



Telecom Order CRTC 2013-93

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Ottawa, 25 February 2013

Northwestel Inc. – Wholesale Connect Service

File numbers: Tariff Notices 883 and 883A

In this decision, the Commission approves revised monthly recurring rates and service charges for Wholesale Connect Service in Northwestel's operating territory on a final basis. The introduction of Wholesale Connect Service will assist competitors in providing telecommunications services in Northwestel's operating territory, ultimately leading to greater consumer choice of telecommunications services.

Introduction

1. On 8 March 2012, Northwestel Inc. (Northwestel) filed Tariff Notice (TN) 883, in which it proposed to introduce item 300 – Wholesale Connect Service as part of its Access Services Tariff. In Telecom Order 2012-203, the Commission approved Northwestel's TN 883 on an interim basis.
2. Wholesale Connect Service provides the transport of telecommunications traffic across Northwestel's network communities that are served by Northwestel's fibre or high-capacity microwave radio transport links. Competitors can use Wholesale Connect Service to connect their points of presence in Northwestel's operating communities and provide telecommunications services to their end-users in those communities.
3. Wholesale Connect Service is available in 30 communities in Northwestel's operating territory. Northwestel has categorized these 30 communities into 4 distinct types of bands.¹ The service is available at different levels of bandwidth.
4. In TN 883, Northwestel proposed to set interim rates at a nominal level of \$1 per month for recurring charges and \$1 for service charges. Northwestel further requested that final rates be approved retroactive to the date of the interim order.
5. On 22 May 2012, Northwestel filed an amendment to TN 883 for final approval of its rates. In this amendment, the company proposed revised Wholesale Connect Service monthly recurring rates and service charges based on cost studies filed by Northwestel.

¹ Type A band consists of core communities served by fibre transport links (e.g. Whitehorse, Yellowknife). Type B band consists of communities connecting to Type A communities using fibre transport links (e.g. Fort Providence). Type C band consists of communities connecting to Type A communities by a combination of high-capacity microwave radio and fibre transport links (e.g. Dawson City). The Breakout band consists of communities outside of Northwestel's operating territory.

6. The Commission received submissions from Ice Wireless Inc. and Iristel Inc., the SSi Group of Companies (SSi), TELUS Communications Company (TCC), and Yukon Government. The public record of this proceeding, which closed on 19 November 2012, is available on the Commission's website at www.crtc.gc.ca under "Public Proceedings" or by using the file numbers provided above.

Issues

7. The Commission has identified the following issues to be addressed in this order:
 - I. Should Northwestel's proposed service be modified as requested by parties?
 - II. What are the appropriate rating principles to be applied to the Wholesale Connect Service?
 - III. Are the costs submitted by Northwestel reasonable?
 - IV. Are Northwestel's proposed contract term rates appropriate?
 - V. What are the final Wholesale Connect Service rates and should they be approved on a retroactive basis?
 - VI. Is the order compliant with the Policy Direction?²

I. Should Northwestel's proposed service be modified as requested by parties?

8. Northwestel proposed its Wholesale Connect Service with a specific configuration and service definition. During the proceeding, parties requested modifications to the Wholesale Connect Service as follows: (1) that the access portion of the service be made available as a separate component, and (2) that the proposed Service Level Agreement (SLA)³ targets be enhanced.
9. In addition, TCC submitted that the Wholesale Connect Service was not a substitute for the retail V-Connect service⁴ and that the service did not meet its requirements. However, TCC stated that it was not opposed to the Commission approving a tariff for Northwestel's Wholesale Connect Service. In response to TCC's comments, Northwestel indicated that Wholesale Connect Service can be used to meet the needs of providers of a national scope, by combining the Wholesale Connect Service with other service options (e.g. other tariffed services) to provide an equivalent service to the retail V-Connect service.

² *Order Issuing a Direction to the CRTC on Implementing the Canadian Telecommunications Policy Objectives*, P.C. 2006-1534, 14 December 2006

³ Northwestel proposed Wholesale Connect Service Level Agreements that specify performance targets, for example, service availability and penalties for failure to meet those targets.

⁴ Retail V-Connect provides transport of telecommunications traffic between customer sites across Northwestel rate centres.

10. With respect to the request regarding SLAs, the Commission notes that Northwestel is not currently required to provide SLA performance targets for wholesale services. As for the request to unbundle the access service, the Commission notes that the proposed service includes both the access and transport components and that the costs for these components were not provided separately. The Commission therefore considers that it is not possible to separate the proposed service costs and thus the rates into access and transport at this time.
11. The Commission considers that all three requests seek to change some aspect of the service, as defined by Northwestel. The Commission is of the view that it would not be appropriate to consider whether the SLA performance targets proposed by Northwestel should be varied, whether the service should be altered in order to unbundle the access component, and whether the Wholesale Connect Service is a proper substitute to the retail V-Connect service, in this particular proceeding.

II. What are the appropriate rating principles to be applied to the Wholesale Connect Service?

12. Northwestel submitted that its proposed rates were generally based on market prices of comparable services. The Commission notes that under Northwestel's proposed pricing approach, the proposed rates for Wholesale Connect Service include markups⁵ above Phase II costs,⁶ ranging from 19 to 275 percent, with an overall average of 74 percent.
13. SSi submitted that the proposed rates are excessively high and that the service is an essential input for local competition and satisfies all three criteria that characterize an essential service.⁷ In reply, Northwestel argued that the access and network management components of the Wholesale Connect Service do not meet the criteria of an essential service and that retail Digital Private Line service is available to transport telecommunications traffic between communities.
14. The Commission notes that the Wholesale Connect Service primarily consists of facilities for the transport of telecommunications traffic between communities. The Commission considers that due to the characteristics of Northwestel's operating territory and given the remoteness and operational challenges in the Far North, it would not be economically feasible for competitors to build their own transport

⁵ "Markup" is defined as the difference between the cost and rate of a service. For example, if the service cost is \$100 and the markup is 15 percent, then the service rate is \$115.

⁶ Phase II costing is an incremental costing approach used by the Commission to assess the incumbent carrier's costs of providing wholesale service to competitors.

⁷ The facility is required as an input by competitors to provide telecommunications services in a relevant downstream market;

The facility is controlled by a firm that possesses upstream market power such that withdrawing mandated access to the facility would likely result in a substantial lessening or prevention of competition in the relevant downstream market; and

It is not practical or feasible for competitors to duplicate the functionality of the facility.

facilities. The Commission also considers that Northwestel's Digital Private Line service is not an appropriate substitute for the Wholesale Connect Service as Digital Private Line service must be purchased in large bandwidth quantities.

15. In setting rates, the Commission balances the need to ensure that service providers are reasonably compensated for their costs and continue to invest in their networks with the need to ensure that markups are not so high as to prevent competitors from providing competitive alternatives in the marketplace.
16. The Commission notes that the proposed markups for the Wholesale Connect Service are significantly higher than for other wholesale services provided by Northwestel such as unbundled local loops or local interconnection services which have a markup of 25 percent. Further, the Commission notes that the Wholesale Connect Service and the wholesale high-speed access services of the large incumbent service providers are similar as they both provide access and transport of high-speed traffic. The Commission also notes that the large incumbent service providers' wholesale high-speed access services are priced using markups ranging between 30 and 40 percent.
17. Given the considerations discussed in the paragraphs above, the Commission is of the view that the proposed markups are high and that the resulting rates will deter economically efficient competitive entry into the market.
18. In light of the above, the Commission considers it appropriate to set rates for Wholesale Connect Service based on Phase II costs plus a 30 percent markup. Further, consistent with the rating approach generally approved for Northwestel's wholesale services, the Commission finds that the markup should be applied uniformly across all rate elements of the service.

III. Are the costs submitted by Northwestel reasonable?

19. In this section, the Commission examines issues raised by parties associated with Northwestel's cost studies filed in support of the proposed monthly rates and the proposed service charges and decides on the appropriate cost adjustments.

i) Wholesale Connect Service monthly rates costing issues and adjustments

a) Inter-office fibre cable costs

20. Northwestel calculated its proposed transport fibre cable costs using the capacity costing approach. Under this approach, the fibre cable unit cost is calculated by dividing the total fibre cable cost by the capacity of the electronic equipment at each end of the fibre cable. This unit cost is further adjusted by the ultimate utilization of the electronic equipment to recognize the non-working capacity (e.g. spare units).
21. SSi submitted that, based on this approach, the portion of a fibre cable used by a particular service cannot be accurately determined and therefore the associated costs cannot be accurately determined. SSi argued that the alternative fibre cost factor (FCF)

approach⁸ should be used. Northwestel replied that it cannot use the FCF approach due to the high variability of year-over-year deployment of fibre, noting that 50 percent of its fibre investment has been deployed in the last five years and that consequently, it is premature to move to the FCF approach.

22. SSi submitted that Northwestel's FCF⁹ is 60 times that of Bell Canada's.
23. In its cost study completed for SSi, Lemay-Yates Associates Inc. (Lemay-Yates) recommended using the FCF approach as opposed to the capacity costing approach and suggested using an FCF for Northwestel that is twice the level of that of Bell Canada, which in Lemay-Yates's view would take into account the higher cost structure in Northwestel's operating territory.
24. The Commission considers that fibre capacity can typically be increased by augmenting the capacity of the electronic equipment at each end of the cable without adding fibre cable. In the circumstances, the Commission considers that using the capacity costing approach proposed by Northwestel will overestimate the incremental fibre cable costs associated with the Wholesale Connect Service.
25. The Commission further notes that, according to the incumbent local exchange carriers' (ILECs) Regulatory Economic Studies Manuals, an FCF approach is to be used to estimate inter-office fibre cable costs.
26. In light of the above, the Commission considers that the FCF approach should be used to derive Northwestel's transport fibre cable costs.
27. The Commission notes Northwestel's statement that it experienced a high variability of historical year-over-year deployment of fibre and that its 2014 forecast FCF was much lower than previous years. Further, the Commission considers that Northwestel's historical FCFs over the past five years do not reflect the expected long-run value. The Commission also notes that Northwestel's FCF of 6 is more than 15 times the average FCF of the ILECs.
28. The Commission notes that, in its cost study completed for SSi, Lemay-Yates proposed to use an FCF that is twice the level of Bell Canada in order to take into account the higher cost structure in Northwestel's operating territory. The Commission further notes that twice the average FCF of the large operating southern ILECs equates to approximately 0.7 and that Northwestel's forecast for the year 2014 is 0.7.

⁸ The FCF approach is used by large incumbent local exchange carriers to estimate transport fibre costs associated with a service. This approach relies on the ratio of fibre cable investments to the related fibre electronic investments. For example, an FCF of 0.25 means that for every \$100 invested in fibre electronic equipment, \$25 will be spent on fibre cable investment.

⁹ In response to a request for additional information, Northwestel submitted an FCF of approximately 6; in contrast, Bell Canada's current FCF is 0.1.

29. In light of all of the above, the Commission decides that it is appropriate to use an FCF of 0.7 to estimate Northwestel's transport fibre cable costs.

b) Router equipment costs

30. Routers are used to switch traffic within Northwestel's network. Northwestel developed its router unit costs by dividing the router equipment costs by the annual peak demand forecast. Northwestel used an average annualized demand in megabits per second (Mbps) based on the estimated peak utilization of two specific routes and assumed a year-over-year growth in usage. Northwestel also proposed an 80 percent ultimate utilization for its router equipment.

31. The Commission considers that Northwestel's proposed approach, whereby router unit costs are derived based on an average demand forecast, does not reflect the incremental costs for the shared router equipment.

32. The Commission considers that, consistent with the current costing methodology specified in the ILECs' Regulatory Economic Studies Manuals, router equipment costs should be derived based on the capacity costing approach. Under this approach, the router unit cost is derived based on the equipment's capacity, and adjusted to take into account the ultimate utilization of the equipment.¹⁰

33. The Commission considers that Northwestel's proposed ultimate utilization of 80 percent for its router equipment is consistent with that prescribed for this type of equipment in the ILECs' Regulatory Economic Studies Manuals and is appropriate. The Commission notes that the maximum capacity of Northwestel's fully-configured router is 8,143 Mbps. Therefore, the Commission determines that the capacity costing approach with a capacity of 8,143 Mbps and an ultimate utilization of 80 percent is to be used to develop the router unit costs instead of Northwestel's proposed approach.

c) Annual unit cost changes¹¹

34. In its Wholesale Connect Service cost studies, Northwestel proposed to apply annual unit cost changes¹² of +2 percent to both its operating expenses and equipment costs, without including productivity improvements. In response to a request for information, Northwestel stated that it does not track this type of information, and did not provide any data on historical equipment unit cost changes.

¹⁰ The ultimate utilization is used to recognize the non-working capacity (e.g. spare units).

¹¹ Also applies to Other Class of Service Bandwidth monthly charges; three optional classes of service for higher quality of transmission at an additional rate per 1 Mbps of bandwidth.

¹² Annual unit cost changes reflect forecasts of year-over-year cost level changes for equipment costs or operating expenses, net of productivity improvements (e.g. due to efficiencies in provisioning equipment over time or in streamlining operational processes).

35. According to the ILECs' Regulatory Economic Studies Manuals, service cost studies are to generally reflect the expected annual unit cost changes over the study period. Cost changes reflect the anticipated changes in prices paid for equipment as well as labour cost increases. In addition, cost studies are to reflect the impact of expected productivity improvements over the study period in recognition of anticipated increases in operational processes or equipment provisioning efficiencies.
36. The Commission notes that the annual productivity improvement prescribed in the ILECs' Regulatory Economic Studies Manuals for use in regulatory economic studies varies from 1.3 to 1.4 percent.¹³
37. In light of Northwestel's Modernization Plan¹⁴ and given that the Wholesale Connect Service primarily consists of transport equipment that is subject to significant technology advancements and efficiencies, the Commission considers that Northwestel should achieve productivity improvements for this service similar to those achieved by other service providers.
38. Therefore, the Commission decides that an annual productivity improvement of 1.3 percent is to be applied to the operational expenses over the study period in addition to Northwestel's proposed annual cost change of +2 percent, for a net increase of +0.7 percent.
39. With respect to the annual cost changes for equipment, the Commission notes that unit costs of transport equipment have declined significantly in past years and are expected to continue to decline as suppliers are able to increase equipment capacity.
40. The Commission also notes that in Telecom Regulatory Policy 2011-703, which addressed the southern incumbents' wholesale high-speed access services, it mandated the use of annual unit cost changes, net of productivity improvements, of -10 percent for similar network transport equipment. However, the Commission acknowledges that Northwestel has higher installation costs than other ILECs due to the characteristics of its operating territory. Therefore, the Commission considers that Northwestel's overall transport unit costs would decline less than those for southern ILECs.
41. In light of the above, the Commission decides that an annual unit cost change, net of productivity improvements, of -5 percent, is to be applied to Northwestel's transport equipment costs.

¹³ Some ILECs use a productivity improvement factor of 1.3 while others use an estimate of 1.4 based on their productivity studies.

¹⁴ Pursuant to Telecom Regulatory Policy 2011-771, the company developed and filed a comprehensive plan to modernize its network infrastructure (an updated Modernization Plan was filed with the Commission on 16 January 2013).

d) Subsidies received from the public sector and agencies

42. Northwestel did not include the subsidies it received from its service improvement plan (SIP) and one-time external subsidies from the public sector and agencies in its cost studies.
43. SSi submitted that subsidies should be included in the Wholesale Connect Service cost studies as a benefit since they have assisted and continue to assist Northwestel in maintaining, upgrading, and replacing its transport network over time.
44. Northwestel objected to including any subsidies from its SIP because the Commission did not adjust the unbundled loop rates for other ILECs for any SIP subsidies. Northwestel also objected on the basis that subsidies are one-time in nature and any subsidized equipment will need to be maintained and replaced.
45. The Commission notes that Northwestel has benefited from the SIP and the one-time external subsidies in establishing parts of its network. The Commission also notes that subsidies and benefits accruing to a particular service reduce that service's incremental cost and, consistent with standard costing practice, are to be included in the associated cost studies.
46. Therefore, the Commission considers that Northwestel's cost studies should be adjusted to reflect these benefits and the resulting lower equipment costs. The Commission notes, however, that ongoing maintenance and power expenses are not being subsidized. The Commission has accordingly included ongoing maintenance and power expenses that are not subsidized.

e) Billing costs

47. Billing costs relate to ongoing billing and collection activities. Northwestel developed its billing systems and collection costs by applying a factor expressed as a percentage of revenues. Northwestel submitted that it did not have any data or time to develop explicit expense estimates and despite the Commission's request, did not provide a proxy from another service.
48. The Commission notes that Northwestel's proposed costing approach for billing expenses results in billing costs that are directly proportional to the service's revenues obtained from a given customer. For example, under the company's proposed costing methodology, the billing costs for some customers are in excess of \$1,000 per month per circuit. The Commission also notes that Northwestel has provided no evidence to demonstrate that its billing expenses would increase as revenues increase.
49. The Commission notes that in TN 889 filed in September 2012, Northwestel proposed a much lower billing cost per month for its Ethernet Metropolitan Area Network service. The Commission notes that this wholesale service is similar to the Wholesale Connect Service. Based on the foregoing, the Commission considers that the company's estimated billing costs associated with the Wholesale Connect Service are not appropriate. The Commission further considers that it would be appropriate to use

the Ethernet service's billing costs as an appropriate estimate of the billing costs for the Wholesale Connect Service. Therefore, the Commission decides that the billing costs submitted in Northwestel's TN 889 are to be used to determine the billing costs associated with the Wholesale Connect Service.

ii) Wholesale Connect Service charge costing issues and adjustments

50. Northwestel proposed two service charges: (i) Basic Class of Service Bandwidth service charges intended to recover costs associated with design, installation at customer premises, configuration of equipment, order entry, and customer premise equipment during the initial set-up of the service, and (ii) a bandwidth change service charge to recover costs associated with order entry and configuration of equipment when a request is made by an independent service provider to change the subscribed bandwidth per site (e.g. bandwidth change from 5 Mbps to 10 Mbps).
51. Northwestel submitted that the proposed service charges are based on the associated costs plus reasonable markups. The costs included both labour and equipment costs. The labour costs were calculated by multiplying the time it takes to perform the activity by the hourly loaded labour cost of the employee performing the work. The equipment costs represent customer premise equipment, such as routers, modems, and power equipment that Northwestel must purchase in order to provide the service at the customer's premises. Bandwidth service charges vary depending on the type of customer premise equipment required.
52. SSi submitted that the service charges proposed by Northwestel are excessive given the nominal nature of the service and requested that the Commission reduce the proposed charges accordingly.
53. The Commission notes that the proposed time estimates, which were largely based on information gathered by Northwestel from subject matter experts, were not supported by empirical evidence, such as measured data or time and motion studies. Rather, they were based on Northwestel's experience with similar types of wholesale services.
54. The Commission has reviewed the cost estimates submitted in support of the proposed service charges and considers that a number of adjustments are required, including the exclusion of certain pre-sales activities that are not considered to be causal to the service charge order process. In addition, the Commission considers it appropriate to reduce time estimates for certain activities that the Commission considers redundant (i.e. double-counted) or greater than would be reasonably expected (given the activities in question). Further, the Commission notes that Northwestel did not provide persuasive rationale to support its proposed service charges.
55. Based on the above, the following adjustments were made to the following activities for each of the service charges below:
 - I. Basic Class of Service Bandwidth circuit service charge
 - i) Customer design: reduction of time estimate by 83 percent

- ii) Field installation: reduction of time estimate by 30 percent
- iii) Configuration of equipment: reduction of time estimate by 54 percent
- iv) Order entry: reduction of time estimate by 45 percent

II. Basic Class of Service one-time bandwidth change service charge

- i) Configuration of equipment: reduction of time estimate by 45 percent
- ii) Order entry: reduction of time estimate by 40 percent

IV. Are Northwestel's proposed contract term rates appropriate?

56. In addition to the non-contracted monthly rates, Northwestel proposed monthly rates for contracted terms.¹⁵ SSI requested that the non-contracted monthly rates be reduced and that there should be a 17 percent discount for the three-year term monthly rates.
57. The Commission notes that, since rates for wholesale services are cost-based, there should be no differences in rates based on contract length, unless the service costs vary due to the length of the contract. The Commission notes that Northwestel provided no cost justification for the proposed rate differences between the non-contracted and contracted periods.
58. The Commission further notes that to obtain the best price under contracted terms, competitors would have to subscribe to the three-year term contract. The Commission considers that this situation would reduce the competitors' flexibility to adjust to changing market needs.
59. For these reasons, the Commission considers that the rates for Wholesale Connect Service are to be approved for non-contracted periods only, consistent with the general rate-setting approach used for wholesale services.
60. Therefore, the Commission **denies** Northwestel's proposed contract term rates.

V. What are the final Wholesale Connect Service rates and should they be approved on a retroactive basis?

61. In Telecom Order 2012-203, the Commission approved on an interim basis the introduction of Wholesale Connect Service, setting interim rates for each service speed at a nominal level of \$1 per month as of 3 April 2012. In that order, the Commission stated that final rates may be approved retroactively.
62. The Commission notes that the interim rates were set to \$1 to permit Northwestel to implement Wholesale Connect Service as expeditiously as possible.

¹⁵ One-year and three-year contracted monthly rates

63. The Commission considers that Northwestel should be permitted to recover its costs plus an appropriate markup as of the date the service was approved for use by competitors.
64. In light of all of the above, the Commission **approves on a final basis** the Wholesale Connect Service monthly recurring rates and service charges set out in the Appendix of this order, effective 3 April 2012. These rates and charges are based on Northwestel's Wholesale Connect Service cost studies but have been adjusted to reflect the Commission's costing determinations in this order, and include a markup of 30 percent.
65. Northwestel is to file revised tariff pages reflecting the determinations set out in this order **within 30 days of the date of this order**.

VI. Is the order compliant with the Policy Direction?

66. The Commission considers that its findings in this order advance the policy objectives set out in paragraphs 7(b), (c), and (f) of the *Telecommunications Act* (the Act).¹⁶ The Commission considers that Northwestel's Wholesale Connect Service rates approved in this order were established with a view to ensuring that competitors pay rates constituting Phase II costs plus an appropriate markup, while Northwestel legitimately recovers the costs that it incurs. The Commission therefore considers that, in accordance with subparagraphs 1(a)(ii) and 1(b)(ii) of the Policy Direction, the rates for Northwestel's Wholesale Connect Service are (a) efficient and proportionate to their purpose and interfere with competitive market forces to the minimum extent necessary to meet the above-referenced policy objectives, and (b) neither deter economically efficient competitive entry into the market nor promote economically inefficient entry.

Secretary General

Related documents

- *Northwestel Inc. – Introduction of wholesale connect service*, Telecom Order CRTC 2012-203, 3 April 2012
- *Northwestel Inc. – Review of regulatory framework*, Telecom Regulatory Policy CRTC 2011-771, 14 December 2011
- *Billing practices for wholesale residential high-speed access services*, Telecom Regulatory Policy CRTC 2011-703, 15 November 2011, as amended by Telecom Regulatory Policy CRTC 2011-703-1, 22 December 2011

¹⁶ The cited policy objectives of the Act are
7(b) to render reliable and affordable telecommunications services of high quality accessible to Canadians in both urban and rural areas in all regions of Canada;
7(c) to enhance the efficiency and competitiveness, at the national and international levels, of Canadian telecommunications; and
7(f) to foster increased reliance on market forces for the provision of telecommunications services and to ensure that regulation, where required, is efficient and effective.

Appendix

Approved rates and charges

Monthly Rates

Basic Class of Service Bandwidth	Type A	Type B	Type C	Breakout
5 Mbps	n/a	\$838	\$3,406	n/a
10 Mbps	\$1,073	\$1,083	\$6,286	\$1,564
20 Mbps	\$1,374	\$1,752	\$12,407	\$2,250
30 Mbps	\$1,668	\$2,205	\$18,165	\$3,031
40 Mbps	\$1,967	\$2,662	\$23,921	\$2,889
50 Mbps	\$2,266	\$3,118	\$29,676	\$3,621
60 Mbps	\$2,562	\$3,571	n/a	\$4,290
80 Mbps	\$3,158	\$4,479	n/a	\$4,649
100 Mbps	\$3,752	\$5,388	n/a	\$6,722

Other Class of Service Bandwidth Monthly Rates

Per 1 Mbps Medium Class of Service	\$81
Per 1 Mbps High Class of Service	\$81
Per 1 Mbps Highest Class of Service	\$81

Service Charges

Basic Class of Service Bandwidth one-time charge (<10 Mbps)	\$5,807
Basic Class of Service Bandwidth one-time charge (>10 Mbps)	\$6,344
Basic Class of Service Bandwidth one-time charge (Breakout community)	\$8,490
Other Class of Service Bandwidth one-time charge	\$129.32
Basic Class of Service one-time bandwidth change one-time charge	\$129.32