



DETERMINATION 2010/01

**UNDER SECTIONS 29(3) AND 29(4) OF THE
TELECOMMUNICATIONS ACT 2001 –
TERMINATION OF INTERNATIONAL INCOMING
TELECOMMUNICATIONS TRAFFIC ON DOMESTIC
NETWORKS IN TRINIDAD AND TOBAGO**

1. Background

Pursuant to section 21 of the Telecommunications Act 2001 as amended (the “Act”) concessions have been granted to nine (9) entities to operate an international telecommunications network and/or provide international telecommunications services, namely:

- Columbus Communications Trinidad Limited (CCTL);
- Columbus Networks International Trinidad Limited (CNITL);
- Digicel (Trinidad and Tobago) Limited (Digicel);
- Laqtel Limited (Laqtel);
- Lisa Communications Limited (Lisa);
- Open Telecom Limited (Open);
- Telecommunications Services of Trinidad and Tobago Limited (TSTT);
- Three Sixty Communications (Three Sixty);
- Windward Telecom Limited (Windward).

Of these concessionaires, only three, namely TSTT, Digicel and CCTL have also been granted a concession to operate and provide a public domestic telecommunications network and service.

By letters dated between May and July 2009, each of these concessionaires wrote to the Authority requesting regulatory intervention by the Authority under section 29 of the Act vis-à-vis the introduction of a Price Floor for the termination rate for incoming international telecommunications traffic destined for domestic fixed and mobile networks in Trinidad and Tobago.

The Authority considered the request, reviewed relevant cost, traffic and pricing information obtained from the concessionaires and on 23rdth November 2009 issued the “**Draft Determination under Section 29(3) of the Telecommunications Act**”.

The draft determination proposed the following pricing rules and principles to be applied to rates charged by concessionaires for the termination of international incoming telecommunications traffic on domestic telecommunications networks in Trinidad and Tobago:

1. The rate must be no less than the sum of:
 - a. the cost to terminate the international telecommunications traffic on the relevant domestic network; plus,
 - b. any relevant cost incurred in terminating the international telecommunications traffic.

2. The relevant costs incurred in terminating the international telecommunications traffic are the same as that associated with the operation of an efficient international network. Thus, this cost shall include:
 - a. the efficient port charges or its equivalent (if applicable) at the relevant international Network Access Point (NAP);
 - b. the efficient backhaul cost from the relevant international NAP to the relevant international Cable Head;
 - c. the efficient international connectivity cost from the international Cable Head to the Cable Head in Trinidad and Tobago; and,
 - d. the efficient backhaul cost from the Cable Head in Trinidad and Tobago, to the point of interconnection on the relevant domestic network in Trinidad and Tobago.

The Authority also issued on the same day an assessment of the minimum rates for incoming international termination, by application of the rules and principles established by the Authority pursuant to section 29(3) of the Act in which the Authority applied the pricing rules and principles to the relevant costs. The Authority's assessment indicated that based on the proper application of the rules

and principles established in the draft determination to the costs on a fair and non-discriminatory basis, the price charged for the termination of international incoming telecommunications traffic on a domestic mobile network in Trinidad and Tobago should be no less than \$0.0758 United States Dollars (“US\$”) per minute and the price charged for termination on a domestic fixed telecommunications network should be no less than US\$0.0234 per minute.

The draft documents were issued for comment to concessionaires authorized to operate in the international market, as identified above.

The Authority received responses from the following concessionaires:

- Columbus Communications Trinidad Limited – letter dated 16th December 2009;
- Digicel Trinidad and Tobago Limited – letter dated December 9th 2009;
- Three Sixty Communications – letter dated December 11th 2009 (Further comments and recommendations under cover of letter dated December 22nd 2009 – Also received via email on 23rd December 2009);
- Telecommunications Services of Trinidad and Tobago – letter dated December 11th 2009;
- Windward Telecom Limited – letter dated December 4th 2009 (Also received via email on 2nd December 2009);

The Authority has now reviewed the representations made by the concessionaires and provides herein its responses to those comments, and its revised determination having regard to the comments and representations made.

2. Representations Made by Concessionaires

A summary of the representations made by the concessionaires that operate in the international market in response to the Authority's draft determination and assessment is provided below.

2.1 Windward Telecom Limited

The comments received from Windward Telecom put forward the following arguments:

- The Authority's use of the nominal exchange rate of US\$1.00 equivalent to TT\$6.30 was unjustified;
- The Authority's use of (US\$ as the preferred currency when in fact the rates are specified in Trinidad and Tobago Dollars (TT\$) was unjustified;
- The Authority's decision not to include the transit charges in the calculation of base termination rates ignored a relevant cost, to the detriment of operators;
- The division of a STM-1 at a technical ratio of 3:1 by the Authority to derive the 3.5 million minutes, failed to reflect the absolute monthly costs of a concessionaire carrying 3.5million minutes per month;
- The Authority's application of a 3.5million minutes per month threshold, is unfair to concessionaires that do not presently carry that traffic volume;
- The Authority did not take into account the effect of reciprocal pricing between incoming and outgoing rates by operators who carry both incoming and outgoing minutes in the international cost structure;
- The Authority did not include in its technical calculations domestic conduit costs, software costs, real estate and point of presence costs, and 24/7 network monitoring costs;
- The Authority did not include other related costs in its calculations, namely depreciation of physical facilities, amortization of software, pre-operating losses, return on working capital, regulatory costs, concession fees, billing

and collection costs, bad debt expenses, legal and audit expenses, insurance and salaries costs, and marketing and administration expenses;

- The Authority's application of a fifteen percent (15%) mark-up Windward Telecom argued, bore no legitimate relationship to either the capital intensity of an efficient operator's termination business nor to the concessionaire's actual cost of capital. A twenty-four percent (24%) pre-tax return on assets was recommended by Windward Telecom;

2.2 Digicel Trinidad and Tobago Limited

Digicel, in its submission, raised the following objections:

- The Authority in delaying the implementation of a price floor and introducing the level of competition authorized in this market, had failed in its responsibility to protect the interest of concessionaires and has by introducing a floor at a low level, has now overtly taken steps to undermine same;
- The Authority's liberalization strategy in the international telecommunications market segment has resulted in a proliferation of international concessionaires with little or no domestic vested interests and to competition which has led to depressed international settlement rates for inbound calls and a reduction in net foreign inflows;
- The Authority neglected to include in its analysis specific costs identified in ITU Recommendation ITU-T D. 140 as stated in its Proposed Price Regulation Framework;
- The Authority's analysis failed to incorporate the Federal Communications Commission's (FCC) Benchmark Order which established a US\$0.19 benchmark for Trinidad and Tobago and that this rate was relatively consistent with incoming international rates enjoyed by Caribbean countries;¹

¹ Digicel provided evidence of international inbound termination rates onto Digicel networks in various Caribbean territories to support its position.

2.3 Telecommunications Services of Trinidad and Tobago

TSTT, in its submission, argued as follows:

- The Authority's analysis was overly focused on costs;
- The Authority should expand its analysis to take into consideration the adverse impact that the proposed price floor rates would have on the telecommunications industry and the economy of Trinidad and Tobago. Such an approach, in TSTT's view, would be consistent with the Objects of the Act;
- The Authority's price floor should be aligned with the US\$0.146 benchmark rate for upper middle income developing countries like Trinidad and Tobago established by the US Federal Communications Commission ("FCC");
- The Authority's analysis failed to take into consideration the 'knock on' effect that these rates would have on neighboring Caribbean territories.

2.4 Three Sixty Communications Limited

In its submission, Three Sixty argued that:

- The Authority's analysis should not be governed by the theory of an efficient network but rather by a desire to advance the principles of telecommunications development, infrastructure investment and universality set out in Section 3 of the Act;
- The Authority's adoption of a cost-based approach for inbound international termination rates was *ultra vires* the Act which speaks directly to cost based domestic interconnection rates only;
- Aggregate inbound foreign traffic is relatively price inelastic and therefore an increase to the rate requested by all concessionaires would not reduce inbound traffic volumes;
- The Authority should be sensitive to and appreciative of the long term impact that a cost based rate would have on the inbound market segment and the country.

2.5 Columbus Communications Trinidad Limited

CCTL raised the following issues in its submission:

- The Authority may not have included all critical investment and operating costs in its analysis, namely, carrier-grade switching infrastructure including the POI at Nelson;
- The Authority failed to include depreciation of physical and network hardware and software.

3. Responses to Concessionaires' Representations

The Authority's responses to the comments and concerns of concessionaires, as well as the other considerations that informed the Authority's decisions, are set out below.

3.1 Exchange Rate

The Authority's use of a nominal exchange rate of US\$1 to TT\$6.30, removes to a considerable extent the present fluctuations in the real exchange rate. The Authority's approach provides certainty to concessionaires and eliminates any potential disputes as to what the actual exchange rate is on any given day.

3.2 Standard Currency

The Authority's use of the US\$ as the preferred currency was informed by the data received from concessionaires which indicated that save and except for the domestic termination rates (fixed and mobile), prices were quoted in US\$.

3.3 Exclusion of Transit Charge

The Authority did not include a transit charge given that the Report and Decision of the Arbitration Panel in the fourth dispute between TSTT and Digicel, determined that TSTT may not apply this charge to Digicel until Digicel had been offered the alternative of a direct connection to TSTT's mobile network.² The Authority's position was further informed by Clauses (5)(1) and (16)(1) of the Interconnection Regulations 2006, respectively:

“A concessionaire shall provide interconnection under the same terms and conditions and of the same quality as it provides for its own networks and services, the networks and services of its subsidiaries and partners, or the networks and services of any other concessionaire to which it provides interconnection”.

² Reference N0. 4/7/06/04. In the Matter of an Arbitration Telecommunications Authority of Trinidad and Tobago Section 82 of the Telecommunications Act 2001 Between Digicel (Trinidad and Tobago) Limited, Complainant and Telecommunications Services of Trinidad and Tobago Limited, Respondent. Report and Decision of the Arbitration Panel. March 7, 2008. Available online at http://www.tatt.org.tt/ddocs/disputeDecision_No_%202.pdf

“The terms and conditions for interconnection contained in the most recent interconnection agreement under which the concessionaire is the interconnection provider shall be made available to any other concessionaire requesting interconnection.”

3.4 Sub-Division of a STM-1

The Authority did not use a technical ratio to sub-divide a STM-1 to derive the 3.5 million minutes per month for a DS-3. The Authority, based upon the principles of fairness and non-discrimination, selected a DS-3 as the base unit of international transmission facility to be used in its assessment. This ‘unit’ for assessment was in the Authority’s view reasonable given that it represented the smallest international capacity utilized by concessionaires within the market. In this way the Authority ensured that it did not require efficiencies of scale not available to the smaller operators.

3.5 Monthly Traffic Threshold

The Authority’s application of a 3.5 million minutes per month conveyance threshold is conservative and is consistent with the usage patterns of an average concessionaire in this market. The Authority’s investigations suggested that most concessionaires were utilizing VoIP technology for international conveyance. This would therefore suggest a lower level of facility utilization depending upon the compression employed by concessionaires.

The Authority is of the view that the proposed level of utilization is appropriate for any efficient carrier operating in the inbound market segment and that concessionaires must be encouraged to strive to increase their inbound traffic to achieve the efficiencies associated with this minimum size. The Authority is of the view that an imposed price floor must facilitate, to some degree, competition that discourages inefficient use of resources.

3.6 Reciprocal Cost Subsidization

The Authority's omission of reciprocal cost subsidization in its analysis is based upon statements and assurances by concessionaires at a meeting held at the Authority's office on May 22nd 2009, that explicitly indicated that the inbound and outbound market operated 'independently' of each other and reciprocal traffic and rate agreements were not a constituent part thereof.

3.7 The Authority's Component Pricing Model

The Authority's reference point for the computation of inbound international costs is at Schedule E of its proposed Draft Telecommunications (Pricing) Regulations, which states that *"Where the Authority implements price floors for terminating international traffic, it shall set the price floor so that the international termination is no less than the cost of terminating the international call on the relevant public domestic telecommunications network, plus any other relevant cost incurred in terminating the international traffic."*

The generality of this requirement at Schedule E, allowed the Authority to adopt any appropriate approach that includes 'any other relevant cost incurred' in inbound termination. This provided the Authority with the flexibility to adopt a *Components Price* (CP) Methodology (as required by the Authority's Pricing Framework) which approach, incidentally, is consistent with ITU-T Recommendation D.140³. However, the Authority was cognizant of the uniqueness of concessionaires' domestic switching and aggregation costs which were influenced by the type of switching facilities employed, the use of the switch for domestic and international origination and termination, the actual switched traffic volumes and the topology of the international network design used by concessionaires (off-island or on-island switch location). In its deliberations the Authority recognized the potential complexity of cost allocation for domestic switching and aggregation and chose to equate the switching and aggregation cost at the NAP in the US to that at the

³ ITU Recommendation D.140 was also cited in the Authority's Proposed Pricing Framework as an approach to determining the international inbound termination rate.

domestic end in Trinidad. This in the Authority's view provided a reasonable reference point upon which it could build to develop an initial floor price.

While the Authority accepts CCTL's submission that it may not have included all relevant critical investment and operating costs in its analysis, it disagrees however, with the inclusion of many of the related costs identified by Windward Telecom, notably, pre-operating losses, bad debt expenses, legal and audit and insurance. The Authority is guided by its Costing Methodology for the Telecommunications Sector wherein specific cost categories for potential exclusion from its Top-Down Long Run Average Incremental Cost (TD-LRAIC) model are detailed. The Authority is therefore of the view that those costs mentioned previously and which are excluded from its TD-LRAIC model should not be included in this CP model. Of the other related costs identified by Windward Telecom, the Authority recognized the need to appropriately apportion and allocate same to derive the relevant cost incurred in terminating the international traffic. The Authority is also aware that many of those costs vary by concessionaire. In the absence of its TD-LRAIC model and appropriate benchmarks to apportion and allocate these costs, the Authority included a degree of flexibility in its calculations.

3.8 Application of a 15% Mark-up on Cost

The Authority is not in agreement with Windward's recommendation for a twenty-four percent (24%) pre-tax return on assets. The Authority's reference point in its deliberations was the weighted cost of capital (WACC) used by the Arbitration Panel in the determination of the final domestic termination rates. For completeness, the Authority in its deliberation reviewed the WACC for telecommunications markets and/or firms as determined by a number of regulatory agencies and consultation firms. In its deliberations the Authority:

- Noted the Telecommunications Regulatory Agency (TRA) of Bahrain decision on the WACC for both Batelco and Zain which was determined to be 9.5 percent in November, 2009.

- Noted the New Zealand Commerce Commission (NZCC) determination on its telecommunications service obligation (TSO) which utilized a WACC of 6.9 percent for the period 2007/08.
- Noted Price Waterhouse Coopers calculation of the WACC for Telecom Corp. of New Zealand limited and TeamTalk Limited of New Zealand at 8.9 percent and 6.9 percent in September 2009.⁴
- Reviewed the 2003 study by Anderson Management International for Sweden's Post & Telestyrelsen⁵ which calculated the pre-tax WACC for the fixed (11.5%) and mobile (13.1%) Significant Market Provider (SMP) in Sweden. That study also presented the WACC used in different European Countries at that time and the approach used to calculate same (Table 1).
- Reviewed the 2005 working paper by Frontier Economics for the Finnish Communications Regulatory Authority (FICORA)⁶ which calculated the cost of capital for Finnish mobile network to be within the range of 11.0% to 16.7%.
- Reviewed the 2005 Report commissioned by the Association Française des Opérateurs de Réseaux et de Services de Télécommunication (AFORST) which determined the pre tax WACC for France Telecom to be 7.64%. That Report also presented the WACC estimated by the Autorité de Régulation des Communications Électroniques et des Postes (ARCEP) for France Telecom which was estimated at 7.9%.

⁴ PWC calculations in June 2009 yielded a WACC of 9.4% and 7.0% for Telecom Corp. of New Zealand limited and TeamTalk Limited respectively.

⁵ http://www.pts.se/upload/Documents/SE/WACC_report_samrad_prissattning_Teracom_feb07.pdf

⁶ http://www.ficora.fi/attachments/suomial/1156442435479/Estimating_the_cost_of_capital_for_Finnish_mobile_telecommunications_companies-FINAL-STC.PDF

Table 1: Comparison of Cost of Capital rates used in different EU Countries⁷

	Return on capital (pre-tax)	Approach	Determined by
B	Originating: 13.67% Terminating: 12.77%	CAPM WACC	NRA
DK	10.85%*	CAPM WACC*	NRA*
D	NRA: 8.75% SMP: 12.5%	CAPM WACC	NRA
EL	13.12%	CAPM WACC	SMP and approved by NRA
E	12.34%	CAPM WACC	NRA
F	Interconnection: 12% Mobile: 17% ULL: 10.4%	CAPM WACC	NRA
IRL	12%	CAPM WACC	NRA
NL	Terminating: 10.7% Originating: 12.3% Price cap: 10.8%	CAPM WACC	NRA
A	NRA: 9.34% SMP: 12%	CAPM WACC	NRA
P	SMP: 13.31%	CAPM WACC	NRA
FIN	Various	Various	SMP
S	Fixed: 15% Mobile: 15.02%	Fixed: Historic rate of return Mobile: WACC	Fixed: Validated by NRA Mobile: NRA
UK	Fixed: 13.5% Mobile: 14%*	CAPM WACC	NRA

Source: Andersen, July 2002. * Updated by Andersen Management International

- Reviewed the 2000 Report by NERA Economic Consulting for the Office of the Telecommunications Authority, (OFTA)⁸ Hong Kong which estimated the WACC for the incumbent and an entrant provider at 15.33% and 16.25 respectively. Those values were premised upon inputs obtained from the Hong Kong financial market. In the instance where inputs for the WACC were premised upon international financial markets, the WACC for the incumbent and an entrant were estimated at 9.78% and 10.84% respectively.

The Authority noted in its deliberations that the cost of capital depended upon:

- Service origination or termination- WACCs for origination were generally greater than that for termination;

⁷ Ibid 8
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- The Network type (fixed or mobile - Mobile WACCs were generally greater than fixed.
- Agency/Organization calculating the cost of capital. - Significant Market Provider (SMP) WACCs were generally greater than that calculated by National Regulatory Agencies (NRA);
- Local or International financial market inputs – WACCs derived from local financial market inputs were generally greater than that derived from international market inputs.

The Authority after reviewing all relevant studies and documentation, and in the absence of a specific WACC study for Trinidad and Tobago, is of the view that a fifteen percent (15%) mark-up is reasonable and conforms to international best practice for firms operating in the telecommunications industry.

3.9 Relevant Policies and other Factors Considered

Mindful of the Objects of the Act, the Authority complied with the GoRTT Cabinet Minute No. 2909 of October 14, 2004 in its approach to liberalise the international market. The Cabinet Note authorised the Authority to issue a Request for Proposal (RFP/04 – 02 –TATT), inviting “*suitable applicants to submit proposals to qualify for concessions/licences to provide international public telecommunications services and/or facilities whereby the population of Trinidad and Tobago can access, inter alia, quality and affordable voice, data and image services*” . In its deliberations, Authority noted that:

- The Government policy directive mandated a framework wherein the number of international concessionaires was to be determined by competitive market forces and the criteria for market entry was to be established by the Authority (an open market).

- Section 29 of the Act stipulates that prices, inclusive of inbound international traffic are to be established by market forces (supply and demand conditions), unless there are existing conditions requiring regulatory intervention.
- Regulatory intervention in the international market is governed by Section 29(3) and (4) of the Act.
- A price floor that is higher than the market-based rate establishes a rate above the market equilibrium which could lead to market distortion. This, in the Authority's view, may encourage inefficient market entry.
- The Objects of the Act require the Authority to establish an open competitive market, facilitate the orderly development of the telecommunications industry within given parameters and to protect the interest of the public. This requires the Authority to balance the interest of its key stakeholders- concessionaires and consumers of telecommunication networks and services.

Taking these factors into consideration, the Authority is of the view that it has created an open competitive market framework that allows market conditions, inclusive of concessionaires' efficiencies, to determine inbound prices, while continually striving to achieve a balance between concessionaires and consumers. Further, in the Authority's opinion, its intervention under Section 29 of the Act must minimize market distortions while providing the right price signals for efficient market entry.

The Authority in its deliberations and analysis was also cognizant of the following:

- That the Act does not require inbound international termination rates to be based on cost but in accordance with conditions of demand and supply.
- That aggregate inbound foreign traffic is relatively price inelastic.
- The FCC's Benchmark and International Simple Resale Orders and the rates and policies established by those Orders.

- Of the FCC's "First Order and Report" of March 30th 2004, which provides Competitive Safeguards, to protect US consumers against certain anticompetitive action by foreign carriers and decisions by foreign telecommunications regulatory agencies/government.
- That the Objects of the Act not only advance the principles of telecommunications development, infrastructure investment and universality but also those of market liberalization and competition and protection of consumers.
- That competition induces allocative and productive economic efficiency.
- Of the impact that a proposed floor price for inbound termination would have on the Telecommunications industry and the economy of Trinidad and Tobago.
- Of the likely impact that a proposed price floor may have on the 'cross-border supply of telecommunications services'.
- Of the potential impact on Trinidad and Tobago given that international trade agreements require that international rates be subjected to trade discipline under the World Trade Organization (WTO).

The Authority adopted a *Components Price* (CP) Model as the basis for calculating international settlement rate benchmarks. Pursuant to its CP methodology, the Authority calculated the prices for the three network elements that are used to provide international telephony service as identified by the International Telecommunication Union's Telecommunication Standardization Sector (ITU-T) in Recommendation D.140. These three elements are: (1) international transmission facilities; (2) international switching facilities; and (3) national extension (domestic transport and termination). The Authority's model is consistent with that adopted by the Federal Communications Commission (FCC) in its 1997 Benchmark Order.⁹

⁹ See the following footnote 4 in the FCC's First Report and Order IB Docket No. 02-324, IB Docket No. 96-261. "See NPRM, 17 FCC Rcd at 19977-78, ¶¶ 43 & 44; In the Matter of International Settlement Rates, IB Docket No. 96-261, Report and Order, FCC 97-280, 12 FCC Rcd 19806, 19904-05, ¶ 216 (1997) (*Benchmarks Order*); Report and Order on Reconsideration and Order 3 February 2010

The Authority in its research and deliberations was cognizant that all concessionaires operating in the international market, with the exception of the Telecommunications Services of Trinidad and Tobago (TSTT), utilize a network topology with a single point of origination. While this topology can be considered suitable for a nominal “efficient international telecommunications network” the Authority was mindful of the topology’s limitations vis-à-vis resilience and design. The Authority was also mindful of the single point of origination at the United States of America (herein referred to as the “US”) and the potential implication that origination from the US may have on international termination rates.

The Authority had regard to the FCC’s “First Order and Report” dated March 30th 2004,¹⁰ wherein it states at Part IV: Competitive Safeguards, that the FCC” *“...would regard certain actions as indicia of potential anticompetitive conduct by foreign carriers, including, but not limited to: (1) increasing settlement rates above benchmarks; (2) establishing rate floors, even if below benchmarks, that are above previously negotiated rates; or (3) threatening or carrying out circuit disruptions in order to achieve rate increases or changes to the terms and conditions of termination agreements. Each of these types of actions has been demonstrated as a means to disrupt normal commercial negotiations in order to force U.S. carriers to accept above cost settlement rate increases that would be passed on to U.S. customers, and may require Commission action to protect U.S. customers.”*

The Authority is particularly interested in the opinion of the FCC, at bullet point (2) above that states that the imposition of a rate floor by a *foreign carrier*, even where that rate is below the benchmark but above the negotiated rate would be perceived

Lifting Stay, 14 FCC Rcd 9256 (1999) (*Benchmarks Reconsideration Order*); *aff'd sub nom. Cable & Wireless P.L.C. v. FCC*, 166 F.3d 1224 (D.C. Cir. 1999). In 1991, the Commission concluded that through the encouragement of International Simple Resale, or ISR, it could introduce competitive forces on routes that would place downward pressure on U.S.-international settlement rates. *See Regulation of International Accounting Rates*, CC Docket No. 90-337, Notice of Proposed Rulemaking, FCC 90-265, 5 FCC Rcd 4948 (1990) (*ISR NPRM*); Further Notice of Proposed Rulemaking, FCC 91-158, 6 FCC Rcd 3434 (1991) (*ISR FNPRM*); First Report and Order, FCC 91-401, 7 FCC Rcd 559 (1991) (*ISR Order*). ISR involves the provision of switched services over resold or facilities-based private lines that connect to the public switched network at either end-point. Instead of U.S. carriers paying for the use of half of a shared circuit to a foreign point through traditional settlement payments, U.S. carriers under ISR arrangements may connect or lease a complete or whole circuit end-to-end to the corresponding foreign carrier’s network and pay a negotiated rate for termination of services on the foreign network that does not comply with the strict requirements of the ISP. *See* 47 C.F.R. § 63.16.”

¹⁰ *The FCC’s First Report and Order IB Docket No. 02-324, IB Docket No. 96-261*

as an anticompetitive conduct by that carrier which may harm U.S. customers, and may therefore warrant FCC's intervention.

The Authority also noted in its deliberations that the same FCC "Order" recognizes that neither the FCC policy "*nor the International Telecommunications Union (ITU), Institute for Telecommunications Research (ITR), nor WTO agreements preclude national regulatory authorities from raising termination rates so long as those actions are "cost-oriented," do not discriminate against carriers, and are enacted after public notice and consultation.*"

The Authority notes with concern that while several concessionaires mentioned the FCC benchmarks in support of a higher, non-cost oriented floor, none of the concessionaires mentioned this caveat in their submissions in support of their request to the Authority for intervention under Section 29 of the Telecommunications Act, or in their responses to the Authority's draft determination, notwithstanding that the price floor level proposed by concessionaires may as a result have been inconsistent with the FCC Order. The Authority is concerned that the concessionaires' submissions were, to that extent, misleading.

The Authority refers to the statement in the Order that any demanded rate increases should be justified to ensure recovery of long-run incremental costs (LRIC). The Authority is therefore of the view that the 'cost-oriented' position of the FCC is consistent with a LRIC approach. In this context the Authority is satisfied that a floor price for inbound international termination derived from its TD-LRAIC model would be consistent with the FCC's position.

In determining 'cost oriented' inbound termination rates the Authority calculated the CP cost for two of the three elements identified in the ITU-T Recommendation D.140, namely (1) international transmission facilities; (2) international switching facilities. In the Authority's opinion the CP cost for the third element, national extension (domestic transport and termination) equated to that of the domestic termination cost for mobile (US\$0.0635) or fixed (US\$0.0111) networks.

Finally, the Authority in its analysis reviewed the inbound termination rates for other Caribbean countries, as provided by certain concessionaires and compared those rates to the domestic termination rates in those same countries. This analysis revealed that the margin proposed by the Authority was generally in sync with those for other countries. In many instances, the Authority's margin was greater than those for other Caribbean countries, while in few instances it was less. The Authority therefore envisages no major 'knock on' effect of its proposed rates upon neighboring Caribbean territories.

4. Final Determination

4.1 Pricing Rules and Principles

The Authority, having considered the representations made by concessionaires in response to the draft Determination made on 23rd November 2009, hereby establishes the following Pricing Rules and Principles:

Pricing Rules and Principles for the Termination of International Incoming Traffic on Domestic Networks in Trinidad and Tobago

These rules apply to any person who has been granted a concession for the operation of an international telecommunications network or a concession for the provision of international telecommunications services (hereinafter referred to as a “concessionaire”).

These rules shall apply to any telecommunications traffic which originates at a location outside of Trinidad and Tobago, and which is terminated on a domestic network in Trinidad and Tobago.

Pursuant to section 29(3) of the Act, and consistent with the Price Regulation Regime established by the Authority on 20th March 2009 under section 29 of the Act, the Authority hereby establishes the following pricing rules and principles for the termination of international incoming telecommunications traffic on any domestic telecommunications network in Trinidad and Tobago:

- 1. The rate charged by a concessionaire for the termination of incoming international telecommunications traffic on a domestic telecommunications network shall not be less than the sum of:*
 - a. the cost of termination of the international traffic on the relevant domestic network (herein referred to as the domestic termination rate); plus,*
 - b. any relevant cost incurred in terminating the international traffic.*

- 2. *The relevant costs incurred in terminating the international telecommunications traffic, referred to in 1 b. above, are the same as those associated with the operation of an efficient international network. Thus, this cost shall include:***

 - a. the efficient port charges or its equivalent (if applicable) at the relevant international Network Access Point (NAP);*
 - b. the efficient backhaul cost from the relevant international NAP to the relevant international Cable Head;*
 - c. the efficient international connectivity cost from the international Cable Head to the Cable Head in Trinidad and Tobago;*
 - d. the efficient backhaul cost from the Cable Head in Trinidad and Tobago, to the point of interconnection on the relevant domestic network in Trinidad and Tobago;*
 - e. the efficient domestic switching and aggregation cost;*
 - f. the relevant interconnect facilities cost to access the domestic networks; and,*
 - g. the relevant Administrative costs to operate an efficient international telecommunications network.*
- 3. *These rules and principles shall be applied in a fair, equitable and non-discriminatory basis, and in particular, any assessment of the minimum rates shall be based on assumptions and data which represent efficiencies reasonably available to all concessionaires operating in the relevant market.***
- 4. *Each concessionaire shall provide to the Authority for each three month period ending on 31st March, 30th June, 30th September and 31st December***

in each year, a statement in the form set out in the Annex to this determination, containing:

- *all rates charged by the concessionaire for the termination of incoming international traffic and the volume of such traffic carried/terminated in the preceding three calendar months;*
- *all rates paid by the concessionaire for termination of outgoing international traffic and the volume of such traffic terminated in the preceding three calendar months.*

The information shall be submitted to the Authority within fourteen (14) days of the end of the period to which the information relates.

5. *Each concessionaire shall produce to the Authority such information as the Authority may reasonably require to assess the costs of those routes which the Authority selects as appropriate for assessment, applicable to the periods from 1 January to 31 December in each year. Such information shall be produced within 30 days of the end of the period to which the information relates, or of the receipt of details of the information required from the Authority, whichever is later.*

6. *Upon publication of this determination, and at intervals of twelve (12) months thereafter (or otherwise as the Authority considers necessary based on market conditions) the Authority shall assess the minimum price for the termination of incoming international telecommunications traffic on a domestic networks on those routes which it considers appropriate having regard to traffic volumes and competition, based on the information provided under 4. And 5. above, applying the principles set out in 1 and 2 above, and it shall publish such assessment on its website and by written notice to all concessionaires authorized to operate in the relevant market.*

7. *No concessionaire shall offer, negotiate on the basis of, or charge a rate which is less than the rate set out in the most recent assessment published by the Authority under 6 above, unless it has first justified to the Authority's reasonable satisfaction that the rate does not breach the rules and principles set out in this determination, as applied on a fair, equitable and non-discriminatory basis.*

4.2 TATT Comments on establishment of Pricing Rules and Principles

In making this determination the Authority has taken note of the arguments advanced by concessionaires of the linkage between international revenues and investments in telecommunications in Trinidad and Tobago. It is expected, therefore that any increase in the rates which concessionaires may charge for the termination of international calls on domestic networks in Trinidad and Tobago as a result of this determination would have the effect of encouraging investment in the domestic telecommunications sector.

The Authority's deliberations have also considered the possibility that any increase in the rates charged for termination of international calls on domestic markets might impact upwardly the rates charged to locally based carriers for the termination of calls on domestic networks in other countries, which might result in upward pressure on the price paid by domestic consumers for international outgoing calls. The Authority has been comforted by and has relied upon the explicit statements and assurances by concessionaires that the inbound and outbound markets operate 'independently' of each other and that reciprocal traffic and rate agreements are not a constituent part of pricing in those markets. The Authority strongly cautions that any increases in outbound termination rates in response to this determination would be met with immediate regulatory intervention by the Authority in such manner as may be appropriate to prevent increases to the price paid by local consumers for international calls.

The Authority has noted in its review of this market that notwithstanding the fact that the concessions granted by the Authority to operate international

telecommunications networks and provide international services authorise both service origination and termination, concessionaires who do not have domestic networks are limited in or prevented from providing origination of international telecommunications to domestic consumers. This presents a possible disadvantage to such concessionaires as compared to those who operate domestic networks, and may also prevent the full benefits of liberalisation and competition in the international market from reaching the consumer. The Authority is mindful of this possible deficiency and intends to increase the priority of its Framework for Implementation of Indirect Access for Trinidad and Tobago, towards the introduction of Indirect Access within the shortest practicable timeframe.

Finally, concessionaires and the public are reminded that this determination will be reviewed together with the annual assessment of minimum rates in order to ensure that the matters taken into account remain appropriate for the pricing of services in this market. The Authority has already noted that changes in the market such as the increased use of IP technologies in carriage of international traffic may significantly affect cost based pricing decisions made in these markets. The Authority will continue to monitor those changes and will make regulatory interventions as necessary.

TELECOMMUNICATIONS AUTHORITY OF TRINIDAD AND TOBAGO

3rd February 2010