

Cable & Wireless (CI) Limited
Interrogatories to Digicel Cayman Limited on
FLLRIC Costing Manual (CD-2005-1)

Interrogatory 1. Interconnection rates are required by Law and regulation to be, *inter alia*, reciprocal and cost-oriented. The FLLRIC models are, therefore, intended to generate the costs, and to result in the interconnection rates, of a representative network operator in the Cayman Islands. As one set of fundamental assumptions to the model, C&W proposed a set of service volumes that would serve that purpose. Those inputs are contained in the generic model that Digicel and the other interested parties received. The volume inputs as already presented in the costing manual are attached in Schedule 1 and 2.

- a) Does Digicel agree that the service volume inputs are representative of a network operator in the Cayman Islands?
- b) If not, please provide the service volume inputs (and justification for those inputs) that Digicel would agree are representative of a network operator in the Cayman Islands.

Interrogatory 2. C&W provided on a confidential basis its estimates of unit costs for equipment costs that it believes are consistent with those of a representative network operator in the Cayman Islands.

- a) Confirm that Digicel disagrees that such set of equipment costs is consistent with those of a representative network operator in the Cayman Islands.
- b) If applicable, explain in detail why Digicel believe that such set of equipment costs is not consistent with those of a representative network operator in the Cayman Islands
- c) Provide on a confidential basis to the Authority, Digicel's unit cost estimates for the following equipment. Include Digicel's source or basis for each estimate. We have provided a schedule of the unit cost estimates required in Schedules 3 and 4.

Interrogatory 3. In its Introduction, at pages 3-4, Digicel stated that C&W's cost model is not representative of "Digicel's costs and should not be used by the ICTA to determine Digicel's mobile termination rate."

- a) Does Digicel agree with the following statements? If not, please explain in detail why not.
 - i. The purpose of the proceeding is to arrive at a "...FLLRIC costing manual and associated model [that] will be used to develop rates for interconnection services with other telecommunications service providers, to ensure that C&W's retail rates are not anti-competitive, and to quantify any access deficit", as stated in Consultation Document 2005-1.
 - ii. Paragraph 10(1)(c) of the *Information and Communications Technology Authority (Interconnection and Infrastructure Sharing) Regulations* states that charges for interconnection services shall be "reciprocal for the same service in order that the responder and requestor pay the same rate for

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providing each other the same services, except for any applicable contribution towards an access deficit that may be approved by the Authority”.

- iii. Paragraph 10(1)(f) of the Interconnection and Infrastructure Sharing Regulations states that charges for interconnection services shall be “based on a forward-looking long-run incremental cost methodology once it is established by the Authority following a public consultative process.”
- iv. Principle 2 in ICT Decision 2004-5 states: “Forward-looking costs are the costs to be incurred by a carrier in the provision of a service. These costs shall be calculated as if the service was being provided for the first time by a new carrier and shall reflect planned adjustments in the company's plant and equipment. Forward-looking costs ignore embedded or historical costs; rather, they are based on the least cost technology currently available whose cost can be reasonably estimated based on available data. As such forward-looking cost estimates must reflect technologies that are currently operational used and available in the marketplace.”

- b) What additional changes, if any, does Digicel propose be made in the model—other than those already addressed in its previous responses--to achieve forward-looking-cost-oriented reciprocal termination rates, as required by the Interconnection and Infrastructure Sharing Regulations?

Interrogatory 4. Digicel states at page 5 of its submission, that it does not believe that the technology chosen by C&W is the least cost technology currently available and operational in the market place. In support of this assertion, Digicel states:

“...the use of IP technology exaggerates fixed network costs, probably because of higher asset costs...and definitely on the basis that C&W claims short depreciation periods for these assets.”

- a) Does Digicel believe that the asset costs of IP technology are greater than PSTN technology for delivering today’s service offerings? Provide in detail the basis for Digicel’s answer to this question.
- b) Does Digicel believe that the depreciation periods for IP technology are equal to or longer than PSTN technology? Provide in detail the basis for Digicel’s answer to this question.

Interrogatory 5. Digicel asserts, at page 5 of its submission, that 3G technology is currently in use in the Cayman Islands and that operators are moving towards this technology. Provide all evidence used to support this assertion. If Digicel or its consultants have no such evidence, please explain the basis for this assertion.

Interrogatory 6. Digicel states, in footnote 1 at page 6 of its submission, that “[termination] rates in Cayman may be reciprocal, but the actual rates themselves may be different owing to cost differences that are outside the operators’ control”. Explain what this statement means, and the basis on which it is made.

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Interrogatory 7. Digicel has requested, at page 8 of its submission, that the expense factors in the FLLRIC model be stated in terms of mark-ups on “network capital costs”. Digicel also expressed, what it claimed were typically found ratios, in terms of “capital costs”. Explain in detail what Digicel means by “capital cost”.

Interrogatory 8. Is Digicel proposing that C&W use a single WACC for both its fixed and mobile networks when calculating the cost of its fixed and mobile termination services, and another set be used for the calculation of termination services of other operators in the Cayman Islands. If not, please clarify Digicel’s proposal.

Interrogatory 9. Please identify the actual network operators whose WACCs are cited in the Table at page 9 of the Digicel submission, the dates or vintages of the WACCs presented, and references to any regulatory proceeding or determinations in which these WACCs were considered.

Interrogatory 10. Digicel states at page 15 of its submission that “In the case of the mobile model, the key facilities to be configured according to the scorched node approach are the cell sites.” How many cell sites does Digicel have? Identify how many are in dense urban, medium urban and rural areas. Identify how many locations, categorized by dense urban, medium urban and rural areas, used for Digicel’s cell sites are also used to provide Digicel’s fixed network services. Please provide figures before and after acquisition of Wireless Ventures / Cingular sites in the Cayman Islands.

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Schedule 1. Volume Assumptions: Fixed Network

Service	Volume - Calls (Annual)	Volume - Lines	Volume - Minutes (Annual)	Volume - 2Meg units
900-ADSL RETAIL	0	6750	0	3375
900-ADSL WHOLESAL	0	675	0	0
900-CARDS	0	0	0	0
900-DIAL UP INTERNET USAGE	246375	675	7247504	1
900-DIRECT CONNECT	0	50	0	25
900-DOMESTIC DQ RETAIL	1290000	0	1258208	0
900-DOMESTIC DQ WHOLESAL	645000	0	629104	0
900-DOMESTIC LEASED CIRCUITS RETAIL	0	400	0	200
900-DOMESTIC LEASED CIRCUITS WHOLESAL	0	140	0	35
900-DOMESTIC TRANSIT	88704661	0	107122022	0
900-EMERGENCY SERVICES RETAIL	1075	0	1075	0
900-EMERGENCY SERVICES WHOLESAL	538	0	538	0
900-FIXED CALL TO C&W MOBILE	9937758	0	22003567	0
900-FIXED CALL TO OTHER MOBILE	14181366	0	33553582	0
900-FIXED INTERNATIONAL INCOMING	20247565	0	42398302	0
900-FIXED INTERNATIONAL OUTGOING	8772807	0	41045680	0
900-FIXED VOICEMAIL RETAIL	2958017	6407	1185495	0
900-INTERNATIONAL DQ RETAIL	258000	0	258000	0
900-INTERNATIONAL DQ WHOLESAL	129000	0	129000	0
900-INTERNATIONAL FRAME RELAY RETAIL	0	44	315855	7
900-INTERNATIONAL FRAME RELAY WHOLESAL	0	10	45270	3
900-INTERNATIONAL LEASED CIRCUITS RETAIL	0	17	0	4
900-INTERNATIONAL LEASED CIRCUITS WHOLESAL	0	0	0	0
900-INTERNATIONAL PAYPHONE	98550	0	492750	0
900-ISDN ACCESS RETAIL	0	80	3802	0
900-NATIONAL PAYPHONE	2779	270	11881	0
900-OPERATOR ASSISTANCE	516000	0	1342462	0
900-PSTN ACCESS BUS	0	8000	0	0
900-PSTN ACCESS RES	0	13500	0	0
900-FIXED CALL to OLO	9937758	0	22003567	0
900-PSTN TERMINATION	22874356	0	50365313	0
900-NATIONAL CALL RETAIL	44780099	0	110646975	0
900-INTERNATIONAL TRANSIT from OLO	10123783	0	21199151	0
900-INTERNATIONAL TRANSIT to OLO	10123783	0	32195789	0

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Schedule 2. Volume Assumptions: Mobile Network

Service	Volume - Calls (Annual)	Volume - Lines	Volume - Minutes (Annual)
900-MOBILE DATA	-		-
900-MOBILE INTERNATIONAL INCOMING	7,472,694		26,570,648
900-MOBILE INTERNATIONAL OUTGOING	4,981,796		17,713,765
900-MOBILE ON NET CALL	26,304,479		36,826,183
900-Mobile Subscriber		30,000	
900-MOBILE TO FIXED	6,119,166		12,238,331
900-MOBILE TO OTHER MOBILE	21,477,974		25,814,630
900-MOBILE VOICEMAIL RETAIL	10,950,000		5,475,000
900-SMS	6,665,587		
900-MOBILE TERMINATION	26,950,809		42,524,718
900-INBOUND ROAMING	577,052.40		589,300

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Schedule 3. Cost Assumptions: Fixed Network

Description	Unit	Digicel's Proposed Unit Cost (CI\$)
Transmission Equipment Costs		
Add-Drop Multiplexer		
STM1	unit	
STM4	unit	
STM16	unit	
STM64	unit	
Tributary Cards	unit	
Tributary Card, Access Ring	unit	
Tributary Card, Transport Ring	unit	
Digital Cross Connects		
STM1	unit	
STM4	unit	
STM16	unit	
STM64	unit	
Electronics Module	unit	
Cable		
8 fibre optical cable	CI\$/km	
12 fibre optical cable	CI\$/km	
24 fibre aerial optical cable	CI\$/km	
24 fibre underground optical cable	CI\$/km	
48 fibre underground optical cable	CI\$/km	
Cable (24-Fibre) laying cost including sub-duct- underground	CI\$/km	
Cable (48-Fibre) laying cost including sub-duct- underground	CI\$/km	
Optical fiber joint		
8 fibre optical cable	CI\$/fiber joint	
12 fibre optical cable	CI\$/fiber joint	
24 fibre aerial optical cable	CI\$/fiber joint	
24 fibre underground optical cable	CI\$/fiber joint	
48 fibre underground optical cable	CI\$/fiber joint	
NGN		
Media Gateway (MG)	per port	

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Description	Unit	Digicel's Proposed Unit Cost (CI\$)
Network Management hardware	per system	
Network Management software	per system	
Voicemail Platform	per platform	
MSE-Soft Switch		
Communications Server 2000 (CS-2K) Compact (or analogous) Hardware	per system	
CS-2K Compact (or analogous) Software	per system	
Gateway Controller	per system	
Universal Audio Server (UAS)	per system	
Universal Signal Point (USP)	per system	
PP-8600 (or analogous) switch	per system	
PP-15k (or analogous Ethernet) Router	per system	
MCS5200 (or analogous) server	per system	
Other Costs		
DSLAM Equipment Unit Cost	unit	
Broadband Access Server	unit	
Core Ethernet Switch	unit	
Core Router	unit	
Other Servers & Software	unit	
Software	system	
International Transmission to US		
STM	per STM	
National Submarine Link (Inter-islands)		
STM	per STM	

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Schedule 4. Cost Assumption: Mobile Network

Description	Unit	Digicel's Proposed Unit Cost (CI\$)
Radio		
Site cost for omni cell	unit	
Site cost for sectorised cell	unit	
TRX	unit	
BTS Unit - Omni	unit	
BTS Unit - Sectorised	unit	
Other Network		
BSC	unit	
MSC	unit	
TCU	unit	
HLR	unit	
SGSN	unit	
GGSN	unit	
PCU	unit	
Internet Gateway	unit	
Voicemail Platform	unit	
Network Management System	unit	