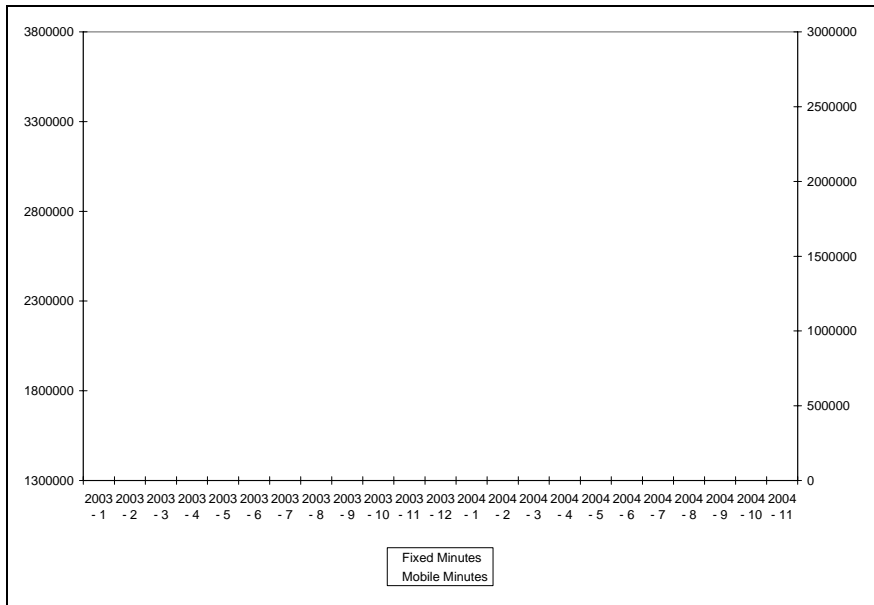
C&W Average Revenue Per Minute: Fixed vs. Mobile



12. The graph above illustrates how lower mobile international calling rates has led to lower fixed international calling rates over time. Usage trends also support the same conclusion. As the following graph illustrates, consumers have been actively substituting fixed international calling with mobile international calling over the past 2 years:

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13. We conclude, therefore, that fixed international calling is one of many services in a relevant product market—we will call the market “international calling”—that includes mobile international calling, fixed international calling, call-back international services, DALs, and VOIP international calling.

Relevant Product Market	Services in the Product Market
International Calling	Fixed International Calling
	Mobile International Calling
	Call-back services
	VOIP-based international services
	DALs

14. Now that the relevant product market has been identified, the second step in the analysis is to determine whether there exists a monopoly provider with control over a bottleneck facility that competitors require in order to compete in the international calling market. It is clear that the market for international calling services lacks such a provider. Mobile providers do not need to access any bottleneck facility in order to offer international services to their own customers. Similarly, high-speed internet providers such as WestTel do not need to access any bottleneck facility in order to offer VOIP-based international services.
15. As discussed above, justification for mandating indirect access could be met if it could be shown that there exists a monopoly

provider with control over a bottleneck facility that competitors require in order to compete in a downstream market. However, based on the analysis above it is evident that there is no monopoly provider with control over a bottleneck facility for international calling. Therefore, we conclude that it is not necessary to mandate Indirect Access at this point.

Market Power

16. While the test above should be sufficient to convince the Authority that it is not necessary to force carriers to offer indirect access, it is clear from the Authority's interrogatories that it is interested in the costs and benefits of imposing Indirect Access at this time. While many costs can be readily identified (and are discussed below), in order to determine the benefits of imposing Indirect Access it is necessary to first determine the competitive status of the market. Economists apply a test of "market power" to determine how competitive a market is.
17. Market *power* consists of a firm's ability to dictate, manipulate, or otherwise control the level of the market price for a service. The presence or absence of market power is often a tangible indicator of the state of competition in a market. Economists sometimes attempt to judge the degree to which a market is competitive by comparing that market's actual existing structural features with those expected to hold under the ideal textbook conditions of "perfect" competition. Those structural features may include, among other things, the number of firms competing, their sizes relative to the total market, demand and supply magnitudes and options, the degree of product differentiation, etc. However, even under the best of conditions, not all markets in the real world can conform to this paradigm of perfect competition. For example, in industries (such as telecommunications) that experience significant economies of scale and scope, multi-product production and high minimum efficient scales are more the norm than the exception. In such markets, the traditional structural conditions of perfect competition cannot be applied to determine whether competition is, at least, "effective." A more direct and tangible indicator of whether effective competition is occurring is then a test of market power.
18. The premise here is quite simple: in an effectively competitive market, no single firm should have the means or the ability to exercise market power. This can be determined in several ways³ but it is common to examine trends in the price level or, more

³ See, e.g., T.F. Bresnahan, "Empirical Studies of Industries With Market Power," in R. Schmalensee and R.D. Willig (eds.), *Handbook of Industrial Organization*, Volume II, Amsterdam: Elsevier Science Publishers B.V., 1989.

precisely, price-incremental cost margin. The more market power a firm can exercise, the greater would be its ability to maintain price above incremental cost (beyond the margin needed to contribute to the recovery of shared and common costs). Any narrowing trend in the price-cost margin may be regarded as evidence of the mitigation of market power and, indeed, may be regarded as evidence of effective competition.

19. As the graphs above already illustrated, international prices have been dropping consistently, and assuming a consistent cost level, the result suggests a significant narrowing of the cost margin. The interpretation of the graphs above is therefore that C&W does not possess market power in international calling.
20. The absence of any one firm with market power in international calling suggests that there would be little, if any, benefit to imposing indirect access in the Cayman Islands. Simply increasing the choices that consumers have is not a defensible argument for imposing indirect access particularly when the relevant market is competitive and, therefore, already provides consumers with many choices; and as discussed below, the costs of imposing indirect access are indeed significant.

Costs

21. The costs associated with mandating IA include the direct costs of putting in place and modifying accounting systems, the costs of consumer protection and education, and the negative impact on domestic infrastructure investment.
22. OFTEL recognized the need to avoid negatively impacting domestic infrastructure investment in its determination on IA for mobile services in 1999. OFTEL opted for “a solution which will allow equal access, but avoids inhibiting investment.”⁴ In particular, it determined an obligation to supply IA at “retail minus”. That is, the mobile access provider would charge the IA operator, the retail price (the price at which the mobile network would charge the customer, if the customer had not chosen to use the IA operator for the call) **less** those cost elements of the service, which for an IA call would not be supplied by the mobile access provider, because they will be supplied by the IA operator. Those elements in particular are outpayments and retail costs.⁵

⁴ See “Customer choice: OFTEL’s review of equal access for mobile networks.” OFTEL February 1999.

⁵ See, for example, “Determination under Provisions of Regulation 6(6) of the Telecommunications (Interconnection) Regulations 1997 to determine Final charges for the Provision of Indirect Access by Vodafone to Intelligent Network Managements Services.” OFTEL July 2000.

23. The costs of IA also include internal implementation costs. The internal costs would be associated with:
- the need to modify software in the switches, including enabling switches to recognize carrier routing prefixes;
 - introducing or amending information systems to record a customer's pre-selected choice and allowing data to be changed between operators for billing and customer services purposes;
 - maintaining customer records, administering the churn process, staff training and generally developing procedures for complying with a pre-selection requirement;
 - establishing usage monitoring facilities/processes & procedures in order to safeguard revenue;
 - agreeing, specifying, developing, testing, and implementing billing modifications prior to ready-for-service date.
 - creating an IAA (Inter Administration Accounting) process
 - creating and maintaining a process for fraudulent or suspicious calls handling/investigation agreed between carriers.
 - dealing with the more complex technicalities for legal compliance for CALEA-type requests.
24. Finally, the costs imposed on regulators or consumers are important considerations. These include items such as customer education for the transition, reprogramming of customer premises equipment, and customer protection mechanisms (particularly for slamming).
25. Furthermore, complex processes will need to be developed to ensure that customer orders can be provisioned effectively, and to protect against unethical practices such as 'slamming' (the practice of switching a customer's service without consent). Slamming complaints are a worldwide problem wherever equal access has been mandated, and the Cayman Islands can expect the same if IA is mandated. The Authority would need to actively monitor the retail markets in which IA would be active, and would need to be ready to take enforcement action to remedy any infractions that may arise. In the event that IA is mandated in the Cayman Islands, the Authority will need to ensure that it establishes clear rules to prevent slamming backed by statutory authority.
26. In the United States, the Federal Trade Commission estimates that up to 7.5 percent of the population is affected by slamming.⁶ That number is staggering. Given that the population of the Cayman

⁶ <http://www.ftc.gov/reports/consumerfraud/040805confraudrpt.pdf> , Table 3.1.

Islands is roughly 43,000⁷, the US experience suggests that over 3,200 Caymanians would be affected by slamming complaints if indirect access were mandated. Assuming 260 working days a year, this would result in over 12 complaints *every day* that the ICTA would have to deal with. We urge the Authority to consider the implications of a decision on Indirect Access on its own workload.

27. Slamming was, in fact, the number one complaint at the FCC until the FCC decided it wanted to direct those complaints to the individual state regulatory agencies instead of dealing with them itself. Unfortunately the Authority does not have the luxury of passing on the duty of resolving complaints to another organization. It is inconceivable that encouraging fraud to this extent could be in the public interest.
28. Slamming, cramming, and other telephone fraud can also be expected to increase prices as carriers will be forced to launch consumer alert education campaigns - with posters and brochures - to help customers protect themselves from being slammed.⁸
29. Assuming that the Authority mandates IA, a Code of Practice should also be established. A code of practice would be a necessary part of the framework as a protection for customers and the industry against unethical practices (e.g. slamming). The code should establish and clearly state the principles and practices that both international calls providers and access providers will apply in provision of services using IA. It should therefore be adopted by international call providers and access providers. Adoption of the code of practice should be a requirement for the industry, and hence access providers should be at liberty to refuse requests for service from carriers that have not adopted the code. The code would need to be enforceable through IA contract clauses (with Authority oversight if necessary) allowing appropriate penalties to be applied. For example, in Canada, carriers found guilty of slamming are required to pay a financial penalty and a similar system could be adopted in the Cayman Islands. The contract terms should also empower access providers to withdraw IA services in the event of specified serious breaches of the Code. We believe that the best way to develop the code of practice would be through industry cooperation in a working group

Benefits of Not Implementing IA

⁷ <http://www.cia.gov/cia/publications/factbook/geos/cj.html>

⁸ <http://www.thedigest.com/90/90-27.html>

30. There are, in fact, some market benefits to *not* implementing IA. For example, there is a view held by some that the prohibition on equal access for mobile providers in the US has allowed wireless carriers to offer creative "bundles" of local and long distance services. It has allowed them to develop "all you can eat" flat-rate calling plans that have benefited consumers. Similar benefits could be expected to accrue in the Cayman Islands if the market is permitted to progress on its own.

Question 2. In ICT Decision 2004-5 (Interim), the Authority noted, at paragraph 29, that:

...the absence of number portability combined with no mandated indirect access, may inhibit the roll-out of competition in the fixed-line telecommunications market. For instance, an entrant to the international services market must not only offer international services but also local exchange services in order to compete against the incumbent. Furthermore, it must offer this service bundle at a price that is sufficient to overcome customer inertia including convincing the customer to change his existing telephone number.

- A) Provide your company's views, with justification, as to whether each of access methods ii) and iii), as specified in the preamble to question 1) above, are likely to be attractive as a means to originate fixed-access traffic primarily in the case of large business customers and relatively unattractive in the case of residence and small business customers.**
31. We would agree that access method iii) is likely to be relatively more attractive to large business customers than in the case of residence and small business customers. Private line services tend to be justified economically only with the higher traffic volumes associated with large businesses.
32. We would also agree that access method ii) is likely to be relatively more attractive to business customers than to residential customers. It is not clear to us whether access method ii) would be relatively more attractive to a large business customer than a small business customer. Either segment could potentially program their CPE for dialing internally to make ii) similar to call-by-call selection (access method i).
33. What we would not agree with is that the absence of IA means that residential and small business customers will be some left without competition in IDD services. There are currently two new entrant mobile services on the island and no restriction on use of IP to

access international services. Thus, low-volume customers in Cayman Islands have increasing choices. Given the costs and risks inherent in introducing IA to a small market such as the Cayman Islands discussed in the preceding interrogatory, implementing IA without first seeing the results of the opportunity of the current market structure would be very ill-advised.

B) Compare, for each of Grand Cayman and the Sister Islands (Cayman Brac and Little Cayman combined), the economics of facilities-provisioning and the relative magnitude of barriers to facilities-provisioning and other barriers faced by entrants in each of the following markets or market segments:

- i) residence MDU fixed-line access;**
- ii) residence non-MDU fixed-line access;**
- iii) business fixed-line access; and**
- iv) IDD in the presence of mandated IA.**

- 34. The main cost driver differentiating fixed-line services i)-iii) on the Sister Islands is the backhaul facilities required to bring traffic to Grand Cayman. Recent changes in C&W's DPLC pricing that averaged DPLC prices across the Cayman islands will have improved the economics for supplying all types of services in the Sister Islands.
- 35. Clearly the economics of IDD service provision, in general, is better for business than for residential customers and for MDU than non-MDU residential customers. But the point is that irrespective of those economics, all customers in the Sister Islands have choice of service providers today. Competitive mobile networks and high-speed internet services are available on the Sister Islands, just as they are in Grand Cayman.
- 36. Mandated IA would naturally lower the costs of entry in international service provision, particularly for those companies seeking to limit their infrastructure investment in the Cayman Islands. Indeed, because the costs of establishing access to the Sister Islands are greater than on Grand Cayman, mandated IA would subsidise new entry to the Sister Islands to a greater degree than Grand Cayman. Lowering the costs of entry, however, is not in and of itself a positive achievement, in fact, as we have discussed here and in other submissions, can negatively distort the market. Again, we note, the smaller the market, the greater the cost this negative distortion can inflict.

- C) Provide your company's views, with justification, as to whether i) entry in the IDD market alone as a means to acquire a customer base and a revenue stream and demonstrate competence to end-users may facilitate entry into the local access/domestic market, and ii) the extent to which opportunities for such entry will be compromised under each of the following scenarios:**

I) no IA of any form is mandated;
II) access methods ii) and iii), as specified in the preamble to question 1) above, are mandated but equal access is not mandated.

37. With all due respect the question appears to reflect a disconnection with the reality of what is actually occurring in the telecommunications market in the Cayman Islands. Currently there are more than four licensees-other than Cable and Wireless-pursuing fixed network roll-outs. None of them, by all evidence available to us, are currently planning to roll-out a stand-alone IDD service to "demonstrate competence". In fact, what IA will do, however, is discourage roll-out of these fixed networks as it will allow other licensees to stop, delay or otherwise underinvest in fixed networks as an IA-supported IDD-only strategy will clearly be the optimal approach to business. Again, given the small customer base, this means that an IA is a very risky policy.

- D) Provide C&W's best estimate, based on most recent information available, of the proportion of its total residence fixed-line accesses that are associated with residence customers located in MDUs. Indicate the time period(s) to which the estimate pertains and describe all methodologies, assumptions, models, data sources and other inputs used to arrive at the estimate.**

38. Cable and Wireless does not have information on residential housing types readily available. However, the Central Planning Authority and Development Control Board publishes data on planning approvals, certificates of occupancy and building permits. Data published in their annual reports go as far back as 1998 and seem to suggest that multi-dwelling to single dwelling houses is growing fairly consistently in the proportion of 1:3. Based on Board data between 2001-2003, we can assume that the average number of units in a multi-dwelling building is between 4 and 5. On this basis, for every three single dwelling houses we have on average 4.5 units in a multi-dwelling house. The proportion of fixed accesses associated with residential customers in MDUs can be estimated as $4.5/7.5=.6$ or 60%.

Question 4. In supplementary comments, dated 17 December 2003, filed in response to the Authority's Public Consultation on Indirect Access (Ref: CD (2003) 7), C&W argued that IA is a form of interconnection and that certain consequences necessarily flow from that characterization:

There should be no doubt that indirect access is an interconnection service. This makes logical sense in view of the definition of interconnection services in Cayman law, but it is also acknowledged to be so by the simple fact that provisions relating to indirect access are covered in the ICTA (Interconnection and Infrastructure Sharing) Regulations 2003.

As such, the ICTA must recognize that there are provisions for the applicability of any indirect access mandate and cost recovery.

With respect to the Licensees subject to mandated indirect access (Questions 1.1 and 1.3), the regulations require broad application interconnection obligations. Paragraph 4(1) of the Interconnection and Infrastructure Sharing Regulations states "In accordance with the provisions of section 44 of the Law, a licensee shall not refuse, obstruct or in any way impede another licensee in the making of any interconnection or infrastructure sharing arrangement." Thus, if the ICTA chooses to mandate indirect access, the ICTA must oblige all relevant licensees to stand ready to provide it.

With respect to cost recovery (Question 7.1), the ICTA's suggestion that provisioning costs be borne by each of the licensees obligated to provide indirect access violates existing regulation. Paragraph 47(1) clearly states that "the cost of making any interconnection to the ICT of another licensee shall be borne by the licensee requesting the interconnection."

- A) Provide your company's views, with justification, as to whether each of access methods i) to iii), as specified in the preamble to question 1) above, is appropriately considered to be a form of interconnection.**
39. Access methods i) and ii) are methods of indirect access, as they would involve the use of one service provider's network to access the services of another, international, service provider. Further, they can be considered forms of interconnection as they both involve two networks and require the two networks to interconnect and arrange to hand traffic off to each other.
40. Access method iii) is not a form of indirect access, as, by definition, the customer would be directly accessing the network of the international service provider. Further, access method iii) does not involve two networks, which is the critical element of the definition

of interconnection in the Law. Consequently, it cannot be considered to be a form of interconnection.

B) Provide your company's views, with justification, as to whether the distinguishing characteristic of interconnection services is that they are those services which are necessary to allow for the completion of calls between customers of different carriers where one of the carriers involved cannot, under any circumstances, avoid making use of the other carrier's network.

41. C&W is not convinced that "the distinguishing characteristic of interconnection services is that they are those services which are necessary to allow for the completion of calls between customers of different carriers where one of the carriers involved cannot, under any circumstances, avoid making use of the other carrier's network." Under this view, the transit services of one network used to indirectly connect two other networks would not be interconnection services, and therefore not subject to the rules and obligations in the Law and the Regulations regarding interconnection.
42. However, this view would have perverse consequences. Indirect interconnection via transit services and direct interconnection via joining services are functionally equivalent, and are, under the definition of interconnection in the Law which refers to "physical" and "logical" interconnection, legally equivalent. The application of two sets of rules to functionally and legally equivalent services would create distortions and instability into the market.
43. As noted in our response to interrogatory 4(a), the critical feature of interconnection involves the connection of two networks, directly or indirectly.

C) Provide your company's views, with justification, as to whether each of access methods i) to iii), as specified in the preamble to question 1) above, is consistent with the characterization set out in part B) above.

44. As noted above, the characterization set out in the interrogatory 4(b) is inaccurate and unhelpful. The value of any response to a question based on that characterization is likely to be similar.

D) Provide your company's views, with justification, as to whether subsections 4(2)(d), 6(j)(iii), 22(2), 25 and 28 of the ICTA (Interconnection and Infrastructure Sharing) Regulations, 2003, would in combination provide the basis for requiring certain

interconnection or infrastructure services to be made available only by certain Licensees.

45. In C&W's view, the cited provisions of the Regulations do not provide the basis for requiring certain interconnection or infrastructure services to be made available only by certain Licensees.
46. Subsection 4(2)(d) reads:

“A requestor or responder shall not negotiate or propose to enter into an interconnection or infrastructure sharing agreement where the Authority determines that - ... the requested interconnection or infrastructure sharing is contrary to the laws of the Islands or the public interest.”
47. Subsection 6(j)(iii) reads:

“interconnection and infrastructure sharing services shall be provided in a manner that –

...
(iii) enables the development of competition in the provision of public ICT networks and public ICT services in a timely and economic manner.”
48. Subsection 22(2) reads

“The Authority may reject any interconnection or infrastructure sharing agreement, or any portion thereof, if it determines that the agreement does not comply with the law, conditions of the licence, relevant regulations, regulations, decisions, directives or standards and other guidelines that the Authority may prescribe.”
49. Section 25 reads

“Interconnection and infrastructure sharing agreements and the procedures for arriving at such agreements shall be based upon the terms of the Law, conditions of the licence, relevant regulations, regulations, decisions, directives or standards and other guidelines that the Authority may prescribe.”
50. Section 28 reads

“In promoting the efficient, economic and harmonized utilization of infrastructure, the Authority may inquire into and require

modification of any agreement or arrangements entered into between a responder or a requestor and another licensee which has the effect of limiting either efficient and harmonized utilization of infrastructure or the promotion of competition in the provision of public ICT services or public ICT networks”

51. The above provisions address either the Authority’s jurisdiction to alter or reject agreements that offend the law, the public interest, competition, or efficient and harmonized use of infrastructure, or the Licensees corresponding obligations to enter into agreements that do not offend the law, the public interest, competition, or efficient and harmonized use of infrastructure. Further, they apply equally to all telecommunications Licensees in the Cayman Islands, large or small, new or existing. It is a stretch to say that they would, individually or in combination, allow the Authority to require only certain Licensees to provide indirect access or other interconnection services.
 52. Further, these provisions give the Authority jurisdiction to review agreements after they have been concluded between the Licensees involved, and to intervene only if there is something contrary to the law, public interest, competition or efficient and harmonized use of infrastructure. They could not be used as the basis for “requiring certain interconnection or infrastructure services to be made available only by certain Licensees” before those Licensees actually conclude an agreement, and if two Licensees agree that it is commercially reasonable to provide Indirect Access services to each other, the Authority should hesitate to deny one of those parties the right to offer Indirect Access services to the other.
- E) Provide your company’s views, with justification, as to whether the costs associated with “general system provisioning costs” (i.e., those costs which are one-time system set-up costs incurred by the access network licensee in modifying network and support systems to enable the provision of carrier pre-selection and call-by-call selection) can also be considered to be a cost associated with providing an end-user feature or enabling end-user choice, as opposed to merely a cost caused by the provision of a service to other Licensees.**
53. Indirect access, like other forms of interconnection, necessarily involve the establishment of connections between two different carriers, and the Regulations are explicit in how the costs of establishing those services are to be recovered. The creation of an end-user feature associated with a service provided by one service provider to its end-users is a markedly different activity, and is not covered by Interconnection regulations. The cost associated with establishing interconnection between two carriers cannot also be

considered to be a cost associated with providing an end-user feature for a service provided by one service provider.

Question 5. Provide, for each of access methods i) to iii), as specified in the preamble to question 1) above, your company's views, with justification, on the conceptual framework or considerations that should guide the Authority's decision as to which Licensees (i.e., C&W fixed accesses only, all fixed access providers, both fixed and mobile access providers, other (specify)) should be subject to a requirement to make the access method in question available in the event that the Authority determines that mandated availability by at least certain access providers is required.

54. As we have stated in our 12 December 2003 submission, we believe it is premature to mandate indirect access in any form. In particular, until the market has been given an opportunity to evolve under the existing regulatory arrangements, the net benefits of indirect access cannot be measured as required by the *ICTA (Interconnection and Infrastructure Sharing) Regulations 2003*. There are an increasing number of opportunities for large and small volume customers to make IDD calls from competitors other than C&W. Moreover, as we have restated here, we think it is highly risky for the Authority to mandate such access given the size of the Cayman market and the number of licensees who are already investing in access networks-both fixed and mobile.
55. Similarly, we have also described our view on what principle should guide the Authority's decision as to which licensees should be subject to a requirement to make IA. As we also stated in our 12 December submission and addendum letter, both on the basis of non-discrimination and the definition of interconnection, any mandate for IA should apply to all licensees. We should add that the size of the Cayman market means that incumbency gives no great benefit to absorbing the impact of IA. At the very least, therefore, if the Authority embarks on such a misguided policy, it should at least "even out" the risk associated with IA by mandating it universally.

Question 6. At paragraph 11 of its comments dated 12 December 2003, C&W raised a concern that mandated IA may create an uneconomic or artificial separation between IDD and domestic services:

If the ICTA proceeds to impose IA before allowing current policies to work. Then we must assume its objective with IA is more narrowly focused: to create a vertically separated mode for the provision of international voice services, i.e., a decoupling of international and domestic services. Cable & Wireless believes that, while undoubtedly likely to provide consumers more choice in the short term, this objective is a relatively unprincipled approach to imposing regulation: amounting to creating competition for competition's sake. It is unlikely to create an efficient market structure in the long term and will therefore result in a sub-optimal outcome in terms of consumer benefit.

C&W also suggested, at paragraphs 8 and 9 of its 12 December 2003 comments, that the fixed-access and mobile IDD markets may not in fact be separate markets and that, as a result, competition from and between mobile carriers will impose discipline on pricing for IDD originated from fixed-lines:

We can assume that the ICTA is concerned that the incumbent's control of the fixed network gives it market power to control prices and limit choice in international calling services. But whether the incumbent possesses market power in international services depends on whether there is a separate market for fixed international services or whether fixed and mobile international calls are substitutes for each other. If consumers can elect to make international calls either from a fixed or mobile phone, there will be competition in the market for international voice services, which will be tied to the competition in the domestic access market.

...If the ICTA's objective is to achieve greater consumer choice and lower prices through fostering competition in international voice services, then the entry of various new mobile and fixed domestic service providers will ensure the development of a vigorously competitive market in the Cayman Islands, and lower prices, for international voice services. This fact has been evident in all jurisdictions in the Caribbean where international liberalization has occurred, even in the absence of a requirement to provide IA. Cable & Wireless notes that, generally, this development has occurred whether the competition is introduced in either the fixed and mobile markets: lower prices for mobile-originated international calls have led to lower prices for fixed-originated international calls. Fixed network must lower prices in order to remain competitive and not lose traffic to the other networks.

- A) **Provide your company's views, with justification, as to whether the market(s) for IDD calls originated in the Caymans constitutes a market or markets separate from domestic calling and access.**
56. Following the relevant product market analysis discussed in response to question 1, we just ask the following question: if a fixed line customer were faced with an increase in international calling rates, would that customer turn to domestic calling and access? The answer is clearly no. Therefore, we conclude that the international calling market does not include domestic calling and access.
- B) **Provide your company's views, with justification, as to whether Cayman-originated IDD calls from fixed-accesses and Cayman-originated IDD calls from mobile accesses each constitute separate markets.**
57. As discussed in response to question 1, the international calling market includes both fixed international calling as well as mobile international calling. These services do not constitute separate markets.
- C) **Provide your company's views, with justification, as to the degree of demand substitutability in the Caymans context, for each of residence, small/medium business and large business customers, of each of i) IDD calls originating from fixed-accesses and IDD calls originating from mobile accesses, and ii) fixed-access and mobile access, taking into account in both cases issues related to:**
- the pricing structure for domestic voice calling;
 - the pricing structure for optional local calling services;
 - the need for or convenience of mobility;
 - differences in network reliability, voice quality and data throughput;
 - spectrum availability and capacity;
 - the ability for wireline accesses to provide network power to telephone sets;
 - mobile hand-set battery life;
 - mobile hand-set cost recovery;
 - the lack of fixed-to-mobile number portability; and
 - in the case of medium and large business customers, the costs of and barriers to switching from fixed to mobile origination imposed by long term contracts and complex customer networks.
58. Please see our response to question 1. The key issue is whether fixed and mobile international calling are in the same relevant

market. As discussed in response to question 1, fixed and mobile international calling are in the same relevant market.

D) Provide your company's views, with justification, on the usefulness of market definition analyses in determining whether to mandate IA given that the structure of the IDD market, and whether it exists or can function as a separate market, is itself largely determined by the nature and scope of any decision to mandate IA.

59. Please see our response to question 1. Market analysis is instrumental in determining whether mandating IA is necessary or appropriate. As discussed in our response to question 1, a market analysis indicates that current policies are ensuring that there is no monopoly provider of an essential facility. Therefore, it is not necessary to mandate IA.

E) i) Provide your company's views, with justification, as to whether it is reasonable to expect competition from and between mobile carriers to impose discipline on pricing for IDD originated from fixed-accesses and describe in detail the market mechanisms, in terms of customer switching behaviour, that will bring about such discipline, taking into account, among other things, your company's response to part C) above.

60. Please see our response to question 1. It is clear that prices for international calling have been dramatically influenced by the introduction of mobile carriers in the Cayman Islands. It is not necessary to "expect" competition from mobile carriers to constrain fixed international calling prices. This had indeed already occurred.

ii) Provide your company's views, with justification, as to whether any such pricing discipline would depend largely on those customers with both fixed and mobile access shifting or allocating their calling between fixed and mobile accesses depending on relative prices.

61. There are numerous factors that affect a customer's purchase decision. Generally, a customer weighs the costs and benefits of each option, and makes their own purchase decision based on their own utility. The important point is that if fixed international calling prices increased, every single customer of fixed international calling would weigh the alternatives (mobile international calling, VOIP, call-back services, DALs, etc) and determine whether an alternative supplier of international calling services was more appropriate. In this scenario customers who already owned mobile phones would

certainly have a different decision making process than customers who didn't own mobile phones. Nevertheless, every customer would enter a decision process

iii) Provide your company's views, with justification, as to whether long-term contracts, complex customer networks, large numbers of employees, concerns over service quality and reliability, etc., may impede traffic shifting or allocation of the type referred to in ii) above by medium or large business customers and as to whether, as a result, any meaningful degree of traffic shifting is likely to be feasible only for residence or small business customers.

62. Long-term contracts, service quality and reliability, etc, are all factors that will affect customers' decision-making processes. However, these are exactly the types of issues that one expects in a contested market. In fact, these are the options that the Authority should seek to be available in the market. Customers should have the option to manage risk through long term contracts, and trade off price for service quality and reliability. Each customer's individual situation will affect their decision making process when faced with a rate increase. However, the important point is that customers have options for international calling services without a monopoly provider controlling an essential facility, and therefore mandating IA is not necessary.

F) Provide the evidence that C&W relied upon in making the following statements in paragraph 9 of its 12 December 2003 comments, along with any analyses which demonstrates the consistency of the evidence with C&W's conclusions:

...the entry of various new mobile and fixed domestic service providers will ensure the development of a vigorously competitive market in the Cayman Islands, and lower prices, for international voice services. This fact has been evident in all jurisdictions in the Caribbean where international liberalisation has occurred, even in the absence of a requirement to provide IA. Cable & Wireless notes that, generally, this development has occurred whether the competition is introduced in either the fixed and mobile markets: lower prices for mobile-originated international calls have led to lower prices for fixed-originated international calls.

63. C&W relied upon its experience in the Caribbean in making this statement, and C&W made the statement in order to suggest what might occur in the Cayman Islands with the introduction of mobile competition. However, since that statement was made, competition has occurred in the Cayman Islands, and the statement has come to fruition in the Cayman Islands. Indeed, there is a vigorous competitive market for telecommunications services, and fixed

international rates have indeed come down since the introduction of *mobile* competition.

- G) In the event that evidence based on experience in other developed countries was relied upon in the responses to C), E) or F) above, provide/indicate for each such jurisdiction:**
- i) the current mobile and fixed-line penetration rates as proportions of both households and population;**
 - ii) the mobile and fixed-line penetration rates for any one year in the 1987-1990 time frame;**
 - iii) whether fixed-line local exchange service has traditionally been priced on a usage-sensitive basis;**
 - iv) whether fixed-line local exchange service is currently priced on a usage-sensitive basis;**
 - v) whether indirect access for long distance (either domestic, IDD or both) calls originated from fixed-line accesses has been mandated and, if so, the form of IA mandated, the date on which it was implemented and the service providers for whom it was mandated (incumbent only, all providers, other (specify));**
 - vi) whether indirect access for long distance (either domestic, IDD or both) calls originated from mobile accesses has been mandated and, if so, the form of IA mandated, the date on which it was implemented and the service providers for whom it was mandated (incumbent only, all providers, other (specify));**
 - vii) the date on which mobile competitors began commercial operations, if applicable;**
 - viii) the date on which fixed-line local exchange access competitors began commercial operations, if applicable;**
 - ix) the average monthly revenue per fixed-line residence customer: a) based on most recent information available (specify period), and b) at the time of market entry by fixed-line access competitors;**
 - x) the average monthly revenue per mobile residence customer: a) based on most recent information available (specify period), and b) at the time of market entry by mobile access competitors; and**
 - xi) a comparison of standard rates for IDD calling from residence fixed-line accesses with those for IDD calling from residence mobile accesses: a) based on most recent information available (specify period), and b) at the time of market entry by mobile access competitors.**

64. C&W objects to the interrogatory request and considers a response onerous and irrelevant based on the fact that the Cayman market already provides evidence to support the statement, which obviates the need to provide evidence from other jurisdictions.

H) Provide C&W's best estimate of a) the current proportion of Cayman fixed-line residence customers that also subscribe to its residence mobile wireless service plans, and b) the proportion of Cayman households currently subscribing only to its mobile services (i.e., who do not also subscribe to fixed-line access). Provide a complete description of the data sources and estimation methods relied upon and indicate the time periods to which the data sources and resulting estimates pertain.

65. We do not have an effective means of determining how many of our fixed-line customers also subscribe to a C&W mobile service. For example, C&W mobile plans include both prepaid and postpaid plans, and we have no way of matching customers of prepaid plans with a fixed-line service. Similarly, we do not have a way of determining the proportion of Cayman households currently subscribing to a C&W mobile service and not a fixed-line service. However, the high number of subscribers of mobile service in the Islands suggest that the proportion of fixed-line customers subscribing to mobile service is very high.

I) [C&W only] Provide a comparison, for residence customers, of current long distance rates for calls originated from fixed-accesses with those for calls originated from mobile accesses for each of the following jurisdictions:

- the U.S.;
- the U.K.;
- each country served by C&W other than the Caymans and the U.K..

Provide, for each country, information comparable to that requested in G)i), v) and vi) above and all supporting and source documentation, assumptions and calculations necessary to produce the rate comparisons.

66. C&W does not possess a comparison of long distance rates for calls originated from fixed-access with calls originated from mobile access for the countries identified in the question. Such a comparison would be burdensome, time consuming, irrelevant, and may not even be possible in some circumstances. For example, in all these jurisdictions, a significant number of mobile long distance minutes are bundled with subscription. Therefore, a meaningful comparison is not possible. Compiling the comparisons would also be irrelevant because the issue at hand is the international calling market in the Cayman Islands, and the evidence in the Cayman

Islands suggests that fixed international calling services are indeed constrained by prices for mobile international calling services.

Question 7 **Provide C&W's views, with justification, as to whether each of access methods ii) and iii), as specified in the preamble to question 1) above, would, if provided by C&W to other Licensees, fall under the pricing principles set out at paragraph 64(b) of Part 6 of Schedule 4 to the Liberalisation Agreement.**

67. Schedule 4 to the Liberalisation Agreement categorises the services provided by C&W into three broad, mutually exclusive, categories: retail (addressed in Parts 2 and 3), interconnection (including indirect access and infrastructure sharing, and addressed in Part 5), and so-called "wholesale" services (consisting of all the remaining services provided by C&W to other carriers, including but not limited to the resale of retail services, and addressed in Part 6). Each of these three broad categories of services are subject to significantly different regulatory regimes.
68. Access method ii) is a form of indirect access, and therefore a form of interconnection. As a consequence, it cannot be a "wholesale" service subject to the pricing principles of Part 6 of Schedule 4 of the Liberalisation Agreement.
69. As noted in the response to interrogatory 4, access method iii) is not a form of indirect access and, therefore, is not subject to the pricing principles applicable to interconnection services set out in Part 5 of Schedule 4. Rather, it would be a retail service, if it were provided by C&W to a C&W end-user to access C&W's international services, or it would be a "wholesale" service, if it were provided by C&W to the end-user of another international service provider and used to access the international services of that other service provider.

Question 8. Provide your company's views, with justification (including experience to date in the Caymans and evidence from other jurisdictions), as to whether price competition for mobile services could be expected, in the absence of mandated carrier preselection, to focus primarily on a) effective per-minute rates for local/domestic calling as reflected in monthly and additional per minute charges, b) charges for mobile-originated IDD or c) local/domestic per-minute charges and IDD charges combined.

70. As discussed in response to question 1, the relevant product market with respect to indirect access is the international calling market. This includes fixed international calling, mobile international calling, call-back services, VOIP-based international services, and DALs. The prices that customers face for international calling would include both a fixed portion (i.e., some monthly access expense) plus a per minute price of the international call. Therefore, competition in the international calling market could be expected to impact both the per minute rates for international calling as well as the monthly access prices. However, per minute prices for local/domestic calling are constrained by the prices of other services in that relevant product market – the domestic calling market. Therefore, we would not expect competition in the international calling market to affect prices for local/domestic calling per minute rates.

Question 9. Provide, for each of Grand Cayman and the Sister Islands, C&W's best estimate of the proportionate breakdown, for the most recent 12 month period for which data is available (specifying the 12 month period used), of C&W's Cayman-originated IDD traffic (measured in minutes) into the following components:

- i) originated from fixed-line residence MDU accesses;**
- ii) originated from fixed-line residence non-MDU accesses;**
- iii) originated from fixed-line business accesses;**
- iv) originated from residence customer mobile accesses; and**
- v) originated from business customer mobile accesses.**

71. We give the following estimates of breakdown of IDD originated traffic by segment over the past 12 months-December 2003 to November 2004- for Grand Cayman and the Sister Islands. We also present the last 3 months overall figure to indicate just how significant the recent shift to international has been.

Segment	Grand Cayman (last 12 months)	Sister Islands (last 12 months)	Overall (last 3 months)
MDU Fixed	###%	###%	###%
Non-MDU Fixed	###%	###%	###%
Business Fixed	###%	###%	###%
Residence Mobile	###%	###%	###%
Business Mobile	###%	###%	###%

Question 11. At paragraph 10 of its comments dated 12 December 2003, C&W stated that:

At the moment, there are several new access provider--fixed and mobile--establishing infrastructure to compete with Cable and Wireless a wide variety of market segments, including international call services. Existing regulation also provide for resale and mandate infrastructure sharing arrangements to enable the operation of new service providers that do not choose to build infrastructure or build only a part of a network. The ICTA should allow this set of regulations to work their effects on the market before mandating IA. Indeed, the incremental net benefit of IA cannot be known until the current liberalization policies are implemented and results examined.

Provide a detailed description of the decision framework and criteria that C&W proposes be used in examining the results of current liberalisation policies and in determining whether, in light of those results, it is necessary to mandate IA. C&W's proposed framework should include benchmarks or criteria based on cumulative target reductions and target entrant market shares at various specified points in the future against which actual market results may be judged. The benchmarks should include i) cumulative target reductions, at various specified points in the future, in prices for IDD originated from each of residence fixed-accesses, residence mobile accesses, business fixed accesses and business mobile accesses and in prices for each of residence and business fixed-line local exchange service; and ii) target market shares, at various specified points in the future, for entrants in the following markets or market segments: mobile access, residence fixed-access (served by means other than resale of any C&W wholesale switched local exchange services), business fixed-access (served by means other than resale of any C&W wholesale switched local exchange services) and IDD originated from each of residence fixed-accesses, residence mobile accesses, business fixed accesses and business mobile accesses. C&W's response should explain in detail the rationale for each of the benchmarks and time periods chosen.

72. Please see our response to question 1. The evidence indicates that competition has sufficiently developed such that the market for international calling does not require mandated indirect access. There is no monopoly provider of an essential facility, and therefore, the costs significantly outweigh the benefits of requiring IA. The current liberalisation policies have resulted in multiple

providers of international calling services, effectively eliminating any market power in the market by any one provider (please see response to question 1).

Question 12. Provide, for all months since 1 April 2004 for which data is available combined, for IDD originated from each of residence fixed accesses, residence mobile accesses, business fixed accesses and business mobile accesses, the following, as applicable:

- the average price per minute using actual traffic patterns;
- the average price per minute arrived at by applying prices for mobile-originated IDD to the distribution of traffic (time of day, day of week, destination country, etc.) observed for the comparable (i.e., residence or business) fixed access-originated IDD; and
- the average price per minute arrived at by applying prices for fixed access-originated IDD to the distribution of traffic (time of day, day of week, destination country, etc.) observed for the comparable (i.e., residence or business) mobile-originated IDD, reflecting the overall average discount represented by the Talk Away discount.

73. The most readily available data is the following average revenue per minute data for fixed-originated and mobile-originated international calls from 1 April 2004 through 31 November 2004. This data is an aggregate of both residential and business customers.

	Fixed ARPM	Mobile ARPM
2004 – April	###	###
2004 – May	###	###
2004 – June	###	###
2004 – July	###	###
2004 – August	###	###
2004 – September	###	###
2004 – October	###	###
2004 - November	###	###

74. The second and third bullets requested in the question are onerous, burdensome, and would require significant time and effort to obtain. Applying mobile rates to fixed calling statistics (and visa versa) would require detailed data on rates and calling statistics which are simply not maintained in a manner that would allow automated processing. Manual processing would be necessary, and would likely require at least two to three weeks to obtain, inclusive of any data checking that would also be necessary before releasing any final numbers. Furthermore, the result of the lengthy process would contribute marginal benefit to the current proceeding.

Question 15. Detail any plans, including those elements related to the timing of service introduction, possible bundling, pricing and features provided, that your company may have for purposes of marketing mobile wireless services specifically as a replacement for fixed-line local exchange service.

75. # #

Question 16. At paragraph 33 of its comments dated 12 December 2003, C&W stated:

While Cable & Wireless appreciates that the ICTA has given some recognition to the need to conduct a cost benefit analysis, the issues need to be more fully explored and costs and benefits quantified for the ICTA to fulfil its obligations under the Liberalisation Agreement and accurately assess whether introduction of indirect access would be appropriate to Cayman.

A) Assume that the Authority determines that carrier preselection and call-by-call selection must be implemented by all providers of fixed-access switched local exchange services, effective 1 January 2006. Provide C&W's best estimate of the costs that it would incur in complying with such a mandate, for each of the following broad cost categories:

i) one-time general system provisioning costs (future-worth to 1 January 2006 using a discount rate of, for example, 13.5%) caused by the modifications to network and operating systems necessary to enable C&W to offer carrier preselection and call-by-call selection (i.e., equal access or Feature Group D);

ii) any ongoing costs caused by the need to maintain the capability referred to in i) above, expressed both in annual cash flow terms for each of the years 2006-2010 and in present worth terms as at 1 January 2006;

iii) the one-time costs caused by enabling carrier preselection and call-by-call selection for an individual IDD licensee, including the setting up of commercial arrangements for the electronic transfer of customer orders; and

iv) costs caused by implementing the end-customer's carrier preselection for any given access line.

B) Identify and describe in detail all cost components/activities included in each cost estimate provided in response to A)i) to A)iv) above. Provide, for each cost inclusion, the rationale for C&W's view that

the cost component/activity is caused by the requirement to offer or provide mandated carrier preselection and call-by-call selection.

- C) Provide a breakdown of each of the cost estimates provided in response to A)i) to A)iv) above into amounts associated with each of the cost inclusions identified in response to B) above.**
- D) Assuming that the Authority determines that carrier preselection and call-by-call selection must be implemented both by providers of fixed-access switched local exchange services and mobile wireless services, effective 1 January 2006, provide information comparable to that requested in A) to C) above in respect of any additional costs associated with the extension of the IA mandate to cover mobile wireless providers.**
76. For a response to questions A-D, it is important to recognize that the actual technical implementation costs associated with the move to indirect are low relative to the other costs that we have identified in our response to question 1, in particular the negative impact on domestic infrastructure investment and possibly consumer protection.
77. We also note that we do not quite understand why the Authority has posed this question to C&W alone, particularly when the question posits that all fixed service providers provide IA. Surely, given that indirect access, if implemented, may and ought to be implemented across a number of carriers, the likely costs to other carriers is an important consideration.
78. The costs associated with the technical implementation of indirect access would depend a great deal on timing. As the Authority is aware, C&W is in the middle of transitioning its fixed line subscriber base to its new NGN switch. Before the Hurricane Ivan, we had planned completion of this transition by ###. Although delay we still hope to be on track to accomplish this before the end of ####. Costs for implementing in terms of software upgrades is under \$US###.
79. If Indirect Access were required before the migration to the NGN switch, C&W would have to make investments in its AXE switch. At the time of this writing, we have been unable to get Ericsson quotes for any upgrades to this switch. However, the modification will involve both more investment and engineering time than modification of the NGN switch. In particular, there will be substantial labour costs of setting the routing tables in the switch up to do this, which will include local staff costs and supplier support costs. There will be additional software required and possibly RTU fees. The billing system will also have to be modified. We note

that C&W is not sure whether the AXE can support carrier pre-select services without substantial investment.

80. We are still awaiting vendor estimates for additional GSM costs.

E) At paragraph 34b) of its comments dated 12 December 2003, C&W indicated that one of its internal implementation costs would be “establishing usage monitoring facilities/processes & procedures in order to safeguard revenue.” Provide a detailed description of what is contemplated by this cost element.

81. The following are contemplated for this cost element:

- a. Design software scripts and decoders that would allow proper analysis of the data record for indirect access calls in order to validate and authenticate the components of each record based on internationally agreed formats.
- b. Ensure that all systems have proper record sequencing and verifiable audit trails.
- c. Ensure that all records of this nature that enter the network are free from fraudulent activity and are thereby in keeping with good revenue assurance practices.
- d. Design management reports that could verify the findings of the various fraud and revenue assurance systems that would form the basis of any consequential actions.
- e. Update systems and processes where and when necessary as fraudulent or suspicious activity migrates or mutates.

F) At paragraph 34b) of its comments dated 12 December 2003, C&W indicated that one of its internal implementation costs would be “creating and maintaining a process for fraudulent or suspicious calls handling/investigation agreed between carriers.”

- i) Describe in detail the processes contemplated by C&W and the nature of the fraudulent calls they would be designed to prevent and explain why C&W considers that the requirement for such processes is caused by carrier preselection and call-by-call selection rather than entry by other fixed and mobile access providers or the use of other Licensees’ calling cards.

82. The same processes as applied in 16E would apply here as well, additionally; the following call scenarios would be targeted:

- a. Calls originating from “carrier X” but using preselection and call-by-call coding information from “carrier Y”.
- b. Calls that do not meet internationally agreed formats.
- c. Calls where the calling or called numbers are manipulated to reflect inaccurate information.

ii) Describe in detail all current intercarrier processes for the handling and investigation of fraudulent or suspicious calls and explain why any such processes would be insufficient under mandated carrier preselection and call-by-call selection.

83. Generally speaking, CCITT regulations are applied in the handling of fraudulent or suspicious calling activity. We're not presently aware of any specific meetings on the subject matter between local operators. At present without formal local intercarrier related processes being established, most such activity is chased by the law enforcement agencies as needed for their purposes.

Question 17. At paragraph 34 c) of C&W comments dated 12 December 2003, C&W listed the “(r)eprogramming of customer premises equipment” as being among those costs imposed on consumers by indirect access. Explain why indirect access would necessitate the reprogramming of customer premises equipment.

84. Reprogramming of customer premises equipment would be required in many cases under call-by-call access method i) and access method ii) where the customer would want to automate dialing.

Question 18 Item 404 of C&W’s Draft General Tariff provides for 10-10-335 Service. 10-10-335 Service is described in the draft tariff as follows:

...a discount IDD Service that allows Residential Customers to use a special access number to call any Overseas Telephone Number and receive a 33% discount off regular IDD Rates on all Call Charges after the initial \$5.

To access 10-10-335 Service, Customers must dial 10-10-335 followed by 1 + Telephone Number, i.e. including the numbering plan area code, or by 011 + country code + city code + local number, as the case may be.

Item 403 of C&W’s Draft General Tariff provides for 10-10-269 Service. 10-10-269 Service is described in the tariff as follows:

... a discount IDD Service that allows Residential Customers to use a special access number to call any Cable and Wireless Telephone Number in any C&W Caribbean Island and pay a maximum of \$10 per Call.

To access 10-10-269 Service, Customers must dial 10-10-269 followed by 1 + Telephone Number, i.e. including the numbering plan area code.

- A) Explain whether 1010335 and 1010269 are Carrier Identification Codes (“CIC”). If such codes are not CIC, explain the allocation of such numbers and provide, if possible, a reference to the North American Numbering Plan Administrator’s website (www.nanpa.com) supporting the company’s explanation. If such codes are CIC,
- i) Identify the carriers to whom the Carrier Identification Codes associated with these services have been assigned.
- ii) Indicate whether the carriers referred to in i) above are licensed to operate in the Caymans. If not, provide C&W’s views, with justification, as to whether the carriers require a license.

- iii) **Describe in detail the nature of the relationship between C&W and each of the carriers referred to in i) above, including the nature of any corporate affiliations, affiliate or subsidiary relationships, joint ventures and/or common ownership.**
- iv) **Provide a copy of all agreements between C&W and each of the carriers referred to in i) above regarding billing and collection, interconnection, revenue settlement and other inter-carrier matters.**
- v) **Provide an overview of the commercial and technical arrangements embodied in the agreements referred to in iv).**

85. As C&W noted at paragraph 52 of its 12 December 2003 response to the Authority's public consultation on Indirect Access (CD(2003)7), and at paragraph 42 of its 6 April 2004 Reply Comments in the same proceeding, 10-10-335 and 10-10-269, as described in General Tariff Items 403 and 404, are not Carrier Identification Codes. These are short dialing sequences assigned by the Authority to C&W for specific purposes. Other short dialing sequences have been assigned by the Authority to other carriers for other purposes, e.g., the code "123" used by Digicel Cayman Limited to facilitate access by its customers to its voicemail platform. The Authority's jurisdiction to assign such "short codes" to carriers operating in the Cayman Islands is found in the *Information and Communications Technology Authority Law (2004 Revision)* and not the North American Numbering Plan Administrator's website or other documentation.

B) Indicate whether such calls from business fixed-lines are blocked. If so, describe the technical arrangements necessary to enable such blocking. If such calls from business fixed-lines are not blocked, indicate how the tariff limitation of the service to residence customers is implemented and enforced given that, in neither case, is any form of application required.

86. By "such calls", C&W assumes the Authority means calls dialed with both the 10-10-269 and the 10-10-335 prefixes. Calls dialed from business lines are processed by the switch, but the discount is only applied by the billing system to lines classified as "residential".

C) The 10-10-269 service is limited to calls placed to telephone numbers assigned to a Cable & Wireless customer in a C&W Caribbean Island. Indicate whether calls placed to telephone numbers assigned to a Cable & Wireless mobile customer in a C&W Caribbean Island are eligible.

87. Calls placed to the mobile number ranges of C&W affiliates in the Caribbean are eligible for the 10-10-269 discount.

D) Indicate whether 10-10-269 calls placed to locations or numbers other than telephone numbers assigned to a Cable & Wireless customer in a C&W Caribbean Island are blocked. If not, indicate how the tariff limitation of the service to calls placed to telephone numbers assigned to a Cable & Wireless customer in a C&W Caribbean Island is implemented and enforced.

88. Calls dialed with the 10-10-269 prefix and placed to locations outside the Caribbean, or placed to number ranges not assigned to C&W affiliates in the Caribbean, are not processed by the switch.

E) Confirm that the availability of these 10-10 services to C&W fixed-line customers demonstrates that Feature Group D access capability has been implemented in switches serving the Cayman Islands.

If C&W has not implemented Feature Group D access capability in switches serving the Cayman Islands: i) explain in detail the technical and access arrangements necessary to offer these services, ii) provide C&W's views, with justification, as to whether these technical and access arrangements and the use of the 101XXXX dialling plan comply with the requirements of the North American Numbering Plan, iii) indicate whether these arrangements are made available by C&W to other Licensees or providers upon request and, if not, why not, and iv) provide C&W's views, with justification, as to whether any failure to make such arrangements available to other Licensees or providers would constitute an anti-competitive practice, an abuse of dominant position or be otherwise unjustly discriminatory.

If C&W has implemented Feature Group D access capability in switches serving the Cayman Islands:

i) provide information comparable to that requested in questions 16A) (if applicable), 16B), 16C) and 16D) for all cost elements that have already been incurred.

ii) indicate the dates on which:

- the decision to implement Feature Group D was taken by C&W;
- work implementing Feature Group D network capability commenced; and
- work implementing Feature Group D network capability was completed.

iii) identify and explain the reasons for C&W's decision to implement Feature Group D capability in switches serving the Cayman Islands;

iv) provide C&W's views, with justification, as to whether the costs of implementing Feature Group D capability in the network and developing any additional operating processes necessary to offer and

administer the call-by-call selection component of Feature Group D were caused by or incremental to C&W's internal decisions to implement Feature Group D and its 10-10 services and thus would not be causal to any future Authority decision to mandate equal access;

- v) indicate whether the 101XXXX dialling arrangements for calls originated by C&W fixed-line customers are made available by C&W to other Licensees or providers upon request and, if not, why not; and**
- vi) provide C&W's views, with justification, as to whether any failure to make such arrangements available to other Licensees or providers would constitute an anti-competitive practice, an abuse of dominant position or be otherwise unjustly discriminatory.**

89. As stated in response to interrogatory 18(A), the numbers used to access these 10-10 service are not carrier identification codes. They cannot, therefore, demonstrate that Feature Group D access capability has been implemented in switches serving the Cayman Islands.

i) Implementing Feature Group D access capability would be a significant undertaking in C&W's Ericsson local switches, which still serve most of C&W's customers, as Feature Group D is not a standard implementation on the AXE. Implementation of Feature Group D on the AXE would be manual. C&W is not sure whether the AXE can support carrier pre-select services with substantial investment. On the NGN switch, implementation of Feature Group D can apparently be done via a software load. C&W does not yet have information with respect to its mobile switches.

ii) By "these technical and access arrangements, C&W assumes the Authority means the technical and access arrangements used to provide the 10-10-335 and 10-10-269 services in General Tariff Items 403 and 404. It is not entirely clear what the Authority means by "requirements of the NANP". C&W assumes that the use of the 101XXXX CAC dialing plan complies with the requirements of the North American Numbering Plan, as it has been used wherever "equal access" has been implemented. If by "101XXXX dialing plan", the Authority means the 10-10-XXX short dialing prefixes assigned to C&W by the Authority, these are not inconsistent with the NANP at the present time, and would need to be reviewed only at such time as a carrier to which CIC 0335 or CIC 0269 has been assigned chooses to provide international services in the Cayman Islands.

iii) No other Licensee has requested 10-10 arrangements. While C&W would consider making them available to other Licensees as part of a commercially negotiated agreement, C&W

notes that the second part of the question refers to “providers” in opposition to and separate from “Licensees”. C&W would not make these arrangements available to other “providers” who are not Licensees, and is disturbed that the Authority might be considering allowing unlicensed parties (who are unregulated and do not pay fees to the Authority or to the Government of the Cayman Islands) to provide international services in direct competition with duly licensed service providers (one of which is heavily regulated and all of whom pay very large license fees).

iv) In light of the answer to interrogatory 18(E)(iii) above, an answer to this interrogatory is not necessary.

Question 19 Attached is correspondence from TeleCayman dated 10 August 2004 proposing that, as a first phase of Indirect Access, customers using public payphones in the Cayman Islands have a choice of and access to any licensed provider for long distance call completion.

A) Provide your company's views on the merits of TeleCayman's proposal. If the Authority adopted TeleCayman's proposal as phase one of implementing indirect access, provide the estimated implementation costs assuming access method ii) as specified in the preamble to question 1) above for public payphones only, and the benefits of such implementation.

B) Refer to paragraph 23 of C&W comments dated 12 December 2003, where C&W states that "(f)or certain services, particularly payphones, technical and operational considerations may make indirect access inappropriate" and goes on to list these considerations. Assuming the Authority mandated access method ii) as specified in the preamble to question 1) above for public payphones only,

i) describe in detail the major modifications that C&W believes would be required to the two separate C&W platforms (describe).

ii) describe in detail, with justification, the additional processes that C&W believes would need to be developed to track and refund payments made at coin operated payphones, as a result of the mandate.

iii) describe and quantify the administrative burden and additional costs referred to by the company in the above-noted reference.

For each of i) to iii) above, provide a detailed description of methodologies, assumptions, models, data sources and other inputs used to arrive at the cost estimates.

90. C&W notes that the Authority's interrogatory focuses on one form of Indirect Access, access method ii), yet does not refer to that portion of paragraph 23 of C&W's 12 December 2003 comments that specifically addressed that type of access. At that time, C&W noted "Cable & Wireless expects competition to arise in the market for payphone-originated international voice services, in the absence of any IA requirements, through the use of toll-free access to a pre-paid card platform. Imposing additional regulatory requirements upon payphone service providers will likely not materially impact competition in this market."

91. Since December 2003, a competitive payphone provider has in fact entered the market in the Cayman Islands, and appears to have made a substantial investment and to have enjoyed remarkable success in the market. Mandating Indirect Access from payphones might well affect that provider's decisions regarding existing and future investments in the Cayman Islands.