Fair Trading Commission

D E C I S I O N

Interconnection Guidelines - Accounting, Costing and Pricing Principles

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1. INTRODUCTION

1. The Fair Trading Commission (the Commission) established by the Fair Trading Commission Act 2000-31, is the independent regulator of international and domestic telecommunications services and electricity services.

2. In carrying out its duties as an independent regulator, the Commission must operate in a transparent, accountable and non-discriminatory manner. Consultative documents and the public consultation process are the main ways in which the Commission discharges its responsibilities relating to transparency and accountability.

3. In addition, the Commission is specifically charged under the Fair Trading Commission Act to consult with interested persons when it is discharging certain functions.

4. Section 4(4) of the *Fair Trading Commission Act 2000-31* states:

> *"The Commission shall, in performing its functions under subsection (3)(a), (b), (d) and (f)*[1]*, consult with the service providers, representatives of consumer interest groups and other parties that have an interest in the matter before it."*

[1] Section 4(3) of the Act states:

The Commission shall, in the performance of its functions and in pursuance of the objectives set out in subsections (1) and (2):

(a) establish principles for arriving at the rates to be charged by service providers;
(b) set the maximum rates to be charged by service providers;. . .
(d) determine the standards of service applicable to service providers;. . .
(f) carry out periodic review of the rates and principles for setting rates and standards of service of service providers.

Consultative Process

5. On important issues that arise in the regulation of the utility industries, the Commission may issue a consultative document.

6. On April 04, 2003 the Commission issued its Consultation Paper, Document No. FTC 03/02, entitled "Consultation Paper – Interconnection Guidelines – Accounting, Costing and Pricing Principles".

7. The Commission has considered all responses submitted by interested parties and in establishing these Interconnection Guidelines - Accounting, Costing and Pricing Principles, the Commission has incorporated where it deemed appropriate, output from the consultative process.

8. The Commission wishes to thank all those persons who responded to the consultation document.

2. BACKGROUND

1. Interconnection is the linking of public telecommunications networks to allow users of one licensed carrier to communicate with users of another licensed carrier. It is critical to the Government's objective of introducing competition in the telecommunications sector and will be undertaken on the basis of the Interconnection Policy[2] and principles enunciated in the Telecommunications Act 2001-36.

2. The Commission shares responsibility for interconnection with the Minister responsible for Telecommunications. The Commission is specifically charged under the Telecommunications Act 2001-36 with responsibility for approving Reference Interconnection Offers (RIO), interconnection agreements and for resolving interconnection disputes referred to it by the parties.

3. These Guidelines must be applied to the determination of interconnection charges in the Reference Interconnection Offer (RIO) to be filed by the dominant carrier[3]. In the event an interconnection agreement is filed with the Commission before an approved RIO is in existence, the Commission will review the interconnection charges in that agreement having regard to these Guidelines and the principles in section 25 of the Telecommunications Act 2001-36.

4. The statutory provisions governing interconnection are set out in Part VI of the Telecommunications Act 2001-36. In particular, section 25 (1) requires that *"a carrier shall provide, on request from any other carrier, interconnection services to its public*

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[2] As specified by the Minister responsible for telecommunications in accordance with section 4 (2)(i) of the Telecommunications Act 2001-36

[3] Telecommunications Act, 2001-36 section 26(3) '*In this Part "dominant carrier" means a carrier that the Minister determines to be dominant based on that carrier not being effectively constrained by competitive forces in a particular telecommunications market and such other criteria as the Minister prescribes.' Cable & Wireless (Barbados) Ltd. has been declared the Dominant Carrier in the Barbados telecommunications market as of April 24, 2003.*

telecommunications network for the purpose of supplying telecommunications services in accordance with the provision of subsection (2)".

Subsection (2) specifies that interconnection services referred to in subsection (1) shall:

(a) *be offered at points, in addition to network termination points offered to the end users, subject to the payment of charges that reflect the cost of construction of any additional facilities necessary for interconnection;*

(b) *be on terms that are transparent and non-discriminatory;*

(c) *in respect of the interconnection charges and service quality of the interconnection services, be no less favorable than similar services provided by the interconnection provider for:*

  (i) *its own purposes,*

  (ii) *any non-affiliate service supplier of the carrier,*

  (iii) *a subsidiary of the carrier, or*

  (iv) *for similar facilities so provided;*

(d) *be made available in a timely fashion;*

(e) *be offered at charges that are cost-oriented;*

(f) *be offered in such a way as to allow the requesting carrier to select the services required and not require the carrier to stand the cost of network components, facilities or services that are not required or have not been requested by that carrier; or*

(g) *allow for end-users of public telecommunications services to exchange telecommunications with other users of similar services regardless of the carrier to which the end-user is connected.*

5. The Guidelines have taken into consideration, inter alia, the need to promote competition within the telecommunications sector, the importance of the telecommunications sector to the development of Barbados, and the long-term

interests of consumers of telecommunications services. The Commission seeks to ensure that interconnection among carriers is achieved in the most efficient manner.

6. This Decision sets out Guidelines with respect to the accounting framework, costing and pricing methodology.

3. INTERCONNECTON GUIDELINES

7. **The Commission has determined that the FDC Historical approach, (to be in existence for three (3) months), followed by the FDC Current Cost approach, (to be in existence for six (6) months), are the most practical and applicable methodologies in the short term; this short term being a period totalling nine (9) months**.

8. **After this, the Commission considers that the interconnection charges should be based on a TSLRIC approach. The reasons for the Commission's decision are outlined hereafter.**

Stage 1

9. The Commission's choice of costing method for interconnection charges has to be guided not only by economic considerations, but also by the particular phase of the Barbados telecommunications sector liberalisation process.

10. The Government has indicated that it will be issuing mobile licences to three new carriers and consumers are anticipating the benefits that competition can bring.

11. The Commission, being cognisant of this, has determined that its choice of costing methodology has to be primarily based on the ability to promote competition in the quickest possible timeframe. The Commission is also cognisant of the interconnection principles which include cost-orientation, economic efficiency and non-discrimination.

12. The FDC Historical Cost approach may incorporate the principles of cost-orientation and non-discrimination. As data to be utilised in this approach is generally available from the dominant carrier's accounting and engineering records and from other sources such as telecommunication equipment manufacturers, it

should be possible for the dominant carrier to apply this methodology without delay.

13. With the above criteria in mind, the Commission considers that the FDC Historical Cost approach should be applied only for a limited time frame of three (3) months.

Stage 2

14. The Commission is cognisant that in order to promote a truly competitive environment its priorities must be focused on:

- Achieving maximum economic efficiency by establishing charges that are as close to cost as possible;
- Ensuring that costs that are based on cost causation principles. This means that costs that stem from the activity of a particular carrier would be recovered through charges levied on that operator;
- Recognising the dominant carrier's investment in its telecommunications network.

15. In view of the above, the Commission does not favour the extended or permanent use of the FDC Historical Cost basis of establishing interconnection charges for the following reasons:

(a) Joint and common costs are allocated to the various categories of service using formulae that do not necessarily reflect relative usage or other cost causative factors.

(b) Operational and technical inefficiencies of the dominant carrier are passed onto the interconnecting operators through the interconnection charge and the impact of newly deployed technology is not taken into consideration.

16. With the above criteria and arguments in mind the Commission considers that the FDC Current Cost approach should follow for a limited time frame of six (6) months.

Stage 3

17. The Commission favours limited use of the FDC Current Cost basis for establishing interconnection charges for the following reasons:

(a) FDC Current Cost is limited in that it does not fully reflect the competitive environment which the Commission is seeking to facilitate in Barbados. The FDC Current Cost provides limited economic efficiency, whereas a forward looking approach delivers on maximum economic efficiency.

(b) A FDC Current Cost basis is also less likely to stimulate the investment activity in all areas of the telecommunications market to be liberalised, because of potential concerns over anti-competitive pricing, cross-subsidies, and inbuilt inefficiencies of incorrect valuations and irrelevant costs being reflected in the interconnection price.

18. The Commission has also given consideration to allowing the dominant carrier a mark up to TSLRIC. This would represent an allocation of joint and common costs of the dominant carrier. Although not directly caused by interconnection, these joint and common costs are incurred by the dominant operator in connection with its interconnection facilities and services.

19. The Commission considers that after the six months using the FDC Current Cost approach, the interconnection charges should then be based on a TSLRIC approach. **The Commission reserves the right to review any such interconnection charges**.

Costing Methodologies

20. The choice of costing methodology used to determine interconnection charges is critical to both the dominant carrier and the new carriers that are seeking interconnection. It is essential that the charges be set at a level that facilitates entry of new competitors into the market whilst allowing the incumbent to achieve a return on investment.

21. There are several methods that regulators use to measure the costs associated with the use of a network for interconnection. The choice of method takes into account the differences in data availability, accounting methods, regulatory or governmental policy objectives and evolving economic principles. Generally, the methods used to measure the aforementioned costs fall into categories of fully distributed cost (FDC) or forward looking costing methodologies. In addition, there are hybrid methods that combine characteristics or contain elements of more than one methodology.

1. Fully Distributed Cost, Historical Cost

22. The fully distributed cost (FDC) Historical Cost approach[4] uses historical accounting information (based on costs that have been incurred in the past) to allocate costs incurred in the provision of existing services. After allocating direct costs, a portion of the shared and common costs are then allocated to each service based on factors that reflect relative usage such as number of calls, minutes of use or number of circuits. These costs are usually recorded in the company's accounting reports for its own accounting purposes.

[4] Also known as Fully Allocated Cost (FAC)

23. The FDC Historical Cost approach relies on readily available data while recognizing that:

(a) joint and common costs are allocated to the various categories of service using formulae that do not necessarily reflect relative usage or other cost causative factors;

(b) any operational and technical inefficiencies of the dominant carrier are passed onto the interconnecting operators through the interconnection charge and

(c) the impact of newly deployed technology is not taken into consideration.

24. **The Commission considers that the FDC Historical Cost approach is practical in the short term. The Commission therefore directs that derivation of interconnection charges, as part of the RIO, must be based on FDC Historical Cost. The Commission intends that this method be used for a period of three (3) months. At the expiration of this three month period the charges in this RIO will cease to apply.**

2. Fully Distributed Cost, Current Cost

25. The distinguishing feature of the Fully Distributed Cost, Current Cost (FDC Current Cost) approach is that assets in place are valued at the current cost or replacement cost. This approach incorporates the most relevant existing technology.

26. Research has demonstrated that a FDC Current Cost approach can actually be used as a proxy for TSLRIC plus equal proportionate mark-up[5]. The FDC Current Cost can only be a proxy for TSLRIC plus the proportionate mark-up if the asset valuation methods are based on sound economic principles and include only relevant costs.

[5] Oftel - *Proposals for Network Charge and Retail Price Controls from 2001*, February 2001, paragraph 4.11

27. The FDC Current Cost approach is therefore practical and also relies on generally existing and available data. The approach also incorporates a measure of economic efficiency as it incorporates existing technology. The main disadvantage of this approach is that it requires the development and application of current cost valuation methods.

28. **The Commission considers that Cable & Wireless (Barbados) Limited should progress to the FDC Current Cost approach after the use of FDC Historical Cost. It is expected that the derivation of interconnection charges based on FDC Current Cost should be completed in the three month period while FDC Historical Cost is in use. The Commission is of the view that the interconnection charges derived from the FDC Current Cost approach, as part of RIO 2, should not be in effect for a period exceeding six (6) months. Thereafter, RIO 2 shall cease to apply.**

3. Forward Looking Costing Methodologies

29. Forward looking costing approaches seek to identify costs that will be incurred during some future period and the incremental cost which is required to provide a defined additional increment of a given service. In order to take into consideration any economies of scale that might exist in the telecommunications industry, these incremental costs are considered over a long term period.

30. Most regulators and regulatory experts agree that the ideal approach for calculating the level of interconnection charges would be one based on a forward looking cost of supplying the services for interconnection.[6] Additionally, in a fully competitive market, prices would be driven down to incremental costs.[7] This recommended approach is implemented by means of variants of the **long run incremental cost (LRIC)** methodology.

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[6] Hank Intven, McCarthy Tétrault, "*Telecommunications Regulation Handbook*" The World Bank (2000) 3-25

[7] International Telecommunications Union "*Trends in Telecommunication Reform 2000-2001, Interconnection And Regulation*" 3rd Edition, page 40

31. In a competitive market, the value of the investment is not dependent on the original historical cost but on the potential revenues which can be accrued on this investment. Costs incurred in maintaining production capacity are therefore relevant in the future. In order to achieve the strongest possible competitive position, an operator will have to use the most economically efficient technology and network topology. The replacement cost of this efficient, essential equipment is the basis for the calculation of the forward looking long run incremental costs.

32. These LRIC approaches seek to estimate a price for the network elements/services that would result if there were a competitive market for them. A forward-looking incremental cost model creates the right investment incentive for facilities-based entry into the telecommunication market.

33. The more "efficient" prices based on LRIC, reduces the ability of the incumbent carrier to exploit its market power at the expense of the interconnecting carriers who are dependent on the incumbent's facilities. Further, the LRIC approaches, with their reliance on cost-causation principles, reduce the incumbent's ability to engage in anti-competitive cross-subsidisation. Prices based on LRIC methodologies are more likely to lead to lower prices for consumers.

34. It should be noted that there are some disadvantages in employing a forward looking approach. Setting the price of each network element/service according to the last unit as prescribed in LRIC will mean that total revenues may fall short of total costs. Also, forward looking costs methodologies suffer from the fallacy of "perfect competition", because the multi-product firm will price some of its products above incremental cost to recover its total cost and recover a profit.

35. In addition, the LRIC approach may require significant practical and administrative resources because these studies are expensive to conduct and difficult to audit. LRIC studies do not allow for the recovery of historical costs; costs incurred at the time the asset was purchased. This may prevent the interconnection network

provider from recouping some of the costs of its embedded plant and equipment in service, which competitors will use and benefit from. Setting prices for the unbundled element at costs based on basic LRIC, which are about equivalent to the most efficient provider, will provide no incentive for the new entrant to invest in its own facilities.

36. Applying the narrow and basic LRIC approach, the entrant would pay the incumbent operator the incremental costs resulting from the new entrant terminating and originating traffic on the latter's network. There is no inclusion of common or joint costs and thus LRIC studies will often result in costs that are substantially less than the actual or total costs incurred.

37. Regulators have not generally set the interconnection charges solely on a LRIC basis. Prices based solely on LRIC are generally considered to be too low, and do not adequately compensate the incumbent operator for the use of its network. Such rates will generally not provide sufficient compensation for the incumbent operator to properly maintain its network and to attract capital needed in order to build additional infrastructure.

3.1 Total Service Long Run Incremental Cost (TSLRIC)

38. This costing method measures the difference in cost between producing a service and not producing it. A mark-up is also added to recoup a portion of joint and common costs. TSLRIC is LRIC in which the increment is the total service.

39. The term "total service" in the context of TSLRIC, indicates that the relevant increment is the entire service that a firm produces, rather than just a marginal discrete element or facility, such as the local loop and switching.

40. Depending on what services are subject to a study, TSLRIC may be for a single service or for a class of services. It comprises the incremental costs of dedicated facilities and operations that are used only by the service in question.

41. TSLRIC also includes the incremental costs of shared facilities and operations that are used by that service in addition to mark-ups to recoup a portion of joint and common costs, which are not included in TSLRIC.

42. The TSLRIC approach is consistent with the principle of cost causation such that the service-specific fixed costs of each service are often included in the calculation of the respective incremental costs. It is therefore useful in highlighting the absence or presence of subsidies for a service.

43. The Commission considers that after the six months using the FDC Current Cost approach referred to previously, the interconnection charges should then be based on a TSLRIC approach and included in RIO 3. The TSLRIC would be developed over the six month period while FDC Current Cost approach is in effect.

Benchmarking

44. The previously discussed costing approaches are all cost based models which require some level of cost study or cost modeling. Where there are no models, inadequate information or where resources or time is limited, efficient international comparisons or benchmarks are a mechanism that may be applied to determine regulated interconnection prices.

45. It is recognised that benchmarking is not a simple exercise and must be carried out in a careful and objective manner. It may be necessary to standardise the different international benchmarks and make adjustments based on the factors existing in a given country. Also, in anticipation of the fact that the methodology for determining the interconnection charges may be based on a model using a forward looking approach, benchmarking has been seen by some regulators as the only viable option in the determination of interconnection charges to facilitate interconnection.

46. Where there is no approved RIO, or where a RIO has not been filed in the time frame stipulated by the Commission, the Commission will utilise benchmarking for assessing interconnection charges.

47. The Commission expects that the dominant carrier and each operator seeking interconnection should be able to negotiate an interconnection agreement on interconnection charges within a reasonable time frame.

48. Should there be a breakdown at any time in the negotiation process such that the parties have not reached an agreement, a party may refer the matter to the Commission for resolution in accordance with the Dispute Resolution Procedures of the Commission.

59. In determining a dispute with respect to interconnection charges, the Commission will utilise where appropriate interconnection charges determined through benchmarking. The charges so determined, shall apply for a period to be specified by the Commission.

50. The Commission considers benchmarking to be an effective method for implementing an interconnection pricing regime to facilitate competition, especially in circumstances where information is unavailable or limited and where time is of the essence.

51. Once the dominant carrier and the operator seeking interconnection are able to agree on an interconnection charge, as part of an interconnection agreement that is acceptable to the Commission, the benchmark interconnection charges prescribed by the Commission will cease to apply.

Interconnection Agreements

52. The Commission is responsible for interconnection and is charged under the Telecommunications Act 2001-36 with responsibility for approving interconnection agreements.

53. The statutory provisions governing interconnection agreements are also set out in Part VI of the Telecommunications Act 2001-36. Section 29 (1) requires that *"Where pursuant to subsection (3) of section 28, a person who requests interconnection and an interconnection provider agree on the terms and conditions of interconnection, that agreement shall be filed with the Commission within 30 days of the date of the agreement for the Commission's approval."*

54. Subsection (2) of section 29 specifies the conditions under which an interconnection agreement may be approved by the Commission. It states:

"The Commission may in respect of any agreement filed with it under subsection (1)

(a) approve the agreement in writing; or

(b) require parties to the agreement to vary the filed agreement

(i) to comply with interconnection principles set out in section 25, or

(ii) if it considers that the interconnection agreement unfairly discriminates against other carriers or is otherwise unlawful."

55. Subsections (3) and (4) specify the conditions under which the parties would be required to vary the filed agreement. Subsections (3) and (4) state:

> *"Any direction for variation under subsection (2) shall be issued within 30 days of an interconnection agreement having been filed with the Commission."*
>
> *"Where parties to an interconnection agreement have failed to vary the agreement at the request of the Commission pursuant to subsection (2), the Commission may, having regard to the matters specified in subsections (1) and (2) of section 31 make an*

order stating the amendment that is to be made to the interconnection agreement to ensure that the agreement is consistent with this Part."

56. In the event an interconnection agreement is filed with the Commission before an approved RIO is in existence, the Commission may review the interconnection charges having regard to these Guidelines and the principles in section 25 of the Telecommunications Act 2001-36.

General Accounting Principles - Dominant Carrier

57. The Commission now establishes guidelines to be adhered to by the dominant carrier in the telecommunications market in respect of its accounting framework and its costing and pricing procedures.

58. The dominant carrier must provide:

(a) Interconnection charges are unbundled according to market demand;
(c) Details of the cost-accounting systems used in determining these charges are submitted to the Commission;
(d) Details of the principles and methods utilised in calculating interconnection costs, revenues and charges.

59. As interconnection services are not currently provided through a separate subsidiary of the dominant carrier, it is required that the dominant carrier keep separate, clearly distinguishable accounts for interconnection services[8]. This should allow the Commission to identify all elements of cost and revenue, the basis of their calculation, and the details of the attribution methods used to arrive at interconnection costs and charges.

60. The dominant carrier must maintain separate accounts for interconnection services and its core telecommunications services[9]. These accounts will be subject to review and independent audit by the Commission or its representatives duly authorised.

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[8] Section 2 of the Telecommunications Act 2001-36 states that *"'interconnection service' means a service provided as part of the obligation to provide interconnection under Part VI"*.

[9] Core telecommunications services in this context means services other than interconnection services such as fixed telephony services and data transmission services.

61. Any Access Deficit and Universal Service Obligations related costs and charges, as referred to in Part VII of the Telecommunications Act 2001-36 are to be kept separate from any interconnection costs and charges.

62. The charges for interconnecting at each feasible point of the network, as contained in the RIO or interconnection agreement must be published by the dominant carrier in a charging schedule. This schedule should be updated to reflect changes and be accessible and available to the Commission and interconnecting parties.

63. The dominant carrier delivering interconnection services to another carrier seeking interconnection must charge individual prices for each network component or facility so provided. As such, the billing structure of the dominant carrier must allow the carrier seeking interconnection to receive an itemised billing of the charges for each component, facility or service provided by the dominant carrier.

Accounting Framework

64. Accounting separation is an important requirement for the Commission to ensure that there is transparency and non-discrimination in the costing and pricing mechanisms of the dominant carrier. Additionally the Commission is interested in identifying cross subsidies with a view to removing these where appropriate.

65. The Guidelines seeks to effect accounting separation by the dominant carrier to facilitate the derivation of interconnection costs, rates and revenues. The Commission will issue guidelines with respect to other accounting separation exercises as required.

Standard for Calculating Interconnection Revenues and Costs

66. In the accounts established for the provision of interconnection services, revenue accounts should be established to record revenues attributable to the use of the dominant carrier's network in the provisioning of the interconnection services[10].

67. The costs of managing and operating essential facilities[11] attributable to the provision of interconnection services are to be recorded as the costs of interconnection[12].

Classifications for Interconnection Accounting

68. The Accounts of the dominant carrier must be designed to capture the cost of the major activities involved in providing interconnection over its network. The classifications used will form the basis of unbundling interconnection charges.

69. Examples of the types of activities that a dominant carrier may engage in, to provide interconnection over its network, are as follows:

(a) connecting
(b) switching
(c) transmission
(d) signaling

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[10] See Appendix 3 for a broad classification of interconnection revenues in the Proforma Profit & loss Account i.e. network, internal interconnection and external interconnection revenues. Interconnection costs are also classified and shown in Appendix 3.

[11] "Essential Facilities" as defined in the Telecommunications Handbook, McCarthy Tétrault, refers to facilities associated with a telecommunications network or service that are exclusively or predominantly provided by a monopolist or small number of suppliers, and that cannot feasibly be substituted by competitors for economic or technical reasons.

[12] See Appendix 1 for an example of an allowable cost structure for arriving at interconnection charges.

(e) providing administrative support

(f) providing management support

Establishing an Attribution Base

70. Before arriving at charges for unbundled interconnection activities and a consolidated interconnection charge, it will be necessary to establish a system for cost attribution to the unbundled activities. Attribution must be on a basis such as activity based costing that reflects the causal effects of activity on costs. Costs should be allocated to each product and/or service on the basis of the underlying cost drivers and activities of an efficient operator.

71. The dominant carrier must therefore establish a system that allows current and historical activity of network usage activity to be recorded for direct, common and indirect activities.

72. Activity reports and accounts used to record costs and revenues must clearly identify the relative portion of activities, costs and revenues generated by each interconnected service provider and by the dominant carrier's own internal interconnection activity[13].

Establishing a Basis of Costs At Each Feasible Point of Interconnection

73. The cost of interconnecting at each feasible point of the network must reflect the activity and cost attribution recorded for each unbundled element and function of the network usage.

[13] See Appendix 2 for an example of the type of report that is needed to show the relationship between each service provider and the amount of interconnection activity provided by the dominant carrier.

74. The Commission has identified examples of technical points at which the dominant carrier may offer interconnection. It is not the Commission's intention to dictate specific points of interconnection. The Commission recognises that points of interconnection are subject to commercial negotiations between carriers. Examples of technical points at which interconnection may be offered include:

(a) the line side of the local exchange (for example, the main distribution frame);
(b) the trunk side of the local exchange;
(c) the trunk interconnect points of a tandem switch;
(d) the local cross-connect points; and
(e) out-of-band signaling facilities, such as signal transfer points.

75. The onus is on the dominant carrier to identify the feasible points of interconnection to the network.

76. The dominant carrier must notify the Commission of its progress in establishing its interconnection accounting system and the activities associated with providing interconnection at each feasible point at which interconnection is envisaged.

77. The Commission will use the information provided to guide it in assessing interconnection costs and charges at each feasible point of the network.

78. The burden of proof is on the dominant carrier to show that interconnection charges are calculated in accordance with the principles outlined in section 25 of the Telecommunications Act 2001-36 and these Guidelines.

Accounting for Interconnection Capital and Other Costs

79. **Costs of Modifying a Network** - Costs of modifying a network to provide basic interconnection functions that other carriers can use commonly at the dividing points of unbundled elements of a network must be separately accounted.

80. Such costs are generally regarded as necessary in order to provide what any interconnecting carrier may require that the network should provide. These costs are usually considered to be general to the network as a whole and therefore recovery should be sought from all interconnecting parties rather than any one single interconnecting party.

81. **Cost of Providing Interconnection Equipment** - For the purposes these Guidelines, interconnection equipment is considered to be equipment which is required to provide common interconnection services. These costs are usually considered to be general to the network as a whole and therefore recovery should be sought from all interconnecting parties rather than from any single interconnecting party.

82. **Cost of Providing Transmission Lines -** In principle, carriers should pay the costs associated with the use of transmission lines. If carriers own subscriber lines, and they are shared by other carriers, the costs associated with transmission should be shared according to stipulated criteria.

Records

83. The Commission requires the dominant carrier to keep books, proper accounts and adequate financial and other records in relation to the conduct of its business.

84. This requirement is an important part of the process of allowing the Commission to evaluate the charges that are part of a reference interconnection offer

or interconnection agreement. It would provide necessary information in assessing whether the interconnection charges are cost–based, transparent and made in the long-term interest of consumers.

85. The Commission requires that the following minimum statements and records be submitted to the Commission on an annual basis (unless otherwise specified). The records underlying these statements should be maintained by the dominant carrier for periodic appraisal and inspection by the Commission.

(a) Profit & Loss Accounts separately identifying[14]
   i. Consolidated operation
   ii. Interconnection Accounts of the Fixed Network
   iii. Interconnection Accounts of the Mobile Network

(b) Capital Employed and Return on Capital Employed Statements
   i. Consolidated operation
   ii. Fixed Network
   iii. Mobile Network

(c) Audited Regulatory Statements reconciling Regulatory & Statutory

(d) Tariff of Interconnection Prices at each feasible point of the network

(e) Data on the amount of interconnection traffic switched (quarterly)

(f) A list of Essential Facilities used for interconnection, together with the quantities of such facilities utilised and the amount invested in such facilities.

(g) List of activity based cost drivers and other attribution bases used specifically to attribute joint and common costs during the financial year. The cost drivers must be provided to the Commission prior to the financial year to which they are applicable. Quarterly reports on the amount of activity recorded must be provided with respect to each basis during the period under review.

[14] See Appendix 3 for an example of a Profit & Loss structure to separately identify interconnection costs and revenues.

APPENDICES

Appendix 1

Example of how the Cost Pool for Interconnection Charges can be derived

TSLRIC with a Uniform Mark Up

For illustrative purposes only

Costs		Total Cost
Allowable Start–up Costs	$xxxxxxx	
Cost of Providing Interconnection Links	$xxxxxxx	
Cost of Switching– Local and Tandem	$xxxxxxx	
Allowable Cost of Capital	$xxxxxxx	
Total Cost Before Mark-up	$xxxxxxx	
Mark–up based on allowable Joint & Common Costs	$xxxxxxx	
Cost Pool for determining Interconnection Charge		$xxxxxxxx

Appendix 2

Proforma Interconnection Activity Report

For illustrative purposes only

	Service Provider 1	Service Provider 2	Service Provider 3	Own Department	Total Company
Inter. Access:					
- Sales [15]					
- Sales Rev.					
- Cost of Sales					
Local Switching					
- Sales-Mins.					
- Sales Rev./Min.					
- Sales Rev.					
- Cost of Sales					
Transmission					
- Sales-Mins.					
- Sales Rev/Min.					
- Sales Rev.					
- Cost of Sales					

[15] Details of the interconnection access facilities provided to each interconnecting operator should be provided in a separate statement.

Appendix 3

Proforma Profit & Loss Account of Interconnection Activity

The following table provides an example of how the Dominant Carrier may separate out its interconnection revenues and expenses in the Interconnection Profit & Loss Account. The Table separates Interconnection Revenues and Costs from Core Business Revenues & Costs.

For illustrative purposes only

	Fixed Interconnection	**Mobile Interconnection**	**Total Interconnection**
Revenues			
Network Revenues[16]			
Internal Interconnection[17]			
External Interconnection[18]			
Retail			
Total Interconnection Revenue			
Expenses			
Interconnection Services Sold[19]			
- Access			
- Local Switching			
- Transmission			
Total Cost of Interconnection Services Sold			
Cost of Interconnection Services Purchased from other Operators			
Interconnection Depreciation			
Total Operating Costs			
Return			

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[16] Network revenues include revenues derived from providing essential facilities.

[17] Internal interconnection reflects the cost of providing interconnection services internally. This is recognized in the Telecommunications Act in section 25 (1) (c) which requires that such charges should be no less or no more favourable than those charged to outside interconnection parties.

[18] External interconnection revenues reflect the revenues earned from providing interconnection services to external operators.

[19] A separate statement should be provided indicating the carriers for each type of interconnection service, together with the fixed and variable elements of the costs associated with each carrier. The variable element of the costs should show the number of units sold, the price per unit and the total cost. This statement could be expanded or a separate statement provided, showing the revenue per carrier, including the rate charged per unit of sales.

Fair Trading Commission
Manor Lodge, Lodge Hill
St Michael, Barbados
Telephone: (246) 424-0260
Fax: (246) 424-0300
E-mail: info@ftc.gov.bb
Website: www.ftc.gov.bb