Canadian Radio-television and Telecommunications Commission
Conseil de la radiodiffusion et des télécommunications canadiennes

Telecom Decision CRTC 2005-14

Ottawa, 16 March 2005

Competitive local exchange carrier access to incumbent local exchange carrier operational support systems

Reference: 8621-C12-200404327

The Commission directs Bell Canada and TELUS Communications Inc. to develop and implement competitive local exchange carrier (CLECs) access to certain of their operational support systems (OSS) within a one-year period.

The Commission finds that Aliant Telecom Inc., MTS Allstream Inc. and Saskatchewan Telecommunications will only be required to develop and implement CLEC access to their OSS once a CLEC indicates an interest, by signing an agreement of intent, to gain access to that information.

Background

1. In *Service intervals for the provision of unbundled loops*, Telecom Decision CRTC 2002-68, 1 November 2002 (Decision 2002-68), the Commission considered that access by competitive local exchange carriers (CLECs) to incumbent local exchange carrier (ILEC) operational support systems (OSS) may be an important factor in achieving the Commission's objective to provide CLECs with an equal opportunity to provide local service to customers in a timely manner. Consequently, the Commission directed the CRTC Interconnection Steering Committee (CISC) to study the issue and provide a report to the Commission describing the various OSS functions that could be of use to CLECs, as well as the measures that could be implemented to permit CLECs to access those functions.

2. On 1 May 2003, the CISC OSS working group (OSWG) filed with the Commission *CLEC access to ILEC's Operational Support Systems*, 1 May 2003 (OSRE001a), a non-consensus report (the Report).

3. Participating in the work that led to the Report were Aliant Telecom Inc. (Aliant Telecom), AT&T Canada (Allstream, now MTS Allstream), Bell Canada, Call-Net Communications Inc. (Call-Net), Cogeco Cable Inc., Futureway Communications Inc., doing business as FCI Broadband (FCI Broadband), GT Group Telecom Services Corp., MTS Communications Inc. (MTS, now MTS Allstream), Microcell Solutions Inc. (Microcell), the Ontario Telecommunications Association, Saskatchewan Telecommunications (SaskTel), Shaw Telecom Inc., TELUS Communications Inc. (TCI), Telcordia Technologies (Telcordia), Société en commandite Télébec, Videotron Communications Inc., and Osler, Hoskins and Harcourt LLP.

4. The Report identified the following elements within the ILEC OSS that CLECs desired access to:

   - Customer status information - Customer information, including access to billing name and service address by the billing telephone number, working telephone number or account number; and services for a given customer service address including an indication of other customers or services located at the same service address;

   - Facilities status information - Facilities information, including access to non-Plain Old Telephone Service assigned within a given cable, Company Loop Termination (COLT) assignment data, plant records to determine if dedicated plant is available, and loop specification data prior to loop ordering;

   - Installation status information - Installation status information, including access to loop provisioning status through defined milestones (such as engineering, installation start and completion dates), and switch data by working telephone number; and

   - Repair status information - Repair status information, including an electronic interface between local exchange carrier (LEC) trouble ticketing systems, which includes specific data elements and the capability to create and update out-of-service trouble reports.

Process

5. The Commission found that the minutes from the formal OSWG meetings; the formal contributions to the OSWG; the informal technical, working and clarification documents submitted to aid in discussions at the OSWG meetings; and the Report did not provide a sufficient record for the Commission to make determinations on the outstanding issues on which the OSWG was not able to reach consensus. The Commission, therefore, initiated a further process by letter dated 13 May 2004, in order to gather additional information.

6. The Commission received proposals from Bell Canada and TCI on 12 July 2004, from Call-Net and FCI Broadband on 11 August 2004, from MTS Allstream on 16 August 2004, and from Telcordia on 10 September 2004.

7. Comments were filed by Bell Canada, Call-Net, FCI Broadband, Microcell, MTS Allstream, SaskTel, and TCI on 10 September 2004. Reply comments were filed on 20 September 2004 from all of the above parties, with the exception of FCI Broadband.

Issues

8. The Commission has grouped the unresolved issues with respect to developing and implementing CLEC access to ILEC OSS as follows:

   1. Is CLEC access to ILEC OSS necessary for effective competition;
   2. How will ILEC OSS be made available to CLECs; and
   3. How will start-up costs and ongoing costs be recovered?

1. Is CLEC access to ILEC OSS necessary for effective competition?

Positions of parties

9. Call-Net, FCI Broadband and Allstream (collectively, the CLECs) submitted that CLEC access to ILEC OSS was integral to their ability to compete in the local exchange market. The CLECs were of the view that the ILECs had an inherent competitive advantage by having real-time access to detailed information about the customers and the facilities that served those customers, which afforded the ILECs the opportunity to be more efficient, offer better customer service, and provision facilities on a timelier basis.

10. The CLECs submitted that having access to customer information would reduce the incidents of rejected local service requests (LSRs). According to Allstream, this would reduce provisioning intervals for local service to its customers by up to four days, while Call-Net estimated a reduction in provisioning intervals of two days for residential customers and one day for business customers.

11. The CLECs also submitted that they would benefit from significant internal productivity improvements as a result of having access to ILEC OSS. The CLECs submitted that it would allow them to identify the correct customer and customer address associated with a telephone number; preview network configurations and determine whether a customer was served from a remote or which services could be put on a particular loop; preview customer equipment records to ensure a seamless migration of all the necessary customer services; pre-verify COLT assignment availability; place LSRs and monitor ordering and confirmation status; preview real time demarcation and cable-pair status; generate out-of-service trouble reports; and monitor the repair process.

12. Allstream estimated that its ability to provide better service to its customers would reduce its costs by at least $1.25M over a three year period, as well as increase its revenues. Call-Net submitted that improvements in productivity and new revenues due to improved customer service would result in cost savings of $15M annually.

13. The CLECs submitted that the ILECs would also see productivity improvements from developing and implementing CLEC access to ILEC OSS. The CLECs noted that CLEC access to ILEC OSS would reduce the time spent by the ILEC's carrier services group representatives. Allstream estimated, for example, that it spent 612 hours on average over a three month period on the phone with ILECs for trouble ticket creation. The CLECs also argued that the database consolidation and automation that would occur in order to develop and implement CLEC access to ILEC OSS would present opportunities for the ILECs to improve their operational efficiency and reduce their operational expenses. Call-Net noted for example, that Bell Canada experienced a four-fold improvement in productivity in order processing due to automation of its legacy high-speed Sympatico Internet service ordering processes.

14. Aliant Telecom, Bell Canada, MTS, SaskTel and TCI (collectively, the ILECs) generally submitted that developing and implementing CLEC access to their OSS would be a costly and resource-consuming undertaking that would provide the ILECs with little benefit.

15. SaskTel added that the development of enhancements to the access of OSS information should not be required until it was demonstrated that there were significant inadequacies in the current mechanisms and that there was sufficient demand to warrant the investments.

Commission's analysis and determinations

16. In *Review of the regulatory framework*, Telecom Decision CRTC 94-19, 16 September 1994, the Commission found that increased competition in the local telecommunications market was in the public interest and restrictions on entry into the local market should be removed.

17. The Commission notes that in its *November 2004 Report to the Governor in Council: Status of Competition in Canadian Telecommunications Markets*, competitors and incumbent out-of-territory operations had a combined local line market share of 6.3 percent in 2003, as compared to a market share of 5.1 percent in 2002. The Commission notes that there continues to be yearly improvements in market share gains by competitors, but is of the view that local competition is not developing at a rate that will result in sustainable Canada-wide facilities-based local competition in the foreseeable future.

18. The Commission notes that when a CLEC orders services from an ILEC to provision its end-customers, the CLEC must provide the ILEC with information about the customer, the telecommunications services the customer subscribes to, and the facilities that would be used to provision that customer. The Commission notes that the ILEC then uses this information to validate the CLEC's request, and in the case where the information provided does not match the information the ILEC has in its OSS databases, the ILEC may reject the CLEC's request for service, which results in service installation delays and inconveniences to the end-customer that the CLEC is trying to acquire.

19. Based on the quarterly competitor Quality of Service (Q of S) monitoring reports filed by each ILEC, the Commission notes that Bell Canada rejected over 14,000 LSRs and TCI over 4,700 LSRs in the first two quarters of 2004. The Commission notes that this is equivalent to approximately 12 percent of all LSRs from competitors, whereas the Commission's approved Q of S standard for LSR rejection is five percent. The Commission is of the view that if CLECs had access to the customer information contained in the ILEC's OSS, LSR rejection would be reduced to acceptable levels.

20. The Commission notes that the competitor Q of S monitoring reports also measure an ILEC's ability to provide local loops within specific service intervals or within agreed upon service intervals, and the ILEC's ability to repair competitor out-of-service troubles within specific service intervals. The Commission also monitors the ILECs' ability to provide equivalent services within similar timeframes to their own end-customers through retail Q of S reports. The Commission notes that in the 18 month period of retail Q of S reporting ending in June 2004, Bell Canada did not miss a single standard for provisioning or repairing local loops to its retail end-customers, while TCI missed its repair standard on 12 occasions. The Commission notes, however, that in the same period of competitive Q of S reporting, Bell Canada missed at least one standard in 16 of the 18 months, two standards in seven of the 18 months, three standards in three months, and four standards once. During the same period, TCI missed at least one standard in each of the 18 months and four standards in 12 of the 18 months.

21. The Commission considers that access to timely and accurate information pertaining to customers provides ILECs with the opportunity to provide better quality service than CLECs. The Commission is of the view that without equivalent CLEC access to that information, ILECs provide themselves with an undue preference relative to their competitors and there is unjust discrimination given to retail customers of the ILECs, as compared to the retail customers of the CLECs. The Commission considers that absent access to ILEC OSS, CLECs do not have an equal opportunity to compete with ILECs for local customers.

22. Accordingly, the Commission finds that the development and implementation of CLEC access to ILEC OSS is necessary to eliminate barriers to effective competition in the local market.

23. The Commission notes, however, that based on the record of this proceeding, CLECs only sought access to Bell Canada's and TCI's OSS but did not request access to the other ILECs' OSS at this time. The Commission also notes the ILECs' position that developing and implementing CLEC access to their OSS would be a costly and resource-consuming undertaking. The Commission is of the view that it is not in the public interest to require ILECs, with the exception of Bell Canada and TCI, to provide access to their OSS until there is demand for the service.

24. Accordingly, the Commission finds that only Bell Canada and TCI are required to develop and implement CLEC access to their OSS at this time. Aliant Telecom, MTS Allstream and SaskTel are required to develop and implement CLEC access to their OSS once a CLEC indicates its willingness, by signing an agreement of intent, to access their respective OSS databases.

2. How will ILEC OSS be made available to CLECs?

Positions of parties

25. The parties to this proceeding generally proposed two solutions for developing and implementing CLEC access to ILEC OSS:

- a web-based search engine solution (web-based solution) whereby a CLEC would go to a particular ILEC web page and make a request through a search engine. The information requested would then appear on the CLEC's computer screen, as per the particular ILEC's specifications; and

- a gateway access interface solution (gateway solution) that would allow electronic data to be exchanged. Each LEC would develop an interface to the gateway where information would be available in a standard format and protocol.

26. Bell Canada proposed a web-based solution and estimated that it would cost $4.4M±25 percent to provide access to three of the four elements identified in the Report to which CLECs requested access. Bell Canada submitted that customer status information and facilities status information could be provided within 150 days and repair status information could be provided within 10 months. Bell Canada added, however, that its web-based solution could not include

the installation status information. Bell Canada claimed that its proposed web-based solution struck a reasonable balance between the objectives of promoting facilities-based competition and doing so in a timely, efficient and cost-effective manner.

27. Bell Canada also proposed a gateway solution that would cost $22.9M±25 percent and would take a total of four years to implement. Bell Canada submitted that its gateway solution proposal would provide all four elements requested by CLECs and that each of the four elements would be developed sequentially.

28. TCI proposed a gateway solution and estimated that it could be implemented within 51 weeks at a cost of $5M±50 percent, and would allow CLECs to access most of the data elements requested in the Report. TCI submitted that if the project was undertaken on a step-by-step basis, costs would increase to $8.9M±50 percent and it would take approximately 108 weeks to develop and implement.

29. The CLECs submitted that any OSS access system must support on-demand, real-time access to ILEC data. The CLECs also submitted that supporting more than one method or architecture to access OSS would cost them significantly more, require more time to develop, and be less efficient.

30. The CLECs submitted that they preferred the gateway solution, as it would allow them to develop their own back-end systems to initiate queries and receive data from the ILEC OSS, allowing them to use and manipulate the data in the format that they preferred.

31. Allstream noted that it had already implemented a reasonable level of automation in its LSR and loop ordering process, and it expected access to installation status information would bring limited additional benefit. Allstream, therefore, submitted that in order to save time and money the installation status information element could be excluded.

32. Call-Net and FCI Broadband submitted that although they agreed that installation status information element was the lowest priority of the four elements itemized in the Report, they disagreed that it should be excluded. Call-Net and FCI Broadband submitted that they spent a lot of time and effort verifying that orders were being processed and tracking whether or not installations were completed.

33. FCI Broadband submitted that allowing access to all of the data elements defined in the Report would streamline ILEC-CLEC interaction and allow CLECs to efficiently provision services to end-customers.

34. Microcell submitted that the customer information element was the most important element of the OSS databases, as errors in customer names and service addresses accounted for most of its problems with provisioning service to end-customers in a timely manner.

35. Telcordia proposed a variation on a gateway solution, whereby it would act as a third-party go-between for ILECs and CLECs by leveraging technologies already deployed in the United States and tailoring them for the Canadian market. Telcordia submitted that its system would accept raw ILEC data and make it available to CLECs in a standardized fashion. Telcordia noted that both the ILECs and CLECs would still need to develop and pay for their own front-end and back-end systems to integrate with the Telcordia solution.

36. Telcordia submitted that a standard country-wide system would help competition take place on a national basis; help new entrants, as they would only need to implement a single solution; and be cost efficient, as interfaces, protocols and business rules for the overall industry would only require development once.

Commission's analysis and determinations

37. The Commission is of the view that there are three issues to consider with regard to the development and implementation of CLEC access to ILEC OSS:

    1. mechanism for allowing access;

    2. OSS database elements to be made available; and

    3. timeline for implementation.

1. Mechanism for allowing access

38. The Commission notes that if each ILEC provided CLECs with access to its OSS databases using its own solution, CLECs would have to develop processes to support each of the different systems they wanted to access. The Commission considers that this would add significantly to the cost and time for implementation, and would result in a less efficient system, in comparison to an OSS access system that would be developed using a standard industry-wide solution.

39. The Commission considers that a more effective and practical solution would be one where LECs are not restricted to a particular technology or architecture, provided that all LECs present or receive data at a meeting point or gateway in an industry-standard format. The Commission is of the view that this would allow the ILECs to use the technology that best fits their circumstances and is most cost efficient for them to deliver the information to CLECs. The Commission is also of the view that CLECs would have the ability to use technology that would allow them to implement solutions appropriate to their level of sophistication, such as the ability to auto-populate their own databases and LSR forms.

40. The Commission, therefore, determines that ILECs are required to establish a gateway solution that grants CLECs real-time electronic access to the ILECs' OSS databases, using industry-wide standard formats and protocols.

41. The Commission notes, however, that the ILECs and CLECs are yet to agree on standard formats and protocols for the exchange of OSS information between ILECs and CLECs. The Commission, therefore, directs the OSWG to develop and present to the Commission, within two months of the date of this decision, industry-wide standard formats and protocols for the exchange of OSS information between ILECs and CLECs. Any non-consensus items should be presented separately to the Commission so that the industry can begin development and implementation of CLEC access to ILEC OSS, while the non-consensus items are dealt with by the Commission on an expedited basis.

2. OSS database elements to be made available

42. The Commission is concerned with the long period of time and high costs proposed by some of the parties to develop and implement CLEC access to the ILEC OSS database elements identified in the Report. The Commission is of the view that the elimination of some less essential OSS database elements would result in the development and implementation of CLEC access to ILEC OSS within a more reasonable timeframe and at a more reasonable cost.

43. The Commission notes that of the four ILEC OSS database elements identified by CLECs in the Report, all CLECs who commented in the proceeding agreed that the customer information element was the most important. The Commission considers that allowing CLECs to access the same customer information element that is available to the ILECs would virtually eliminate LSR rejections and would reduce the average time for providing local services to CLEC customers, therefore allowing CLECs to reduce LSR rejections and service provision times and to offer services comparable to those offered by the ILECs to their own customers.

44. The Commission notes that the facilities information element provides information on the cable pair assigned to a customer, the connection of a customer's loop and the CLEC co-located facilities within the central office (CO), and whether a customer is served from a remote or a CO. The Commission notes that more than 36 percent of Bell Canada's total expenditures for its proposed gateway solution were due to the development and implementation of CLEC access to its facilities status information.

45. The Commission notes that a CLEC requires a dedicated facility from each end-customer to a CO in order to serve an end-customer that is provisioned from a remote. The Commission further notes that even with dedicated facilities a CLEC may not be able to offer certain services to customers provisioned from remotes. The Commission is of the view that without information on whether or not a customer is served from a remote, CLECs are at a disadvantage and may not be able to offer the services or meet the installation date sought by the customer. The Commission is of the view that, although the Report indicates that CLECs need access to all components of the facilities information element, CLECs particularly need to know whether or not a customer is served from a remote in order to propose services to existing or potential customers.

46. The Commission considers that requiring the ILECs to develop and implement CLEC access concerning whether or not a customer is served from a remote, as opposed to the entire facilities status information element, would result in significant cost savings and a reduced time period required to develop and implement CLEC access to ILEC OSS.

47. The Commission notes that Bell Canada and Allstream indicated that access to the installation status information element was not necessary. The Commission also notes that Call-Net and FCI Broadband submitted that the installation status information element would be the last of the requested elements in their list of priorities, although they provided evidence that access to that information would reduce their workload. The Commission considers that since CLECs already have an agreed installation date provided to them on the local service confirmation, knowing the progress of the installation may not provide any further significant benefit, while its elimination would reduce the cost and time required for the development and implementation of CLEC access to ILEC OSS.

48. The Commission is of the view that a CLEC does not have the opportunity to provide its customer with service of the same quality as an ILEC without access to the repair status element. The Commission notes that when local service fails, an ILEC can inform its customers as to the status of repair efforts, whereas a CLEC customer would not have access to this information without the CLEC receiving that information from the ILEC. The Commission considers that CLECs must have access to the ILECs' repair database in order for them to have the opportunity to offer services of the same quality as the ILECs.

49. Based on the above, the Commission directs the ILECs to make the following OSS database information accessible to CLECs:

- customer status information, as defined in the Report;
- an indication whether or not a customer is served from a remote or CO; and
- repair status information, as defined in the Report.

3. Timeline for implementation

50. The Commission considers that it is in the best interest of local competition that CLEC access to ILEC OSS is developed and implemented as soon as possible.

51. The Commission notes that, with the exception of Bell Canada, parties indicated that they would be able to develop and implement their gateway solution within a one year period. The Commission expects that, given the reduction in data elements that must be made available, all LECs should be able to develop and implement CLEC access to ILEC's OSS within a period of one year.

52. Accordingly, the Commission directs that Bell Canada and TCI develop and implement CLEC access to their OSS elements identified in this decision within one year from the date of this decision. As noted above, Aliant Telecom, MTS Allstream and SaskTel are required to develop and implement CLEC access to their OSS once a CLEC indicates its willingness, by signing an agreement of intent, to access their respective OSS databases. Within 30 days of signing such an agreement, the affected ILEC must file with the Commission an implementation plan for CLEC access to its OSS databases.

3. How will start-up costs and ongoing costs be recovered?

Position of parties

53. The ILECs submitted that responsibility for the costs of implementation should be assigned to the party incurring the costs, and a mechanism should be established to provide the ILECs with an opportunity to recover their costs, such as through their respective deferral accounts or through an exogenous adjustment to the price cap formula. Bell Canada, SaskTel and TCI also submitted that the Commission needed to be mindful of its previous rulings regarding the implementation of mandated service functionalities that had been determined to be in the interest of fostering facilities-based local competition. Bell Canada added that ongoing costs should be recovered from those deriving the most direct benefit, either via a monthly service charge or a user charge levied on the CLECs.

54. The ILECs submitted that it would be appropriate for the CLECs to recover their costs of gaining access to ILEC OSS through their expected acquired efficiencies. The ILECs noted the substantial efficiencies Call-Net and Allstream estimated they would derive from having access to ILEC OSS.

55. Call-Net submitted that the ILEC deferral accounts should be used to fund all LEC costs. Call-Net noted that OSS functions supported ordering and maintaining unbundled local loops, and that CLECs already paid one-time service charges and monthly service charges for unbundled loops, the maintenance of those loops, and all ancillary services. Call-Net submitted that access to ILEC OSS was effectively an enhancement to the efficiency and effectiveness of the system to provide unbundled loops, a service which CLECs already paid for.

56. Call-Net added that in the event the Commission were to not agree with the principle of using the ILEC deferral accounts, then each LEC should be responsible for its own costs based on the fact that the ILECs would also benefit from productivity improvements from not having to deal directly with CLECs.

57. FCI Broadband, Microcell and Allstream submitted that all parties should be responsible for their own costs and opposed cost recovery through deferral accounts. The three companies submitted that requiring all parties to pay for their own costs would provide the proper incentive for expediency and efficiency in the development and implementation of CLEC access to ILEC OSS and would avoid the potential for fiscal waste and abuse.

Commission's analysis and determinations

58. The Commission considers that CLEC access to ILEC OSS is not a new service, as postulated by the ILECs, but an enhancement to the services for which the CLECs already pay. The Commission also considers that the evidence provided on the record of this proceeding indicates that the development and implementation of CLEC access to ILEC OSS will benefit all parties as a result of increased efficiencies.

59. The Commission considers that requiring each party to pay for their own costs will focus parties on implementing only what is necessary to provide CLECs with the required functionality and, therefore, the development and implementation process will be less costly and time consuming. Accordingly, based on the record of this proceeding, the Commission does not consider that recovery of these costs by each ILEC from its deferral account is appropriate.

60. Accordingly, the Commission determines that each party will be responsible for its own costs for the development and implementation of CLEC access to ILEC OSS.

61. The Commission considers that the costs associated with CLEC access to ILEC OSS are an enhancement of an existing service that ultimately serves an end-customer. The Commission therefore considers that ILECs can submit an application to modify their tariffs, with appropriate justification and cost studies, for the associated competitive services.

Secretary General