



## Telecom Decision CRTC 2006-35

Ottawa, 29 May 2006

### ***Follow-up to **Trunking arrangements for the interchange of traffic and the point of interconnection between local exchange carriers**, Telecom Decision CRTC 2004-46***

Reference: 8638-C12-200410465, 8740-T42-200411182, 8740-T46-200411190,  
8740-A53-200500414, 8740-S22-200500464, 8740-B2-200500498 and  
8740-M59-200501678

*The Commission **approves** the amended definitions of the local interconnection regions (LIRs) proposed by each incumbent local exchange carrier (ILEC) and **approves on a final basis**, effective the date of this Decision, the interconnection rates for the termination of competitive local exchange carrier (CLEC) intra-LIR traffic for each ILEC, as adjusted by the Commission. The Commission modifies the rate structure to include 10 percent traffic imbalance increments, and removes the six-month settling-in period and the subsequent three-month traffic imbalance measurement period to permit billing to commence on the date of commercial launch of a CLEC within an LIR. The Commission maintains the existing interconnection rates for termination of CLEC intra-exchange traffic for the grandfathered exchange-based regime. The Commission specifies the trunking arrangements for extended area service (EAS) transport and transit services in the LIR-based interconnection regime. The Commission also modifies the existing interconnection framework to permit the carriage of toll-terminating traffic on EAS transport and transit services, and permits the ILECs to file, within 90 days of the date of this Decision, cost studies and associated proposed revised rates for EAS transport and transit services if warranted. The Commission directs each ILEC to issue, within 45 days of the date of this Decision, revised tariff pages that reflect the determinations of this Decision.*

### **Introduction**

1. In *Trunking arrangements for the interchange of traffic and the point of interconnection between local exchange carriers*, Telecom Decision CRTC 2004-46, 14 July 2004 (Decision 2004-46), the Commission modified the regulatory framework for the interconnection of local exchange carriers (LECs) by consolidating exchanges to form larger local interconnection regions (LIRs), and to provide increased efficiencies and lower costs of interconnection for local service competitors.
2. In Decision 2004-46, the Commission determined that traffic interchange between LECs was to be provided through shared-cost interconnecting trunks between each LEC's point of interconnection (POI) site within an LIR, and that the termination of traffic that was both interchanged and terminated within the LIR would be subject to the bill-and-keep mechanism, and, where appropriate, mutual compensation. The Commission notes that in this Decision, the shared cost trunks between LECs are referred to as bill-and-keep trunks and the interconnection service for termination of competitive local exchange carrier (CLEC) intra-LIR traffic is hereinafter referred to as the LIR-based traffic termination service.

3. In Decision 2004-46, the Commission also set out rules for the incumbent local exchange carriers (ILECs) to follow in defining their LIRs. In addition, the Commission directed the ILECs to file, within 90 days of the date of that decision, cost studies and proposed rates for the LIR-based traffic termination service. These rates are used to determine the level of compensation between a CLEC and an ILEC based on the level of traffic imbalance on the shared-cost interconnecting trunks. These rates are also referred to as mutual compensation rates.
4. In Decision 2004-46, the Commission also directed the ILECs to identify the designated POIs for those LIRs within which a CLEC was already operating. The Commission further directed the ILECs to amend and file for approval proposed common channel signalling number 7 (CCS7) A-link tariffs to designate a signalling point of interconnection (SPOI) within each numbering plan area (NPA) for the interconnection of A-links.
5. In Decision 2004-46, the Commission further determined that extended area service (EAS) transport and termination, transit, toll originating, 9-1-1, and message relay services would remain on separate trunks and that all other aspects of the existing interconnection framework and associated rates would be grandfathered. In addition, the Commission mandated the provision of shared-cost POI diversity when requested by a CLEC, unless an ILEC could demonstrate to the Commission's satisfaction that POI diversity was not required.
6. The Commission also permitted the ILECs to file updated cost studies for EAS transport, transit, access tandem (AT) and direct connection (DC) services if the cost changes due to the introduction of LIRs so warranted it.

## **Process**

7. Pursuant to the Commission's directives in Decision 2004-46, Bell Canada filed, on 12 October 2004, its cost study, proposed rates for its LIR-based traffic termination service, proposed LIRs, associated default POIs, and designated SPOIs.
8. On 12 October 2004, TELUS Communications Inc. (now TCC)<sup>1</sup> filed tariff notices for each of TCC operating in Alberta (TCC-AB) and TCC operating in British Columbia (TCC-BC). In these tariff notices, TCC proposed common rates for its LIR-based traffic termination service along with revised tariff pages. By separate letter dated 12 October 2004, TCC identified its proposed LIRs, default POIs, and designated SPOIs within its serving territory.
9. On 12 October 2004, Aliant Telecom Inc. (Aliant Telecom), Société en commandite Télébec (Télébec), and TELUS Communications (Québec) Inc. (TCQ) filed their proposed LIRs and default POIs within their serving territories. By letter dated 13 October 2004, MTS Allstream Inc. (MTS Allstream) filed its proposed LIRs and default POIs within its serving territory. On the same date, Saskatchewan Telecommunications (SaskTel) filed its proposed LIRs, the associated default POIs, and designated SPOIs.

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<sup>1</sup> Effective 1 March 2006, TELUS Communications Inc. assigned and transferred all of its assets and liabilities, including all of its service contracts, to TELUS Communications Company (TCC).

10. On 25 October 2004, Cogeco Cable Inc. (Cogeco) filed comments related to its withdrawal from a CRTC Interconnection Steering Committee (CISC) working group dealing with the under-utilization of 9-1-1 facilities for new entrants. Xit telecom inc. (Xit telecom) filed comments related to the 9-1-1 issue on 26 October 2004.
11. Call-Net Enterprises Inc. (Call-Net)<sup>2</sup> filed comments dated 11 November 2004. The Canadian Cable Telecommunications Association (the CCTA), Microcell Telecommunications Inc. (Microcell), now part of Rogers Wireless Inc., Quebecor Media Inc. (QMI), Shaw Telecom Inc. (Shaw), and Xit telecom filed comments on 12 November 2004.
12. On 14 December 2004, the Commission issued a process letter to ensure that all ILECs provided revised tariff pages and rates required to support the LIR-based interconnection regime, and to allow parties to comment on these changes in a timely manner.
13. On 14 January 2005,
  - Bell Canada filed proposed modifications to its tariff pages along with proposed traffic termination service rates that applied to both LIR-based and exchange-based interconnection;
  - Aliant Telecom filed proposed revisions to its tariff pages to incorporate LIRs, proposed traffic termination service rates for LIR-based interconnection, and the associated cost study; and
  - SaskTel filed proposed revisions to its tariff pages and on 28 January 2005 it filed proposed traffic termination service rates for LIR-based interconnection and the supporting cost study.
14. QMI, the CCTA, MTS Allstream, Rogers Communications Inc. (Rogers), TCC, and Xit telecom filed comments in late January 2005. MTS Allstream filed revised comments on 7 February 2005.
15. Bell Canada and Aliant Telecom, jointly, and SaskTel filed reply comments on 7 February 2005.
16. On 17 February and 29 March 2005, MTS Allstream filed proposed revisions to its tariff pages to support LIR-based interconnection. On 17 March 2005, TCC filed comments related to MTS Allstream's 17 February 2005 submission.
17. By letter dated 27 June 2005, Commission staff proposed amendments to the ILEC-proposed LIRs, and set out a process to allow parties to address these proposed amendments.
18. MTS Allstream, SaskTel, TCC, the CCTA, and Xit telecom filed comments on 15 July 2005. Aliant Telecom, Bell Canada, MTS Allstream, SaskTel, and TCC filed reply comments in late July 2005. On 26 August 2005, Aliant Telecom proposed modified LIRs that incorporated Commission staff's proposed amendments along with revisions to several LIRs in the Aliant Telecom-Newfoundland and Labrador region.

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<sup>2</sup> Effective 7 July 2005, Call-Net's legal name was changed to Rogers Telecom Holdings Inc.

19. In response to the Commission's interrogatories dated 16 August 2005, Aliant Telecom filed revisions to its cost studies on 13 September 2005 and responses to the interrogatories on 16 September 2005. Bell Canada filed its responses to the interrogatories on 16 September 2005. On 30 September 2005, MTS Allstream filed comments regarding Aliant Telecom's and Bell Canada's responses.
20. SaskTel filed responses to the Commission's interrogatories and modified tariff pages on 7 October 2005. TCC and MTS Allstream filed responses to the Commission's interrogatories on 21 October 2005. Aliant Telecom and Bell Canada, jointly, and SaskTel filed comments on 14 November 2005.

### **Items to be addressed in this proceeding**

21. After a thorough review of all of the parties' submissions noted above, the Commission addresses the following issues within the context of this proceeding:
  - appropriateness of the ILECs' proposed LIRs;
  - costing issues;
  - final rates and related issues;
  - settling-in period and traffic imbalance measurement period;
  - high-usage architecture (HUA) for trunking arrangements;
  - trunking arrangements for EAS transport and transit services;
  - evolution from the exchange-based regime to the LIR-based regime;
  - POI diversity;
  - cost sharing for joint-build facilities; and
  - SPOI interconnection arrangements.

### **Appropriateness of the ILECs' proposed LIRs**

#### **Background**

22. In paragraph 73 of Decision 2004-46, the Commission established the following rules for ILECs to follow in defining LIRs:
  - LIRs were to be established using provincially defined administrative regions, such as municipalities, counties, regional districts, etc.;
  - the entire serving territory of Northwestel Inc. and the entire serving territory of the small ILECs, where local competition was not yet permitted, would be excluded from the requirement to establish LIRs;

- in cases where an exchange was served by a remote switch, the exchange would be included in the LIR of the exchange of the host switch; and
- the civic address of the largest wire centre, based on network access service (NAS), in each exchange would determine in which LIR the ILEC exchange belonged.

23. As noted above, as part of this process, the ILECs filed proposed LIRs and Commission staff subsequently proposed amendments to the ILEC-proposed LIRs. For ease of reference in this Decision, the Commission has grouped the parties' submissions into two groups: ILEC-proposed LIRs and Commission staff-proposed amendments to the ILEC-proposed LIRs.

### **Positions of parties**

#### ***ILEC-proposed LIRs***

24. Bell Canada submitted that in specifying its LIRs it had reassigned exchanges served by remotes to the LIR of the associated host exchanges. Bell Canada further submitted that it had addressed specific company network anomalies while keeping with the essence of defining LIRs based on provincially-defined administrative regions.
25. MTS Allstream submitted that it had modified the Commission-defined LIRs in its territory to ensure that the rules of Decision 2004-46 were followed. MTS Allstream submitted that it was not feasible to define LIRs that strictly followed provincially-defined administrative regions because the MTS Allstream network architecture was not aligned with provincially-defined administrative regions. MTS Allstream submitted that its proposed LIRs were consistent with the rule that required exchanges served by a remote switch to be included in the LIR of the exchange of the host switch.
26. SaskTel submitted that the Commission-defined LIRs that were based on the Regional Economic Development Authorities boundary map proved to be an unworkable solution. SaskTel proposed 10 LIRs based on local communities of interest (COIs) and SaskTel's host/remote switch arrangements. SaskTel proposed alternative arrangements for Regina and Saskatoon that, in its view, simplified interconnection arrangements while keeping LIR sizes manageable. In each case, SaskTel proposed an urban LIR with a single POI to serve the urban exchange and a rural LIR with its own POI to serve the rural exchanges. SaskTel submitted that this arrangement provided a CLEC with flexibility in serving rural or urban LIRs.
27. Aliant Telecom proposed a set of LIRs and designated POIs for each of its four operating regions: New Brunswick (NB), Nova Scotia (NS), Prince Edward Island (PEI), and Newfoundland and Labrador (NL). Aliant Telecom proposed three POIs for its Halifax LIR and two POIs for its Capital Coast LIR. Aliant Telecom submitted that the transition to a single POI for these LIRs required time and investment, and that multiple POIs would better serve small CLECs.
28. Rogers requested that the Commission direct Aliant Telecom to identify a single POI for CLEC interconnection in the Halifax and Capital Coast LIRs.

29. In reply, Aliant Telecom submitted that it declared more than one POI in the case of two LIRs because of existing arrangements, and because of its intent to minimize overall industry costs and provisioning delays related to the implementation of Decision 2004-46. Aliant Telecom further submitted that multiple POIs could be more appropriate for small competitors. Aliant Telecom submitted that it was prepared to transition to a single POI over a period of time, depending on competitive demand, capital costs, and its capability to develop a network plan and to schedule the required work.
30. TCC submitted examples that, in its view, demonstrated that Bell Canada, MTS Allstream, and SaskTel had not followed the Commission's rules for defining LIRs. TCC requested that the Commission ask the parties to justify any definitions that did not follow the Commission's rules before accepting them. The examples that TCC submitted were the following:
- Bell Canada had proposed separate LIRs for Ottawa and Hull (Gatineau); TCC submitted that because Ottawa-Hull was currently a single exchange, the LIRs should not be developed based on a splitting of that exchange;
  - MTS Allstream had proposed four new LIRs (Melita, Brandon, Dauphin, and Swan River) in place of the Westman and Parkland LIRs as proposed by the Commission; Melita and Brandon were part of the Commission-proposed Westman LIR, and Dauphin and Swan River were part of the Commission-proposed Parkland LIR; and
  - SaskTel had proposed urban and rural LIRs for each of Regina and Saskatoon; TCC submitted that SaskTel had not followed the Commission's rules in making these proposals.
31. The CCTA submitted that it was generally supportive of the ILEC-proposed LIRs. The CCTA was concerned that some specific groupings of exchanges based on host/remote switch combinations were not necessarily based on COI. The CCTA submitted that the LIRs should be competitively neutral and reflect COIs, and that competitive neutrality should take precedence over host/remote switch relationships. The CCTA provided examples of TCC's and Aliant Telecom's proposed LIRs that, in its opinion, were based on host/remote switch relationships rather than COI. In addition, the CCTA submitted that an ILEC should not be able to unilaterally modify allocation of exchanges to an LIR or designation of a POI without Commission approval.
32. Microcell submitted that there was a need for further rationale from TCC and Bell Canada as to how they chose the composition of their LIRs. In addition, Microcell provided examples of TCC's LIR proposals that, in its opinion, did not follow the directives of Decision 2004-46.
33. TCC submitted that it had applied the Commission's rules for defining LIRs, and that the examples noted by the CCTA and Microcell followed those rules.
34. Xit telecom submitted examples of municipal regions in Quebec that were served by multiple LIRs, thus requiring a CLEC to interconnect to multiple POIs to serve a particular municipal region. Xit telecom was of the view that there were several occurrences of COIs that would be

left without the benefits of local competition because of non-economic entry into LIRs that covered these areas.

*Commission staff-proposed amendments to the ILEC-proposed LIRs*

35. In response to the above round of comments, by letter dated 27 June 2005, Commission staff proposed the following amendments to the ILEC-proposed LIRs:
- Aliant Telecom's proposed Halifax LIR and Capital Coast LIR would each be served by a single POI on a going-forward basis;
  - SaskTel's proposed urban and rural LIRs for Regina and Saskatoon would be combined into a single LIR for Regina and a single LIR for Saskatoon;
  - Bell Canada's proposed Hull LIR would be served at the connecting LEC's option, from the Ottawa POI via Bell Canada-provided facilities while maintaining Bell Canada's proposed Ottawa LIR; and
  - MTS Allstream's proposed two LIRs in each of the Westman (Brandon and Melita LIRs) and Parkland (Dauphin and Swan River LIRs) regions would be maintained as is, only until CLEC demand materialized in the Melita or Swan River LIRs.
36. TCC agreed with the Commission staff-proposed LIR amendments for Aliant Telecom and SaskTel. TCC submitted that the proposal to maintain Bell Canada's separate Ottawa and Hull LIRs, with access to both LIRs from the Ottawa POI, did not provide trunking efficiency and simplicity. TCC submitted that Bell Canada should allow diverse POIs, either in combination with Bell Canada-provided facilities at Bell Canada's Ottawa and Hull POIs, or via a second set of Bell Canada facilities. TCC further submitted that Bell Canada should bear the expense of resolving difficulties experienced by entrants related to interconnection that arose because of the division of the Ottawa-Hull exchange.
37. In reply, Bell Canada submitted that, consistent with *Relief plan for area codes 613 and 819*, Telecom Decision CRTC 2004-55, 18 August 2004 (Decision 2004-55), the Ottawa-Hull exchange would be split into two separate exchanges when 10-digit dialling was implemented by the fourth quarter of 2006. In accordance with the Commission's rules specified in Decision 2004-46, and in recognition of the impending split of the Ottawa-Hull exchange, Bell Canada submitted that it had proposed an Ottawa LIR separate from a Hull LIR. However, in response to the Commission staff proposals, Bell Canada subsequently indicated that it was willing to provide a CLEC with access to the Hull POI from the Ottawa POI via Bell Canada-provided facilities at no additional charge.
38. Bell Canada submitted that TCC's comments regarding trunking inefficiencies should be discarded because there would be little or no trunking efficiency loss as a result of splitting the traffic exchanged by LECs in the Ottawa-Hull area given the current volumes of traffic in the Ottawa-Hull exchange and the size of the trunk groups already in place.

39. Bell Canada further submitted that it had no objection to CLECs establishing diverse POIs in the Hull LIR and that it was willing to negotiate the establishment and terms and conditions of additional POIs in the Hull LIR with individual CLECs on a bilateral basis.
40. TCC submitted that if MTS Allstream were allowed to split the Westman and Parkland LIRs as it had proposed, the following conditions should be met:
  - TCC's toll terminating traffic to exchanges served by the Melita switch should be accepted at the Brandon local tandem switch over bill-and-keep trunks prior to the establishment of CLEC demand in Melita;
  - TCC's toll terminating traffic to exchanges served by the Swan River switch should be accepted at the Dauphin local tandem switch over bill-and-keep trunks prior to the establishment of CLEC demand in Swan River; and,
  - any compensation to MTS Allstream for the inclusion of Melita in the Westman LIR or Swan River in the Parkland LIR should be recovered through general interconnection rates.
41. Xit telecom submitted that the proposed adjustments to LIRs did not address the difficulties that small entrants faced when providing local competition in smaller communities. Xit telecom argued that the policy that allowed host/remote switch relationships for assignment of exchanges to LIRs was in conflict with the creation of LIRs based on COI.

#### **Commission's analysis and determinations**

42. The Commission notes that the ILECs' proposals would result in LIRs that encompass multiple exchanges that provide competitors with access to more ILEC customers from a single POI than the existing exchange-based regime, and would reduce the total number of LIRs from the 337 LIRs defined in Decision 2004-46 to 182 LIRs. The Commission considers that the ILEC-proposed LIRs achieve a major objective of Decision 2004-46 as they provide access to larger numbers of ILEC subscribers from a significantly reduced number of POIs.
43. The Commission further notes that differences between the ILEC-proposed LIRs and the LIRs proposed in Decision 2004-46 primarily arose because of the extensive use of remotes in the ILECs' current network architectures, and because exchange boundaries were not aligned with provincially-defined administrative boundaries.
44. The Commission accepts the LIRs proposed by Aliant Telecom, SaskTel, Bell Canada, and MTS Allstream, as amended below.
45. Consistent with the directive of Decision 2004-46 that an LIR is to be accessed from a single POI, the Commission directs Aliant Telecom to amend its proposed LIRs as follows:
  - Aliant Telecom's proposed Halifax LIR is to be served by a single POI (HLFXNS01 – Lorne) instead of three POIs on a going-forward basis; any existing agreements with CLECs that make use of alternative arrangements may be maintained; and



- Aliant Telecom's proposed Capital Coast LIR is to be served by a single POI (STJHNF01 – Allandale) instead of two POIs on a going-forward basis; any existing agreements with CLECs that make use of alternative arrangements may be maintained.
46. Consistent with the directive of Decision 2004-46 that an LIR is to be accessed from a single POI, the Commission directs SaskTel to amend its proposed LIRs as follows:
- SaskTel's proposed Regina urban and rural LIRs are to be combined into a single Regina LIR serving both the urban and rural area through a single POI (REGNSK03 – Regina); and
  - SaskTel's proposed Saskatoon urban and rural LIRs are to be combined into a single Saskatoon LIR serving both the urban and rural area through a single POI (SKTNSK01 – Saskatoon).
47. With respect to the Ottawa and Hull LIRs, the Commission notes that in Decision 2004-46, it proposed separate Ottawa and Hull LIRs, based on provincial/municipal boundaries. The Commission also notes that Bell Canada submitted it had adjusted the Commission-proposed LIRs by applying the LIR definition rules from Decision 2004-46. The Commission further notes that TCC submitted that Ottawa-Hull was a single exchange, and as such, the LIR definition should incorporate the single Ottawa-Hull exchange and the associated exchanges that would be grouped with this single exchange according to the rules of Decision 2004-46, rather than splitting the exchange with the resulting separate Ottawa and Hull LIRs.
48. The Commission notes TCC's concerns that Commission staff's proposed adjustment to Bell Canada's Ottawa and Hull LIRs would not provide trunking efficiency and simplicity. The Commission agrees with Bell Canada that there would be little or no trunking efficiency loss as a result of splitting the traffic exchanged by LECs in the Ottawa-Hull area given the current volumes of traffic in that area.
49. The Commission also notes that Bell Canada's plan to split the Ottawa-Hull exchange into two separate exchanges is consistent with Decision 2004-55, and that Bell Canada's proposal to optionally serve the proposed Hull LIR from the Ottawa POI via Bell Canada-provided facilities is at no additional charge. The Commission further notes Bell Canada's stated willingness to negotiate with CLECs to establish additional POIs in the Hull LIR. In light of the above, the Commission considers that Bell Canada has satisfactorily addressed TCC's concerns regarding the proposed separate Ottawa and Hull LIRs.
50. The Commission directs Bell Canada to amend its proposed Ottawa and Hull LIRs to provide the benefits of competitor access from a single POI as follows:
- Bell Canada's proposed Ottawa LIR is to be maintained as is; and
  - Bell Canada's proposed Hull LIR is to be optionally served at the connecting LEC's discretion, from the Ottawa POI (OTWAON23 – Ottawa) via Bell Canada-provided facilities at no additional charge.

51. With respect to MTS Allstream, the Commission is of the view that the company's proposed LIRs for Melita and Swan River contain rural communities of low interest to competitors for local interconnection. Further, the Commission is of the view that in order to combine the Brandon and Melita LIRs into a single Westman LIR, and to combine the Dauphin and Swan River LIRs into a single Parkland LIR as requested by TCC, MTS Allstream would be required to expand its network infrastructure with little benefit to existing customers. Accordingly, the Commission considers that when demand for competitor local interconnection in the rural Melita and Swan River regions materializes, the requirements for a single POI for each of Westman and Parkland or alternative arrangements should be revisited.
52. The Commission permits MTS Allstream to maintain its existing proposed LIRs at this time, with potential amendments triggered by CLEC demand in rural areas as follows:
- MTS Allstream's proposed separate LIRs in each of the Westman (Brandon and Melita LIRs) and Parkland (Dauphin and Swan River LIRs) regions are to be maintained as is, until CLEC demand materializes in the Melita or Swan River LIRs; at that time, suitable arrangements to allow for one POI in each region or alternative arrangements are to be assessed.
53. The Commission further notes TCC's request that if the existing MTS Allstream LIRs were maintained, TCC should be allowed to route toll traffic to MTS Allstream's Melita LIR (via the Brandon local tandem) and Swan River LIR (via the Dauphin local tandem) over bill-and-keep trunks prior to the establishment of CLEC demand in these LIRs.
54. The Commission notes that TCC's request would permit toll competitors to bypass the payment of toll interconnection service rates in the Melita and Swan River LIRs. The Commission further notes that the purpose of revising the local interconnection regime established in *Local competition*, Telecom Decision CRTC 97-8, 1 May 1997 (Decision 97-8) was to promote competition in local services. The Commission also notes that the primary intention of the LIR interconnection regime is to provide interconnection for LEC customers within the LIR. The Commission recognized in Decision 2004-46 that for technical reasons, a CLEC that had established a POI in a given LIR would be permitted to terminate its toll traffic destined to that LIR at that POI. The Commission notes that TCC has requested carriage of toll traffic via bill-and-keep trunks from the POI of another LIR into an LIR where the CLEC has yet to establish a POI. The Commission therefore denies TCC's request. However, as noted above, the Commission will consider consolidating the LIRs in the Westman region and Parkland region, respectively, or alternative suitable arrangements, if a CLEC indicates to the Commission and MTS Allstream that it intends to serve local customers in one of the LIRs within the region and a POI has already been established by a CLEC in the other LIR of that region.
55. The Commission notes the CCTA's concerns that some of Aliant Telecom's and TCC's proposed LIRs were based on host/remote switch relationships rather than COIs. The Commission further notes Microcell's examples of TCC-proposed LIRs that did not follow the directives of Decision 2004-46 to use provincially-defined administrative regions for the specification of LIR boundaries. The Commission considers that TCC and Aliant Telecom have followed the rules of Decision 2004-46 in establishing the LIRs for the examples provided by the CCTA and Microcell.

56. The Commission notes that Xit telecom provided examples of smaller communities where small entrants faced inefficiencies and high interconnection costs. Xit telecom noted that in some scenarios, a CLEC would be forced to connect to multiple POIs because its serving area would cover multiple LIRs. Xit telecom submitted that because a CLEC may be interested in serving the particular COI, rather than the surrounding area covered by the LIRs, the interconnection costs could make entry into the market uneconomic. The Commission notes that the proposed LIRs follow the rules specified in Decision 2004-46. The Commission considers that approaches to provide relief, if any, to CLECs that are targeting second- or third-tier markets are beyond the scope of this proceeding.
57. The Commission **approves** the ILECs' proposed LIRs, as amended to reflect the above noted adjustments of this Decision.

### **Costing issues**

58. The Commission notes that parties to this proceeding raised issues related to costing methodology, and the underlying costs of the ILECs' LIR-based traffic termination services. The Commission's analysis of these issues is provided in the sections below.

### *Costing methodology*

#### **Positions of parties**

59. MTS Allstream submitted that Bell Canada, Aliant Telecom, and SaskTel changed their costing methodologies for the LIR-based traffic termination service cost studies in comparison with their 1997 exchange-based traffic termination service cost studies. More specifically, MTS Allstream submitted that Bell Canada, Aliant Telecom, and SaskTel changed the demarcation point between traffic-sensitive components and traffic-insensitive components resulting in different costing treatment for the Digital Trunk Controller (DTC)<sup>3</sup> and Enhanced Network (ENet)<sup>4</sup> interfaces in the LIR-based traffic termination service cost studies. MTS Allstream asserted that the impact of this change in costing methodology was to lower the cost of the traffic-insensitive component between the CLEC and those ILECs and to raise the cost of the traffic-sensitive portion, resulting in an overall increase in costs for the service.
60. MTS Allstream submitted that Bell Canada and Aliant Telecom assumed in their cost studies that all interconnection traffic passed through a tandem office, thus overstating costs. MTS Allstream submitted that Bell Canada insisted on the use of high-usage trunks in the exchange-based regime, and therefore should be able to incorporate the benefits of high-usage trunking within its cost study for the LIR-based regime.
61. In reply, Bell Canada and Aliant Telecom submitted that information relating to the 1997 exchange-based traffic termination service cost studies was not available and hence they could not assess whether the demarcation point between traffic-sensitive components and traffic-insensitive components had changed.

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<sup>3</sup> The Digital Trunk Controller (DTC) is a component of the Digital Multiplex System (DMS) switch that is used to connect trunks between DMS switches.

<sup>4</sup> The Enhanced Network (ENet) is a component of the DMS switch that is used to establish call connections between pairs of trunks, pairs of customer lines, and between customer lines and trunks.

62. SaskTel stated that it was not a party to the 1997 exchange-based traffic termination service cost study, so it had not made any changes to its costing methodology. SaskTel submitted that MTS Allstream had not provided any analysis to prove that MTS Allstream's approach was superior to SaskTel's approach.
63. Bell Canada, Aliant Telecom, and SaskTel submitted that the costs for the DTC and ENet components were traffic-sensitive and had been modelled in this manner in the AT, DC, and the 2004 LIR-based traffic termination service cost studies. Bell Canada, Aliant Telecom, and SaskTel further submitted that MTS Allstream had treated the DTC and ENet as traffic-sensitive components in its own DC and AT studies, and hence MTS Allstream's assertion on the appropriate demarcation point between traffic-sensitive components and traffic-insensitive components was inconsistent with its own costing methodology.
64. Bell Canada and Aliant Telecom submitted that LIR traffic could be terminated directly at the office where the interconnection occurred, through a tandem office to a terminating office and, if demand warranted it, through high-usage trunks to a terminating office. Bell Canada and Aliant Telecom further submitted that the majority of the LIR traffic terminated at the office where the interconnection with the CLEC occurred. Bell Canada and Aliant Telecom submitted that it was premature to forecast the extent to which high-usage trunking would be required, and accordingly had not included high-usage trunking arrangements in their cost studies.

#### **Commission's analysis and determinations**

65. The Commission notes that Bell Canada, Aliant Telecom, SaskTel, and MTS Allstream modelled the DTC and ENet as traffic-sensitive components in their AT and DC cost studies. The Commission further notes that Bell Canada, Aliant Telecom, and SaskTel followed the same approach in their LIR-based traffic termination service cost studies, while MTS Allstream modified its costing methodology for its LIR-based traffic termination service cost study to treat the DTC and ENet interfaces as traffic-insensitive components. The Commission further notes that the AT, DC, and LIR-based traffic termination services make similar use of the same switching components.
66. The Commission considers that the ILECs' use of different costing methodologies with respect to DTC and ENet costs reflect their own networks and provisioning practices, and result in minimal cost differences. The Commission considers that the differences in the proposed cost estimates of the LIR-based traffic termination service across ILECs are acceptable. The Commission further considers that Bell Canada's, Aliant Telecom's, SaskTel's and MTS Allstream's costing methodologies are acceptable.
67. With regard to MTS Allstream's assertion that Bell Canada and Aliant Telecom overstated their costs because they assumed that all interconnection traffic passes through a tandem office, the Commission notes Bell Canada and Aliant Telecom's reply that indicates that most of the traffic passes through a single office and terminates at that office. The Commission further notes that for the remaining traffic, Bell Canada and Aliant Telecom's submission indicates that the remaining traffic is assumed to pass through a tandem office given the difficulties in forecasting the demands for high-usage trunking at this time.

68. The Commission notes that the costs for the LIR-based traffic termination service depend on how much interconnection traffic is passed through tandem offices, and the decision to use a tandem switch depends on the traffic volumes between a CLEC and an ILEC, and on the approach the two parties agree to through negotiations. The Commission notes that the LIR regime is in its early stages. As such, the Commission considers that it is difficult to determine the demands for high-usage trunking, and accordingly, considers that Bell Canada's and Aliant Telecom's modelling approaches are acceptable.

#### *Costing analysis*

##### **Positions of parties**

69. Bell Canada and Aliant Telecom submitted that increased costs of switching had resulted in an increase in costs for LIR-based interconnection as compared to exchange-based interconnection.
70. The CCTA and Call-Net questioned Bell Canada's proposed increased rates, and noted that the lower anticipated transport costs should be passed on to CLECs. The CCTA noted that SaskTel's proposed reduced rates demonstrated that costs for LIR-based interconnection could decrease significantly when compared to the costs for exchange-based interconnection.
71. MTS Allstream questioned the increased rates proposed by Bell Canada, Aliant Telecom, and TCC, and submitted that none of these ILECs had provided justification for the increases.

##### **Commission's analysis and determinations**

72. The Commission has conducted a detailed review of the ILECs' cost studies for the LIR-based traffic termination service and addresses below the following costing method issues associated with the ILECs' proposed service costs:
- length of study period;
  - equipment life estimates;
  - proposed growth technology costs for switch terminations;
  - maintenance expenses;
  - portfolio expenses; and
  - service provisioning expenses.

##### *Length of study period*

73. In this proceeding, Bell Canada and Aliant Telecom used ten-year study periods in determining their proposed costs for the LIR-based traffic termination service. By contrast, TCC used a three-year study period, while SaskTel and MTS Allstream used five-year study periods to develop their proposed service costs.

74. In determining the costs of a particular Competitor Service, the Commission considers it generally appropriate to use a common study period across all ILECs to assess these costs. In the Commission's view, such practice minimizes cost discrepancies that may arise from differing demand and costing assumptions due to different study periods. For example, the Commission notes that in *Aliant Telecom, Bell Canada, MTS Allstream, SaskTel and TCI – Approval of rates on a final basis for Access Tandem service*, Telecom Decision CRTC 2006-22, 27 April 2006 (Decision 2006-22) and *Aliant Telecom, Bell Canada, MTS Allstream, SaskTel and TCI – Approval of rates on a final basis for Direct Connection service*, Telecom Decision CRTC 2006-23, 27 April 2006 (Decision 2006-23), with one exception, a five-year study period was used to determine the costs for the AT and DC services. The Commission further notes that the AT and DC services are Competitor Services comparable to the LIR-based traffic termination service.
75. Accordingly, the Commission applies a study period of five years for each ILEC's cost study for the LIR-based traffic termination service and adjusts the ILECs' proposed costs as appropriate.

***Equipment life estimates***

76. The Commission notes that Bell Canada and TCC assumed a three-year life estimate for switching and transmission system software in their cost studies for the LIR-based traffic termination service, while all other ILECs used a five-year life estimate in their cost studies, consistent with the approved accounting plant life estimates for switching and transmission system software. The Commission further notes that Bell Canada and TCC did not provide justification to explain why a three-year life estimate for software rather than the approved five-year accounting plant life estimate was necessary. The Commission therefore considers it appropriate to use life estimates associated with switching and transmission software that are based on each ILEC's approved accounting lives.
77. Accordingly, the Commission applies a five-year life estimate for both switching and transmission software, and adjusts both Bell Canada's and TCC's proposed capital costs for the LIR-based traffic termination service to reflect these changes in software life estimates.

***Proposed growth technology costs for switch terminations***

78. The Commission notes that in determining the switching costs for the LIR-based traffic termination service, the ILECs relied on the DTC and the Spectrum Peripheral Module (SPM) trunk termination technologies. The Commission notes that TCC and Aliant Telecom-NL relied on the exclusive use of SPM technology, while Aliant Telecom-PEI, SaskTel, and MTS Allstream relied on the exclusive use of DTC technology, and Bell Canada and the other Aliant Telecom regions relied on a mix of the DTC and SPM technologies for the estimation of trunk termination capital costs.
79. The Commission notes that the SPM is a newer technology that has or is expected to replace the DTC technology. The Commission notes that for Bell Canada and Aliant Telecom, the resource unit costs for the SPM are higher than the resource unit costs for the DTC. The Commission also notes that, in Decisions 2006-22 and 2006-23, the Commission noted the

increased capacity of the SPM and determined that the trunk termination unit costs should not have increased, and accordingly adjusted the trunk termination unit costs of the ILECs that had proposed the use of SPM or a mix of DTC and SPM to those based on the exclusive use of DTC as the least-cost trunk termination technology. The Commission further notes the similarities of the AT, DC, and LIR-based traffic termination services, and the similar application of the DTC and SPM technologies for those services. In light of the above, the Commission considers that the trunk termination capital costs reflected in the switching capital costs in the LIR-based interconnection cost studies of Aliant Telecom-NL, Aliant Telecom-NS, Aliant Telecom-NB, Bell Canada, and TCC are not appropriate.

80. Accordingly, the Commission adjusts the switching capital costs of the LIR-based traffic termination service proposed by Aliant Telecom-NL, Aliant Telecom-NS, Aliant Telecom-NB, Bell Canada, and TCC to reflect the exclusive use of DTC as the growth technology for the estimation of trunk termination capital costs. The Commission considers that a comparable adjustment is not required for Aliant Telecom-PEI, SaskTel, and MTS Allstream.

*Maintenance expenses*

81. The Commission has compared the ILECs' monthly maintenance expenses. As the maintenance expense relates to comparable activities undertaken by all ILECs, the Commission considers that significant differences in these estimates among ILECs, as expressed on a per-centum call second (CCS) traffic unit basis and as a percentage of capital, are not appropriate.
82. In light of the significant differences across the ILECs' maintenance expense estimates, the Commission considers it appropriate to apply a maintenance expense cap expressed as a percentage of the present worth of annual capital costs to ensure that maintenance expenses are reasonable. The Commission notes that this approach is consistent with the approach adopted in *Competitor Digital Network Services*, Telecom Decision CRTC 2005-6, 3 February 2005, Decision 2006-22, and Decision 2006-23 where the proposed maintenance expenses of certain ILECs were considered inappropriate and were capped at a percentage level of the associated capital costs.
83. The Commission notes that TCC's and SaskTel's proposed maintenance expense estimates, when expressed as a percentage of capital costs, were significantly greater than those of other ILECs. The Commission notes that excluding TCC and SaskTel, the ILECs' maintenance expense estimates, when expressed as a percentage of capital costs, varied from 4.6 to 10.6 percent, with an average value of 7.9 percent. The Commission considers that a maintenance expense cap equal to an average maintenance expense level of 7.5 percent of the present worth of capital costs would represent an appropriate maximum level of maintenance expenses for all ILECs. The Commission notes that it has applied the same maintenance expense cap in Decision 2006-22 and Decision 2006-23 for the comparable AT and DC services.
84. Accordingly, in respect of each ILEC's LIR-based traffic termination service, the Commission applies a maintenance expense cap of 7.5 percent of the present worth of capital costs.

### *Portfolio expenses*

85. The Commission notes that Bell Canada, Aliant Telecom, MTS Allstream, and SaskTel have been required to estimate and include portfolio expenses in their cost studies through the use of portfolio expense factors as set out in *Primary inter-exchange carrier processing charges review*, Telecom Decision CRTC 2004-72, 9 November 2004 (Decision 2004-72). The Commission notes that in this proceeding, these ILECs applied the following approved portfolio expense factors to their respective Phase II expenses: 3.6 percent for Bell Canada and Aliant Telecom, 1.78 percent for MTS Allstream, and 8.25 percent for SaskTel.
86. The Commission notes that Decision 2004-72 did not require TCC to use a portfolio expense factor, as TCC included portfolio expenses as part of its direct and indirect expenses under each expense line item. However, in this proceeding, TCC's proposed portfolio expenses were determined based on the application of a portfolio expense factor and were provided separately under the line item expenses causal to demand – Other. The Commission notes that this constitutes a change in costing methodology by comparison with previous Competitor Services cost studies. The Commission further notes that TCC's portfolio expenses were many times greater than the portfolio expenses of any other ILEC in this proceeding. The Commission is of the view that TCC did not adequately justify the level of its proposed portfolio expenses. The Commission therefore considers that it would be appropriate to adjust the level of portfolio expenses proposed by TCC in this proceeding.
87. The Commission notes that in the context of the Commission's ongoing general review of ILEC Phase II costing information requirements, TCC estimated an average portfolio expense factor of 48.65 percent.<sup>5</sup> The Commission therefore considers it appropriate to determine TCC's portfolio expenses for the LIR-based traffic termination service by applying a portfolio expense factor of 48.65 percent to TCC's expenses. The Commission notes that it applied this portfolio expense factor in Decision 2006-23 in determining the portfolio expenses for the DC service, which is comparable to the LIR-based traffic termination service.

### *Service provisioning expenses*

88. The Commission notes that for the LIR-based traffic termination service, the proposed service provisioning monthly equivalent costs (MECs) for each of the four Aliant Telecom regions were significantly higher than the proposed service provisioning MECs of all other ILECs. Given that these expenses relate to comparable activities within each ILEC, the Commission is concerned over the significant differences in the service provisioning costs between Aliant Telecom and the other ILECs.
89. The Commission notes that in Decision 2006-23 where DC service rates were finalized, the service provisioning costs of Aliant Telecom's four regions and most other ILECs were similar in magnitude and were accepted by the Commission. The Commission considers that the DC and LIR-based traffic termination services have similar service provisioning requirements. In

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<sup>5</sup> In response to Commission interrogatories dated 14 November 2003 regarding Phase II Costing Information Requirements by letter dated 9 January 2004, TCC provided an estimate of a portfolio expense factor of 48.65 percent using Bell Canada's portfolio factor methodology.



light of the above, the Commission considers that Aliant Telecom's costs associated with the service provisioning activities of the LIR-based traffic termination service are not acceptable.

90. The Commission notes that because of differences in practices across ILECs, the costs for similar activities will not always be the same. Accordingly, the Commission adjusts Aliant Telecom's costs for service provisioning for the LIR-based traffic termination service for each of its regions to values that are set based on the highest proposed service provisioning cost estimates of any other ILEC for these activities.

### **Final rates and related issues**

91. The Commission notes that parties raised several issues with respect to rate harmonization and consolidation, the rates and the rate structure proposed by the ILECs for their LIR-based traffic termination services. The Commission's analysis of these issues is provided in the sections below.

#### ***Rate harmonization and consolidation***

##### **Positions of parties**

92. Bell Canada submitted that its proposed traffic termination service rates should apply to both LIR-based interconnection and exchange-based interconnection regimes, in order to minimize costs associated with administering the imbalance mechanism for both Bell Canada and competitors.
93. TCC provided a single cost study and proposed traffic termination service rates across both TCC-AB and TCC-BC territories, based on the blended costs for exchange-based and LIR-based interconnection. TCC submitted that a common set of rates would be administratively simpler for both CLECs and TCC. In addition, TCC submitted that the use of a common set of rates based on current costs would neither artificially encourage nor discourage migration from the exchange-based interconnection regime to the LIR-based interconnection regime.
94. The CCTA, Microcell, Rogers, and MTS Allstream objected to TCC's use of consolidated traffic termination service rates in the territories of TCC-AB and TCC-BC. MTS Allstream submitted that TCC should demonstrate that the costs for LIR-based interconnection in TCC-AB and TCC-BC territories were sufficiently similar to justify unifying the rates. The CCTA submitted that the underlying costs for the exchange-based interconnection for TCC-AB and TCC-BC differed, and that TCC had not demonstrated that the costs for its two territories had changed in its latest cost study for LIR-based interconnection. Microcell submitted that more detailed cost studies would be required before the Commission could decide on the appropriateness of TCC's consolidated rates.
95. QMI requested that all ILECs provide a harmonized set of traffic termination service rates for exchange-based interconnection and LIR-based interconnection regimes. QMI was of the view that rate harmonization would simplify billing procedures and remove any incentives for CLECs to choose one interconnection architecture over the other. Call-Net supported the harmonized set of rates across all ILECs.

### **Commission's analysis and determinations**

96. The Commission notes the CCTA's, Microcell's, Rogers' and MTS Allstream's concerns relating to consolidated traffic termination service rates for TCC-AB and TCC-BC. The Commission notes that the LIR-based traffic termination service costs for TCC-AB and TCC-BC differ from the blended costs for the aggregate of TCC-AB and TCC-BC by only 0.22 and 0.29 percent, respectively. The Commission considers that the costs for the LIR-based traffic termination service and the proposed rates that are directly related to the costs of each of TCC-AB and TCC-BC are sufficiently similar to support TCC's request for a single set of traffic termination service rates for LIR-based interconnection for the aggregate of TCC-AB and TCC-BC. Accordingly, the Commission **approves** a single set of traffic termination service rates for LIR-based interconnection that are applicable to both TCC-AB and TCC-BC.
97. The Commission notes that QMI and Call-Net requested harmonized rates for LIR-based interconnection and exchange-based interconnection across all ILECs and that both TCC and Bell Canada proposed harmonized rates in their applications.
98. The Commission notes that it determined in Decision 2004-46 that the exchange-based regime was grandfathered, with existing exchange-based traffic termination service rates available to CLECs with existing exchange-based arrangements.
99. The Commission considers that the requests to combine the rates for the LIR-based traffic termination service and the rates for the grandfathered exchange-based traffic termination service are beyond the scope of this proceeding. Accordingly, the ILECs are to include in their tariffs, rates for the LIR-based traffic termination service while maintaining the existing rates for the exchange-based traffic termination service for CLECs with grandfathered exchange-based interconnection arrangements.

### ***Rate structure for the LIR-based traffic termination service***

#### **Positions of parties**

100. Bell Canada, Aliant Telecom, and SaskTel proposed restructured tariffs with per-trunk rates for the LIR-based traffic termination service having traffic imbalance levels set at 10 percent intervals. Bell Canada submitted that this modified rate structure was more appropriate for cost recovery and eliminated or reduced potential gaming opportunities that resulted from a LEC's ability to manipulate the traffic that was carried on the shared bill-and-keep trunks. Bell Canada and Aliant Telecom submitted that the ability to route terminating toll traffic onto the shared bill-and-keep trunks could be manipulated by a LEC.
101. Microcell and QMI agreed with Bell Canada's proposal to use rate elements based on 10 percent traffic imbalance increments and recommended that the proposal be adopted by the other ILECs.
102. MTS Allstream submitted that since no parties raised issues associated with the rate structure in the proceeding leading to Decision 2004-46, no change to the rate structure was made in that decision. MTS Allstream further submitted that Bell Canada did not provide evidence on

whether its proposal was justified based on costs of the new billing and traffic measurement requirements that would have to be implemented by CLECs and ILECs, and that it would result in reduced flexibility and new billing and traffic measurement complexities and costs.

103. The CCTA stated that the changes to the rate structure would increase costs to LECs with no identifiable benefits being achieved.

#### **Commission's analysis and determinations**

104. The Commission notes that the restructuring of the traffic imbalance increments from 20 to 10 percent would require modifications in LEC traffic measurement and billing processes, with a potential to increase the associated measurement and billing costs. The Commission further notes that in this proceeding, three of the five ILECs, along with Microcell and QMI, considered that the proposed refinements to the rate structure were appropriate. The Commission considers that the changes required to support the restructuring of the traffic imbalance increments would not be excessive.
105. In light of the increased flexibility in routing of toll traffic and the need to ensure that ILECs are adequately compensated for the termination of toll traffic, the Commission considers it appropriate to establish more refined traffic imbalance increments for the purpose of measuring and billing for the traffic imbalances associated with bill-and-keep trunks.
106. In light of the above, the Commission **approves**, for each ILEC, a change in rate structure of the traffic termination service under the LIR regime to include 10 percent traffic imbalance increments in place of the 20 percent traffic imbalance increments currently used in the existing rate structure under the exchange-based regime.

#### **Settling-in period and traffic imbalance measurement period**

##### **Positions of parties**

107. TCC proposed to amend its tariffs for the LIR-based traffic termination service by removing the six-month settling-in period and the subsequent three-month traffic imbalance measurement period. TCC submitted that because of a CLEC's ability to terminate toll traffic over bill-and-keep trunks rather than through the DC service, a CLEC could easily change traffic levels on bill-and-keep trunks, invalidating the assumptions that led to the existing six-month settling-in period and the three-month traffic imbalance measurement period. TCC further submitted that removal of the six-month and three-month periods would ensure proper compensation for termination of toll traffic and would also avoid the market distortion that would be created.
108. Bell Canada, Aliant Telecom, and SaskTel submitted that the TCC proposal to eliminate the current six-month settling-in period and the three-month traffic imbalance measurement period had merit in order to minimize gaming opportunities.
109. MTS Allstream submitted that the six-month settling-in period and the three-month traffic imbalance measurement period should be maintained because the original reasons for instituting these periods were still valid. MTS Allstream further submitted that TCC's claims regarding potential market distortions were exaggerated.

110. The CCTA requested that the Commission reject TCC's proposal to eliminate the six-month and three-month allowances in the rating mechanism for mutual compensation. The CCTA noted that no party to the proceeding leading to Decision 2004-46 proposed changes to the rating mechanism. The CCTA submitted that a new CLEC would encounter many of the problems in establishing appropriate volumes of interconnecting trunks as initially contemplated in Telecom Order CRTC 98-1190, 30 November 1998.
111. QMI requested that the Commission remove the six-month settling-in period and the subsequent three-month traffic imbalance measurement period.
112. Rogers requested that the Commission confirm that the nine-month period would apply only once, i.e., after a CLEC initially deployed in a new exchange or LIR. Rogers further requested that the Commission confirm that the three-month traffic imbalance measurement period would not be required after the mutual compensation regime was put in place.
113. TCC submitted that a commercial launch in an LIR should be the date at which the CLEC notified the Commission that it had met all CLEC obligations in one of the exchanges in the LIR, not the date at which it connected its first customer, causing bill-and-keep traffic to occur. TCC submitted that traffic imbalance payments should be due from the date that a CLEC entered its first exchange in an LIR because it would be able to terminate bill-and-keep traffic to all ILEC customers within that LIR at that time.

#### **Commission's analysis and determinations**

114. The Commission notes that contrary to the previous exchange-based interconnection regime as described in Decision 97-8, the new LIR-based interconnection regime permits terminating toll traffic to be routed through the bill-and-keep trunks used for the LIR-based traffic termination service.
115. The Commission notes that the ability of a CLEC to direct toll terminating traffic onto bill-and-keep trunks under the LIR-based regime will allow bypass of the AT and DC toll interconnection services. Under the current interim LIR-based regime, when a CLEC establishes interconnection in an LIR, the ILEC is not compensated for toll-terminating traffic from the CLEC for up to a nine-month period. After nine months, the ILEC may then be eligible to receive compensation through the interim tariffs for the LIR-based traffic termination service as determined by the traffic imbalance on the interconnecting bill-and-keep trunks.
116. The Commission further notes that when toll traffic is terminated through the AT and DC services, the ILEC is permitted to measure and bill for this traffic as soon as the service is established with an inter-exchange carrier. The Commission notes that similar technologies are used to provide the AT and DC services and the LIR-based traffic termination service.
117. The Commission considers that the ILECs should receive equitable compensation for termination of toll traffic regardless of whether the toll traffic is terminated by the AT and DC services or by the LIR-based traffic termination service through bill-and-keep trunks. The Commission further notes that most CLECs are seasoned competitors with established capabilities to implement traffic measurements that rapidly produce reliable results.

Accordingly, the Commission **approves** the removal of the six-month settling-in period and the subsequent three-month traffic imbalance measurement period from the tariffs for the LIR-based traffic termination service.

118. The Commission notes that a CLEC has the ability to direct toll-terminating traffic onto the bill-and-keep trunks even though the CLEC has no local customers within an LIR. Accordingly, the Commission considers it appropriate to set the date of commercial launch in an LIR as the date at which the CLEC notifies the Commission that it has met all CLEC obligations in one of the exchanges in the LIR and at which point the traffic imbalance measurements could begin.

#### ***Final rates***

119. The Commission notes that the LIR-based traffic termination service is classified as a Category I Competitor Service with rates based on its Phase II costs, plus a mark-up of 15 percent. The Commission has therefore established the rates for the LIR-based traffic termination service based on the ILECs' proposed cost studies, as amended to reflect the cost adjustments in this Decision, plus a mark-up of 15 percent.
120. The Commission **approves on a final basis** the rates for the LIR-based traffic termination service set out in the Appendix to this Decision for each ILEC, effective the date of this Decision. Consistent with *Regulatory framework for second price cap period*, Telecom Decision CRTC 2002-34, 30 May 2002, the Commission finds that the applicable inflation minus productivity offset (I-X) constraints are to be applied for 2006 and each year thereafter. In addition, the Commission caps the CLECs' rates for the LIR-based traffic termination service at the ILECs' rates for the service. The Commission directs each CLEC to file proposed corresponding tariff amendments as required, within 60 days of the date of this Decision.

#### **HUA for trunking arrangements**

##### **Positions of parties**

121. Call-Net, Microcell, QMI, and the CCTA submitted that an HUA for trunk interconnection, with separate dedicated trunk groups to individual exchanges within an LIR, should not be imposed or mandated by the ILECs.
122. Call-Net and Microcell submitted that separate trunk groups were appropriate for high traffic volumes. Rogers, supported by QMI, submitted that a CLEC should be able to decide if separate trunk groups to exchanges were required, or to direct the ILECs to demonstrate to the Commission's satisfaction that the use of separate trunk groups to exchanges would be efficient. Microcell submitted that a CLEC should have the capability to choose the most efficient trunking architecture by which it would interconnect with the ILEC.
123. Call-Net submitted that the development of alternative agreements with ILECs based on bilateral agreements rarely led to mutually agreeable solutions.

124. In its comments dated 12 October 2004, Bell Canada submitted that trunking arrangements for the termination of intra-LIR traffic, delivery of traffic within EAS areas, and local transit would continue to be established for each ILEC exchange within an LIR. Bell Canada submitted that the trunking would use the shared-cost facility between the CLEC and Bell Canada.
125. In its comments dated 14 January 2005, Bell Canada subsequently submitted that if traffic volumes were low, it would consider alternative routing arrangements based on bilateral discussions. Bell Canada proposed to establish a shared single bill-and-keep trunk group serving multiple exchanges within the LIR where traffic levels were low, and to establish a dedicated high-usage trunk group to a particular exchange/switch where traffic levels to that exchange/switch exceeded the traffic capacity of a DS-1.
126. TCC proposed the use of generally understood industry norms for establishing efficient trunk interconnection between LECs using a cost-effective mix of high-usage trunking and tandem switching arrangements. TCC submitted that this approach would meet needs of both a CLEC and an ILEC where there existed multiple switches within an LIR that required traffic interchange. TCC further submitted that neither LEC should unreasonably refuse a request from the other LEC for a particular trunking arrangement.
127. TCC submitted that the CLECs' proposal regarding dedicated high-usage trunking would give CLECs the ability to force ILECs to incur excessive tandeming costs without similar cost obligations being borne by CLECs.
128. MTS Allstream submitted that an HUA could be efficient, but should only be put in place when mutually agreed upon between the CLEC and the ILEC.
129. MTS Allstream disagreed with Bell Canada's proposal to use a threshold requirement of a single DS-1 to trigger the use of an HUA because the use of this threshold was not necessarily efficient, and shifted the cost of implementation to the CLEC. MTS Allstream submitted that HUA trunking agreements should be optional but, if mandated, a threshold equivalent to two DS-1s of traffic would be appropriate for triggering HUA trunking in conjunction with capabilities to overflow through tandem switches.

**Commission's analysis and determinations**

130. The Commission notes that the ILECs have agreed to negotiate with CLECs efficient interconnection configurations that reflect an appropriate mix of dedicated and shared trunking. The Commission further notes the competitors' concerns over their inability to influence the ILECs to provide the configurations that they want, and the need for the Commission to give them control to accept or reject specific ILEC proposals.
131. The Commission considers that both the ILECs and competitors are aware of the industry principles for specifying the appropriate efficient interconnection configurations for shared trunking and/or dedicated high-usage trunking for a particular network situation. Accordingly, the Commission directs ILECs and CLECs to resolve trunking issues through bilateral negotiations, applying the generally accepted industry principles for establishing efficient trunk interconnection configurations. In the event that parties cannot arrive at a mutually acceptable negotiated solution, the parties may consult with the Commission for direction.

## **Trunking arrangements for EAS transport and transit services**

### **Positions of parties**

132. QMI submitted that the termination coverage area of an EAS transport or transit service provisioned within a particular LIR should encompass all EAS areas for each of the exchanges within that LIR. QMI submitted that under this configuration, a single EAS transport or transit trunk group between the CLEC POI and the ILEC POI would be required to serve all EAS exchanges external to an LIR that had EAS relationships with exchanges within the particular LIR.
133. Bell Canada submitted that one EAS transport trunk group should be required for each exchange within an LIR that had EAS exchanges associated with it. Under Bell Canada's submission, the EAS transport trunk group would support EAS traffic between the specific exchange and all of its associated EAS exchanges. Bell Canada and Aliant Telecom proposed that EAS transport trunking could be optionally used, instead of bill-and-keep trunks, for associated EAS exchanges that were located within the LIR.
134. Microcell also proposed an EAS interconnection configuration that, in its view, would provide trunking efficiencies when exchanges within an LIR had EAS relationships with common exchanges external to the LIR. Microcell provided an example in which one exchange within an LIR had EAS relationships with three exchanges external to that LIR, and a second exchange within the LIR had EAS relationships with the same three exchanges external to the LIR. Microcell submitted that for this example, a CLEC should require an EAS transport trunk group to only one of the exchanges in the LIR to access the external EAS exchanges. In Microcell's example, for situations in which there was no overlap of the EAS exchanges associated with exchanges within the LIR, Microcell's configuration would be the same as that proposed by Bell Canada.
135. MTS Allstream supported QMI's proposal that the termination area of an EAS transport trunk group within an LIR should include all EAS exchanges for each of the exchanges in the LIR.
136. TCC disagreed with QMI's proposal to require only one EAS transport or transit trunk group per LIR.
137. TCC submitted that it would continue to accept CLEC calls to TCC customers in exchanges that fell within both an EAS area and the LIR on either EAS transport trunks or bill-and-keep trunks.
138. QMI and Microcell both submitted, and MTS Allstream agreed, that there should be no call origination restrictions on traffic carried on EAS transport and transit trunk groups.

### **Commission's analysis and determinations**

139. In Decision 2004-46, the Commission stated that there were continuing requirements for EAS transport services and for transit services. The Commission notes that the consolidation of exchanges into LIRs may modify a CLEC's requirements for EAS transport and transit services in a particular region, and may cause changes to that CLEC's trunking arrangements.

140. The Commission notes that parties proposed several trunking arrangements for supporting the EAS transport service and transit services. QMI proposed the use of a single EAS transport trunk group and a single transit trunk group per LIR, to serve all exchanges outside of an LIR that had EAS relationships with exchanges inside the LIR. For the EAS transport service, Bell Canada proposed the use of an EAS trunk group to each exchange within an LIR that had EAS relationships with other exchanges outside the LIR. In Bell Canada's proposal, each EAS trunk group could carry traffic to the exchanges having EAS relationships with a particular exchange within the LIR. Microcell proposed a similar approach that could require fewer trunks or trunk groups than Bell Canada's proposal.
141. The Commission considers it appropriate to permit the ILECs to provide a separate EAS transport trunk group for each exchange within an LIR that has EAS relationships with exchanges external to that LIR. The Commission further considers that if several exchanges within an LIR have EAS relationships with common exchanges outside of the LIR, then ILECs should allow a competitor to interconnect to any of these common exchanges outside of the LIR through only one EAS transport trunk group.
142. The Commission considers that if an ILEC supports CLEC interconnection by means of the EAS transport service to exchanges that are within a multi-exchange LIR and that are within the EAS area of another exchange within the LIR, then CLECs can optionally use the EAS transport service rather than bill-and-keep trunks for this intra-LIR interconnection.
143. The Commission notes that in the LIR-based interconnection regime, the transit service coverage includes the entire LIR and exchanges outside of the LIR that have EAS relationships with exchanges within the LIR. In this case, ILECs are to provide one transit service trunk group to interconnect a CLEC to a second CLEC operating in the same LIR for carriage of traffic within that LIR. Where two CLECs are operating in different LIRs, the Commission considers it appropriate that ILECs provide a transit service trunk group to carry a CLEC's traffic originating at an exchange within an LIR to the second CLEC's customers in exchanges within the second LIR that have EAS relationships with the originating exchange.
144. The Commission considers further that LECs should not be precluded from entering into other EAS transport and transit trunking arrangements that result in increased networking efficiencies. In particular, the Commission generally considers consolidation of trunk groups for the purpose of interconnection to be appropriate.
145. The Commission notes that several parties requested that CLECs be allowed to direct terminating toll traffic to be carried on the EAS transport service and on the transit service, if the toll traffic was brought to the CLEC POI. These parties were of the view that because the Commission had allowed toll traffic to be terminated through the LIR-based traffic termination service if the CLEC had brought the traffic to the POI, the same principle should apply to EAS transport and transit services.
146. The Commission considers that if a CLEC brings toll traffic to the POI in an LIR, the carriage of terminating toll traffic by the CLEC on the EAS transport service and on the transit service is similar in principle to the capability of carrying terminating toll traffic on the LIR-based traffic termination service through bill-and-keep trunks. The Commission notes that it is



difficult to monitor whether traffic includes or excludes toll calls. With the growth of carriage of voice traffic over Internet protocol networks, the capability to distinguish whether a call is a toll call becomes increasingly difficult.

147. The Commission notes that the EAS transport service and the transit service are Category I Competitor Services for which ILECs receive compensation depending on the corresponding service rates, based on their respective Phase II costs plus a 15 percent mark-up, and the quantities of trunks provisioned (based on the traffic volumes carried on them). The Commission further notes that the Phase II costs of the EAS transport and transit services would not be materially different whether traffic includes or excludes toll traffic that has been transported to the POI.
148. In light of the above, the Commission determines that CLECs are permitted to use the EAS transport and transit service to carry toll terminating traffic, provided that the CLEC has brought the toll traffic to its POI.
149. The Commission further notes that the Phase II costs of the EAS transport and transit services may change because of the implementation of trunking arrangements for the LIR regime. In Decision 2004-46, the Commission allowed the ILECs to submit new cost studies for EAS transport and transit services if the Phase II costs were expected to change as a result of the implementation of the LIR regime. Accordingly, the Commission permits the ILECs to file revised cost studies and associated tariffs for each of the EAS transport service and the transit service if an ILEC considers that the changes in the associated Phase II costs warrant it.

### **Evolution from the exchange-based regime to the LIR-based regime**

#### **Positions of parties**

150. Call-Net submitted that the ILEC tariffs should clearly specify whether competitors could continue to use the exchange-based interconnection regime based on grandfathered arrangements. In addition, Call-Net submitted that the tariffs should state that CLECs could migrate from the grandfathered regime to the new LIR regime without penalty.
151. MTS Allstream submitted that the designation of an ILEC's default POI should not preclude establishment of POIs in different exchanges for serving an LIR. MTS Allstream argued that this approach supported CLECs with an established POI that was not in the exchange of the ILEC's default POI of the new LIR. MTS Allstream submitted that CLECs should not be penalized for having constructed POIs under the former exchange-based regime and being forced to build additional POIs or to move existing POIs.
152. Microcell submitted that a CLEC should have the option of connecting at individual exchanges. Microcell submitted that for an LIR consisting of multiple exchanges, a CLEC might wish to serve a subset of the exchanges within the LIR. Microcell submitted that in this situation, the economics of connecting at a distant POI could be unfavourable. Microcell submitted that the ILEC tariff pages should be revised to permit two sets of interconnection arrangements to co-exist and be made available to CLECs. In support of its claim, Microcell noted that paragraph 75 of Decision 2004-46 set out that existing POIs should remain in place until

such time as a CLEC wished to alter them, and that paragraph 108 of Decision 2004-46 set out that both LIR-based and exchange-based interconnection regimes should continue to be offered in parallel.

153. Bell Canada and Aliant Telecom submitted that it would be inappropriate for CLECs to migrate to the new regime without paying penalties for violating tariff terms or conditions associated with the early termination of leases. TCC also submitted that the waiving of termination fees for migrating from the exchange-based regime to the LIR-based regime was not appropriate.
154. Bell Canada, Aliant Telecom, and SaskTel submitted that MTS Allstream's proposal to allow a CLEC to establish the LIR's POI in the exchange of an LIR where a CLEC may already have a POI should be rejected because the Commission had grandfathered the existing exchange-based POIs in Decision 2004-46. These ILECs argued that this proposal to allow the establishment of alternate POIs based on a CLEC's best interests would be counter to Decision 2004-46.
155. Bell Canada submitted that there should be a minimum of one joint-build interconnection facility per LIR with the design of the interconnection facility and cost-sharing arrangements negotiated on a case-by-case basis. Bell Canada submitted that it was willing to continue to consider the use of existing facilities on a case-by-case basis.
156. Rogers requested that the Commission affirm a CLEC's right to use existing interconnection arrangements for the purpose of interconnecting to an LIR, pursuant to Decision 2004-46.
157. TCC submitted that facilities used for LIR-based interconnection should be determined through negotiations between LECs, regardless of whether a CLEC was currently interconnected in any exchange within a given LIR. TCC was of the view that Decision 2004-46 did not give a LEC the right to unilaterally reject continued use of existing facilities and it did not give a CLEC the right to insist that currently used facilities should be the default for LIR-based interconnection. TCC further submitted that the designation of a default POI in an LIR should not preclude the establishment by a CLEC of a POI in different exchanges for the purposes of serving the LIR.
158. MTS Allstream submitted that these types of negotiations between an ILEC and a CLEC would leave a CLEC at a disadvantage. MTS Allstream submitted that a CLEC should have the option of using an existing POI to serve an LIR even if it was located outside of the ILEC's default POI exchange, unless the ILEC could demonstrate to the Commission that it was not feasible.

#### **Commission's analysis and determinations**

159. In Decision 2004-46, the Commission grandfathered the exchange-based interconnection regime, allowing CLECs to maintain existing exchange-based interconnection arrangements. The Commission notes that the grandfathering arrangements applied to CLECs with existing arrangements but did not apply to new entrants desiring exchange-based entry. The Commission notes that a new entrant (a CLEC having no presence in any of the exchanges within an LIR) would be governed by the LIR regime where the LIR-based interconnection arrangement would occur at the designated POI of the LIR. Accordingly, the Commission rejects Microcell's request to have the exchange-based interconnection regime available to CLECs as an alternative to the LIR-based interconnection regime.

160. The Commission notes that a CLEC with existing exchange-based interconnection arrangements could be providing service in a specific exchange that has been included in a multi-exchange LIR. If the CLEC decides to expand its service to other exchanges within the LIR, the CLEC would have to interconnect at an appropriate POI that provides interconnection to all exchanges within the LIR for the CLEC's expanded service. At the same time, the Commission considers that the CLEC would be able to maintain its existing POI at the original exchange until the CLEC wishes to migrate to the LIR's designated POI. In this situation, the CLEC would be operating in the exchange-based interconnection regime for one of the exchanges in the LIR, and in the LIR-based interconnection regime for the rest of the LIR.
161. The Commission notes MTS Allstream's concern that CLECs that have constructed POIs under the exchange-based interconnection regime could be forced to build additional POIs or move existing POIs if the ILEC's designated POI under the LIR regime was not in the same exchange as the CLEC's existing POI.
162. The Commission further notes TCC's proposal for bilateral negotiations between LECs to determine the location of the default POI and, if necessary, alternative POIs within each LIR. The Commission considers that CLECs are disadvantaged in these types of negotiations. Accordingly, the Commission allows a CLEC to use an existing POI even if it is outside of the default POI exchange of the LIR, unless the ILEC can demonstrate to the Commission that the arrangement is not feasible.
163. The Commission notes Call-Net's request to include language in the tariffs to allow a CLEC to migrate from the grandfathered exchange-based regime to the LIR-based regime without penalties. The Commission notes that when a CLEC is operating under the exchange-based regime, it has in place an agreement for interconnection with the ILEC that sets out the terms and conditions for early termination of the agreement, and includes a process for modifying the interconnection agreement. The Commission further notes the complex and numerous ILEC activities associated with interconnection rearrangements. The Commission considers that when a CLEC is planning to migrate from the exchange-based regime to the LIR-based regime, it must respect the terms and conditions and the modification process set out in its existing interconnection agreement with the ILEC. Accordingly, the Commission rejects Call-Net's request.

## **POI diversity**

### **Positions of parties**

164. The CCTA expressed concern that Bell Canada would not provide shared-cost diversity when requested by a CLEC. The CCTA submitted that bilateral discussions should not be necessary to establish POI diversity in an LIR.
165. Shaw expressed a need to clearly specify what POI diversity supported in terms of cost sharing, capacity, and impacts of failures.
166. Microcell submitted that the Commission did not specify in Decision 2004-46 whether POI diversity was mandated within an LIR or within the exchange where the Gateway POI (ILEC local tandem) was located. Microcell submitted that both scenarios should be available,

and that a CLEC should have the right to keep two or more existing POIs located in diverse exchanges or not.

#### **Commission's analysis and determinations**

167. The Commission directives regarding the establishment of POI diversity in the LIR regime are set out in paragraphs 125 and 126 of Decision 2004-46 as follows:

Paragraph 125: "..., the Commission mandates the provision of shared cost POI diversity when requested by a CLEC, unless an ILEC can demonstrate to the Commission's satisfaction that POI diversity is not required. Both the ILEC and CLEC are to implement a second POI and the two carriers are to share equally in the interconnection facilities and trunking costs between the POIs. In cases where a CLEC has requested POI diversity, the Commission also concludes that should an ILEC wish to implement an alternative solution, it would be up to the ILEC to persuade the CLEC to implement the alternative solution rather than POI diversity. Failing to persuade the CLEC of the alternative, POI diversity must be implemented."

Paragraph 126: "The Commission further determines that provisioning POI diversity should not be mandated when requested solely by an ILEC. The Commission finds that POI diversity could be very expensive and as such, could impose a significant burden on small CLECs entering the market."

168. In Decision 2004-46, the Commission did not make any determinations as to which party could dictate the site for a diverse POI and whether a CLEC could retain existing POIs established under the exchange-based regime for diversity. Accordingly, the Commission directs LECs to pursue negotiations in determining the need for POI diversity within an LIR and in determining the appropriate site for the second POI. In the event that parties cannot arrive at a mutually acceptable negotiated solution, the parties may consult with the Commission for direction.

#### **Cost sharing for joint-build facilities**

##### **Positions of parties**

169. Call-Net submitted that where competitors were not building facilities to support interconnection of their POI with the ILEC's POI, they should be able to lease the facility from the ILEC at half the tariffed rate because both parties were obligated to share this cost.
170. Bell Canada submitted that each party was responsible for bearing an equal share of the costs of interconnection facilities and that a CLEC could lease facilities from an ILEC or third party, build its own facilities, or share in a joint-build of facilities with the ILEC. Bell Canada further submitted that if a CLEC leased from a third party, it would not expect the third party to reduce its rates to the CLEC by 50 percent, and hence there was no reason for an ILEC to reduce its rates by 50 percent if a CLEC leased facilities from it.

### **Commission's analysis and determination**

171. The Commission determines that if a competitor chooses to lease its facilities from an ILEC, the existing full rates for the associated facility or Competitor Service should apply.

### **SPOI interconnection arrangements**

#### **Positions of parties**

172. The CCTA submitted that with respect to Aliant Telecom's proposed A-Link interconnection service, Aliant Telecom was using Bell Canada's CCS7 A-Link service at Bell Canada's Competitor Service rate, and was then applying its own mark-up. The CCTA argued that this double mark-up should not be allowed.
173. Aliant Telecom submitted that the CCS7 A-Link service was obtained from Bell Canada at full tariff, and hence Aliant Telecom should be allowed to include an additional 15 percent mark-up on the tariff.

#### **Commission's analysis and determinations**

174. The Commission considers it inappropriate for Aliant Telecom to apply a 15 percent mark-up in addition to Bell Canada's CCS7 A-Link service rate if Aliant Telecom provides the service by using Bell Canada's service.
175. Accordingly, the Commission directs Aliant Telecom to provide the CCS7 A-Link service at the Bell Canada rate without the addition of a 15 percent mark-up.

### **Implementation and disposition of tariff notices**

176. The Commission received the following tariff notice (TN) applications from the ILECs, resulting from the follow-up process to Decision 2004-46:
- TN 151, by Aliant Telecom, dated 14 January 2005;
  - TN 6849, by Bell Canada, dated 14 January 2005;
  - TNs 553 and 553A, by MTS Allstream, dated 17 February 2005 and 29 March 2005, respectively;
  - TNs 74, 74A and 74B, by SaskTel, dated 14 January 2005, 28 January 2005, and 7 October 2005, respectively;
  - TN 538, by TCC (for Alberta), dated 12 October 2004;
  - TN 4219, by TCC (for British Columbia), dated 12 October 2004.

177. The Commission **approves**, with changes resulting from the determinations of this Decision, Aliant Telecom's TN 151, Bell Canada's TN 6849, MTS Allstream's TN 553 as amended by TN 553A, Sasktel's TN 74 as amended by TNs 74A and 74B, TCC's TN 538, and TCC's TN 4219.
178. The Commission directs each ILEC to issue, within 45 days of the date of this Decision, amended tariff pages, effective the date of this Decision, that reflect the determinations of this Decision and include definitions of approved LIRs, including lists of the exchanges within each LIR, the designated POI for each LIR, and the designated SPOI within each NPA.

Secretary General

*This document is available in alternative format upon request, and may also be examined in PDF format or in HTML at the following Internet site: <http://www.crtc.gc.ca>*

**Rates for termination of CLEC intra-LIR traffic**

<b>Aliant-NB</b>		Monthly rate per trunk							
	>10%	>20%	>30%	>40%	>50%	>60%	>70%	>80%	>90%
Traffic imbalance									
up to 24 trunks	\$2.23	\$3.71	\$5.20	\$6.68	\$8.16	\$9.65	\$11.13	\$12.62	\$14.10
up to 48 trunks	\$3.37	\$5.62	\$7.87	\$10.12	\$12.37	\$14.62	\$16.87	\$19.12	\$21.37
up to 72 trunks	\$3.72	\$6.19	\$8.67	\$11.15	\$13.62	\$16.10	\$18.58	\$21.06	\$23.53
up to 96 trunks	\$3.90	\$6.49	\$9.09	\$11.69	\$14.29	\$16.88	\$19.48	\$22.08	\$24.68
more than 96 trunks	\$3.99	\$6.65	\$9.31	\$11.97	\$14.63	\$17.29	\$19.95	\$22.61	\$25.27

<b>Aliant-NL</b>		Monthly rate per trunk							
	>10%	>20%	>30%	>40%	>50%	>60%	>70%	>80%	>90%
Traffic imbalance									
up to 24 trunks	\$2.43	\$4.05	\$5.67	\$7.29	\$8.91	\$10.53	\$12.15	\$13.77	\$15.39
up to 48 trunks	\$3.67	\$6.12	\$8.57	\$11.02	\$13.47	\$15.92	\$18.37	\$20.82	\$23.27
up to 72 trunks	\$4.05	\$6.74	\$9.44	\$12.14	\$14.84	\$17.53	\$20.23	\$22.93	\$25.62
up to 96 trunks	\$4.24	\$7.07	\$9.90	\$12.73	\$15.55	\$18.38	\$21.21	\$24.04	\$26.86
more than 96 trunks	\$4.34	\$7.24	\$10.13	\$13.03	\$15.92	\$18.82	\$21.72	\$24.61	\$27.51

<b>Aliant-NS</b>		Monthly rate per trunk							
	>10%	>20%	>30%	>40%	>50%	>60%	>70%	>80%	>90%
Traffic imbalance									
up to 24 trunks	\$2.42	\$4.03	\$5.64	\$7.25	\$8.86	\$10.47	\$12.08	\$13.69	\$15.30
up to 48 trunks	\$3.69	\$6.15	\$8.62	\$11.08	\$13.54	\$16.00	\$18.46	\$20.92	\$23.38
up to 72 trunks	\$4.07	\$6.79	\$9.50	\$12.22	\$14.93	\$17.65	\$20.37	\$23.08	\$25.80
up to 96 trunks	\$4.27	\$7.12	\$9.97	\$12.82	\$15.67	\$18.52	\$21.37	\$24.22	\$27.07
more than 96 trunks	\$4.38	\$7.30	\$10.21	\$13.13	\$16.05	\$18.97	\$21.89	\$24.81	\$27.73

<b>Aliant-PEI</b>		Monthly rate per trunk							
	>10%	>20%	>30%	>40%	>50%	>60%	>70%	>80%	>90%
Traffic imbalance									
up to 24 trunks	\$2.27	\$3.79	\$5.30	\$6.82	\$8.34	\$9.85	\$11.37	\$12.88	\$14.40
up to 48 trunks	\$3.47	\$5.79	\$8.11	\$10.42	\$12.74	\$15.05	\$17.37	\$19.68	\$22.00
up to 72 trunks	\$3.83	\$6.39	\$8.94	\$11.50	\$14.05	\$16.60	\$19.16	\$21.71	\$24.27
up to 96 trunks	\$4.02	\$6.70	\$9.38	\$12.06	\$14.74	\$17.42	\$20.10	\$22.78	\$25.46
more than 96 trunks	\$4.12	\$6.86	\$9.61	\$12.35	\$15.10	\$17.85	\$20.59	\$23.34	\$26.08

<b>Bell Canada</b>		Monthly rate per trunk							
	>10%	>20%	>30%	>40%	>50%	>60%	>70%	>80%	>90%
Traffic imbalance									
up to 24 trunks	\$2.18	\$3.63	\$5.09	\$6.54	\$7.99	\$9.45	\$10.90	\$12.35	\$13.81
up to 48 trunks	\$3.42	\$5.70	\$7.98	\$10.26	\$12.54	\$14.82	\$17.11	\$19.39	\$21.67
up to 72 trunks	\$3.79	\$6.32	\$8.85	\$11.38	\$13.91	\$16.44	\$18.97	\$21.50	\$24.03
up to 96 trunks	\$3.99	\$6.65	\$9.31	\$11.97	\$14.63	\$17.29	\$19.95	\$22.61	\$25.27
more than 96 trunks	\$4.09	\$6.82	\$9.55	\$12.28	\$15.01	\$17.74	\$20.47	\$23.20	\$25.93

<b>MTS Allstream</b>		Monthly rate per trunk							
	>10%	>20%	>30%	>40%	>50%	>60%	>70%	>80%	>90%
Traffic imbalance									
up to 24 trunks	\$2.15	\$3.58	\$5.02	\$6.45	\$7.88	\$9.31	\$10.75	\$12.18	\$13.61
up to 48 trunks	\$2.59	\$4.31	\$6.04	\$7.76	\$9.49	\$11.21	\$12.94	\$14.66	\$16.39
up to 72 trunks	\$2.74	\$4.57	\$6.40	\$8.23	\$10.06	\$11.89	\$13.72	\$15.55	\$17.38
up to 96 trunks	\$2.83	\$4.72	\$6.61	\$8.50	\$10.39	\$12.27	\$14.16	\$16.05	\$17.94
more than 96 trunks	\$2.89	\$4.82	\$6.75	\$8.68	\$10.61	\$12.54	\$14.46	\$16.39	\$18.32

**Rates for termination of CLEC intra-LIR traffic (cont'd)**

<b>SaskTel</b>	Monthly rate per trunk								
	>10%	>20%	>30%	>40%	>50%	>60%	>70%	>80%	>90%
Traffic imbalance									
up to 24 trunks	\$2.05	\$3.42	\$4.79	\$6.16	\$7.53	\$8.90	\$10.27	\$11.64	\$13.01
up to 48 trunks	\$3.08	\$5.13	\$7.19	\$9.24	\$11.30	\$13.35	\$15.40	\$17.46	\$19.51
up to 72 trunks	\$3.39	\$5.64	\$7.90	\$10.16	\$12.42	\$14.67	\$16.93	\$19.19	\$21.45
up to 96 trunks	\$3.55	\$5.91	\$8.28	\$10.64	\$13.01	\$15.38	\$17.74	\$20.11	\$22.47
more than 96 trunks	\$3.63	\$6.05	\$8.47	\$10.89	\$13.31	\$15.73	\$18.16	\$20.58	\$23.00

<b>TCC-AB</b>	Monthly rate per trunk								
	>10%	>20%	>30%	>40%	>50%	>60%	>70%	>80%	>90%
Traffic imbalance									
up to 24 trunks	\$1.82	\$3.04	\$4.26	\$5.47	\$6.69	\$7.91	\$9.12	\$10.34	\$11.56
up to 48 trunks	\$2.87	\$4.78	\$6.69	\$8.60	\$10.51	\$12.42	\$14.33	\$16.24	\$18.15
up to 72 trunks	\$3.18	\$5.29	\$7.41	\$9.53	\$11.64	\$13.76	\$15.88	\$17.99	\$20.11
up to 96 trunks	\$3.34	\$5.57	\$7.79	\$10.02	\$12.24	\$14.47	\$16.70	\$18.92	\$21.15
more than 96 trunks	\$3.42	\$5.71	\$7.99	\$10.27	\$12.55	\$14.84	\$17.12	\$19.40	\$21.68

<b>TCC-BC</b>	Monthly rate per trunk								
	>10%	>20%	>30%	>40%	>50%	>60%	>70%	>80%	>90%
Traffic imbalance									
up to 24 trunks	\$1.82	\$3.04	\$4.26	\$5.47	\$6.69	\$7.91	\$9.12	\$10.34	\$11.56
up to 48 trunks	\$2.87	\$4.78	\$6.69	\$8.60	\$10.51	\$12.42	\$14.33	\$16.24	\$18.15
up to 72 trunks	\$3.18	\$5.29	\$7.41	\$9.53	\$11.64	\$13.76	\$15.88	\$17.99	\$20.11
up to 96 trunks	\$3.34	\$5.57	\$7.79	\$10.02	\$12.24	\$14.47	\$16.70	\$18.92	\$21.15
more than 96 trunks	\$3.42	\$5.71	\$7.99	\$10.27	\$12.55	\$14.84	\$17.12	\$19.40	\$21.68