
BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE PETITION OF SPRINT
COMMUNICATIONS COMPANY L.P. FOR
ARBITRATION PURSUANT TO THE
TELECOMMUNICATIONS ACT OF 1996 TO
RESOLVE ISSUES RELATING TO AN
INTERCONNECTION AGREEMENT WITH
BROOKINGS MUNICIPAL UTILITIES D/B/A
SWIFTEL COMMUNICATIONS

Docket No. TC06-176

Rebuttal Testimony of Peter C. Rasmuson
On Behalf of Brookings Municipal Utilities D/B/A Swiftel
Communications

February 16, 2007

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Q. ON WHOSE BEHALF WAS THIS TESTIMONY PREPARED?

A. This testimony was prepared on behalf of Brookings Municipal Utilities d/b/a Swiftel Communications (Swiftel). Swiftel is the incumbent local exchange carrier (ILEC) that is franchised to serve the telephone customers within the municipal boundaries of the City of Brookings, SD.

Q. DID YOU SUBMIT TESTIMONY PREVIOUSLY IN THIS DOCKET?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. As a witness for Swiftel, I am here to rebut the direct testimony of Mr. Randy Farrar regarding the applicability of the Hatfield/HAI Model Version 5.0a (HAI Model) for the purpose of calculating Swiftel's reciprocal compensation rate and the specific inputs used in the model. I will also address Mr. Farrar's comments about bill and keep for compensation purposes, and quantify the impact of Mr. Farrar's statement that Sprint can choose to connect with Swiftel at any POI in the LATA.

Q. IS THE SWIFTEL RECIPRICAL COMPENSATION RATE A FORWARD LOOKING RATE?

A. Yes. The HAI Model is a model based on TELRIC principles.

Q. WHY DO YOU DISAGREE WITH MR. FARRAR'S ASSERTION THAT THE HAI MODEL IS NOT APPROPRIATE FOR DEVELOPMENT OF RECIPRICAL COMPENSATION RATES?

1 I disagree with Mr. Farrar's assertion based on the requirements of Section 252 of the
2 Telecommunications Act of 1996, the FCC's First Report and Order released
3 August 8, 1996, ("First Order") in CC Docket No. 96-98, In the Matter of
4 Implementation of the Local Competition Provisions in the Telecommunications
5 Act of 1996, 11 FCC Rcd. 15499 (1996), and the fact that state commissions have
6 used the model for UNE and reciprocal compensation rate development.
7 The requirements of Section 252(c)(2) and Section 252(d)(2)(A)(ii) set the
8 standard for just and reasonable terms and conditions for reciprocal
9 compensation as shown below.

10 (c) STANDARDS FOR ARBITRATION- In resolving by arbitration
11 under subsection (b) any open issues and imposing conditions upon the
12 parties to the agreement, a State commission shall--

13
14 (2) establish any rates for interconnection, services, or
15 network elements according to subsection (d);

16
17 (d) PRICING STANDARDS-

18
19 (2) CHARGES FOR TRANSPORT AND TERMINATION OF
20 TRAFFIC-

21
22 (A) IN GENERAL- For the purposes of compliance by an
23 incumbent local exchange carrier with section 251(b)(5), a
24 State commission shall not consider the terms and
25 conditions for reciprocal compensation to be just and
26 reasonable unless--

27
28 (ii) **such terms and conditions determine such**
29 **costs on the basis of a reasonable approximation**
30 **of the additional costs of terminating such calls.**
31 **(Emphasis added)**
32

33 The First Order states that TELRIC plus a reasonable share of forward-looking
34 joint and common costs is the standard for interconnection (i.e., reciprocal
35 compensation) and unbundled network elements (UNE) pricing. First Order, at

1 para. 682.

2 Elsewhere in the First Order, the FCC also made clear that state commissions
3 would use the TELRIC methodology when establishing rates for transport and
4 termination. Id., at para. 1054.

5 The description of the HAI Model in Section 1.1 of the documentation distributed
6 with the model and provided to Sprint states:

7 **Overview**

8 The HAI Model, Release 5.0a (“HM 5.0a”) has been developed by HAI
9 Consulting, Inc. (“HAI”), of Boulder, Colorado,¹ at the request of AT&T
10 and MCI for the purpose of estimating the forward-looking economic costs
11 of:

- 12 a) Basic local telephone service;
- 13 b) Unbundled network elements (“UNEs”); and
- 14 c) Carrier access to, and interconnection with, the local exchange
15 network.
16

17 The HAI Model is an appropriate model because it meets the requirements of
18 Section 252 and the First Order. Furthermore, the HAI Model has been used by
19 state commissions in Virginia (96-0117), Nevada (96-9035) and California
20 (Application 01-02-024, et al.) to develop UNE pricing and reciprocal
21 compensation rates.

22 In addition, the HAI Model Version 5.0a was used to develop TELRIC pricing for
23 reciprocal compensation in the Iowa Utilities Board’s (IUB) arbitration order
24 involving Sprint and several Iowa ILECs (ARB-05-2, ARB-05-5, ARB-05-6).

¹ With its Release 5.0a, the model formerly known as the HAI Model is now named the HAI Model. Hatfield Associates, Inc., the firm that developed prior versions of the Hatfield/HAI Model no longer performs telecommunications consulting. All of the staff of Hatfield Associates who have played an active role in developing the Hatfield/HAI Model have formed a successor firm, called HAI Consulting, Inc.

1 During this proceeding, Sprint did not challenge the very same model Mr. Farrar
2 is now challenging in his testimony in this proceeding.

3 Finally, in lines 7 through 11 on page 30 of Mr. Farrar's testimony, he admits
4 that only nine of eighteen states in Sprint's territory rejected the HAI Model for
5 USF purposes. The states that rejected the HAI Model for USF purposes do not
6 have any relationship to the use of the model for UNE purposes, specifically the
7 switching and transport elements.

8 **Q. HOW DOES USING THE HAI MODEL FOR UNE RATE**
9 **DEVELOPMENT MAKE IT APPROPRIATE TO USE FOR**
10 **RECIPRICAL COMPENSATION RATE DEVELOPMENT?**

11 A. UNE (Unbundled Network Elements) rate development includes developing
12 rates for switching elements including the local switching and local transport
13 elements that are used to develop the reciprocal compensation rate.

14 **Q. CAN YOU FURTHER EXPLAIN WHY MARTIN GROUP USED THE**
15 **HAI MODEL?**

16 A. Yes. In addition to the reasons noted previously, the HAI Model was originally
17 developed in the mid-1990s to produce estimates of the TSLRIC (Total Service
18 Long Run Incremental Costs) of basic service as part of an examination of cost
19 of universal service and was placed in the record of the FCC's CC Docket No.
20 96-45 to assist the Commission in determining the forward-looking economic
21 cost of universal service. The methodology of the HAI Model is fully consistent
22 with the TELRIC (Total Element Long Run Incremental Cost) principles set
23 forth in the FCC Interconnection Order. AT&T and MCI used earlier versions of

1 the HAI Model as the basis for their recommended prices for unbundled network
2 elements in a large number of state jurisdictions during the latter part of 1996.
3 The HAI Model Version 5.0a was used for TELRIC pricing in the Iowa Utilities
4 Board's (IUB) arbitration order involving Sprint and several Iowa ILECs (ARB-
5 05-2, ARB-05-5, ARB-05-6). Ultimately, Sprint and the Iowa ILECs agreed to
6 use NECA transport rates for reciprocal compensation purposes, primarily
7 because the NECA rates were lower than TELRIC rates for the Iowa ILECs.

8 **Q. IF NECA RATES WERE ADOPTED IN THE IOWA UTILITES BOARD**
9 **ARBITRATION, WHY ARE RATES BASED ON THE HAI MODEL**
10 **MORE APPROPRIATE?**

11 A. Rates based on forward-looking economic costs are the standard as opposed to
12 rates based on historical or embedded costs. A reciprocal compensation rate based
13 on Swiftel's 2005 Intrastate cost study or a rate based on NECA rates (effective as
14 of July 1, 2006) as in the case of the Iowa Utilities Board arbitration, are examples
15 of rates based on historical / embedded costs. Instead of proposing these historical
16 / embedded cost rates, which are higher and would clearly favor Swiftel, the
17 proposed rates are based on TELRIC principles which have been incorporated into
18 the HAI Model.

19 **Q. DID THE FCC'S FIFTH REPORT AND ORDER CONCLUDE THAT**
20 **THE HAI MODEL WAS NOT APPROPRIATE FOR DEVELOPING UNE**
21 **SWITCHING AND TRANSPORT COSTS?**

22 A. No. Mr. Farrar's conclusion based on Paragraph 75 omits the first sentence.

23 **We conclude that the federal universal service mechanism should**
24 **incorporate, with certain modifications, the HAI 5.0 switching and**

1 **interoffice facilities module.² We find that HAI's module satisfies the**
2 **relevant criteria set forth in the *Universal Service Order*³ and would be**
3 **simpler to implement than BCPM's module.** In our evaluation of the
4 switching modules in this proceeding, we note that, for universal service
5 purposes, where cost differences caused by differing loop lengths are the
6 most significant cost factor, switching costs are less significant than they
7 would be in, for example, a cost model to determine unbundled network
8 element switching and transport costs. (emphasis added)
9

10 Based on a straightforward reading of the text, the FCC was simply evaluating the
11 HAI Model as a mechanism to determine USF, by noting that the dominant factor
12 in the total rate for USF purposes is loop cost and not switching and transport
13 cost. This in no way implies the model is inappropriate to determine UNE
14 switching and transport costs. Mr. Farrar's characterization of this paragraph to
15 say that the FCC has concluded that the HAI Model is not properly used for
16 reciprocal compensation rate development is false and misleading.

17 **Q. WOULD YOU CHARACTERIZE THE INPUTS TO THE HAI MODEL**
18 **AS "ARBITRARY" AND "SELECTIVE"?**

19 **A.** No, in fact quite the opposite approach was taken. Rather than change all of the
20 default values for switching and transport related inputs, only those inputs that
21 were directly supported by Martin Group's recent experience with procuring
22 equipment for small rural carriers and Swiftel's records were changed. As I
23 demonstrate in this testimony, the forward-looking cost differences between a
24 small carrier like Swiftel and large carriers like Sprint and the RBOCs are

² We note that Commission staff has developed interface software that will integrate HCPM's outside plant design module with the remainder of the HAI module, including HAI's outside plant design module. This interface has been made available to the public for review and comment. See *Platform Public Notice*. No commenters found fault with the interface. Accordingly, we conclude that this interface software should be used in the platform of the federal mechanism.

³ *Universal Service Order*, 12 FCC Rcd at 8913-8915 para. 250.

1 significant and should be accounted for in the rate development process.

2 **Q. PLEASE ADDRESS THE SPRINT RECOMMENDATIONS FOR**
3 **CHANGES TO THE DEFAULT VALUES IN THE HAI MODEL.**

4 **A.** I will address each one in order as presented by Mr. Farrar's original testimony. In
5 general Mr. Farrar's changes are based on large carrier profiles that do not fit
6 Swiftel's circumstances.

7 1) Switch Installation Multiplier – In 2002 Swiftel completed a switch
8 upgrade. In round numbers, Exhibits 1 shows that Swiftel paid direct costs
9 to Nortel in the amount of [BEGIN SWIFTEL CONFIDENTIAL]
10 [END SWIFTEL CONFIDENTIAL]. In round numbers, Exhibit 2
11 shows that Swiftel paid Martin Group a total of [BEGIN SWIFTEL
12 CONFIDENTIAL] [END SWIFTEL CONFIDENTIAL] for additional
13 engineering. In addition, Swiftel would have capitalized some labor costs
14 for the company's personnel during the engineering, installation and
15 provisioning of the switch. Using only the amounts paid by Swiftel to
16 Nortel and Martin Group for the engineering and installation of the switch,
17 which totaled [BEGIN SWIFTEL CONFIDENTIAL] [END
18 SWIFTEL CONFIDENTIAL] this amount is 23% of the [BEGIN
19 SWIFTEL CONFIDENTIAL] [END SWIFTEL CONFIDENTIAL]
20 paid for the switch upgrade. Clearly the default value of 10% for
21 engineering and installation is based on large carriers with in house
22 engineering and installation staff and is too low to use as Swiftel's
23 forward-looking input. The Commission should use the 1.2 factor in this

1 case because it is conservative, forward-looking and fact-based as opposed
2 to arbitrary, selective or manipulative as alleged by Mr. Farrar.

3 Power Investment – Between 2001 and 2006, Swiftel updated its entire power
4 system for its host office. Exhibit 3 is a summary of the installed costs for
5 these upgrades. Swiftel’s power system has four major components totaling
6 **[BEGIN SWIFTEL CONFIDENTIAL]** **[END SWIFTEL**
7 **CONFIDENTIAL]**
8

9 Clearly the default value of \$20,000 for power systems in a 5,000 – 25,000
10 line central office is based on large carriers with tremendous market power
11 and is too low for a forward-looking input for Swiftel. The Commission
12 should use the \$200,000 power investment in this case because it is
13 conservative, forward-looking and fact-based as opposed to arbitrary,
14 selective or manipulative as alleged by Mr. Farrar.

15 2) Switch Room Size – As shown in Exhibit 4, Swiftel records as of 12/31/05
16 show a total of **[BEGIN SWIFTEL CONFIDENTIAL]** **[END**
17 **SWIFTEL CONFIDENTIAL]** square feet of central office space
18 allocated to regulated use. This allocation would be the same one used for
19 development of Swiftel’s intrastate access rate in proceedings at this
20 Commission. Clearly the default value of 2,000 square feet central office
21 space is too low for a forward-looking input for Swiftel. The Commission
22 should use the **[BEGIN SWIFTEL CONFIDENTIAL]** **[END**
23 **SWIFTEL CONFIDENTIAL]** square feet central office space in this
24 case because it is forward-looking and fact-based as opposed to arbitrary,
25 selective or manipulative as alleged by Mr. Farrar.

26 3) Fraction of Interoffice Structure Assigned to Telephone – Based on input

1 from Swiftel staff members, since 2004 Swiftel has constructed all direct
2 buried and trenched cable using a joint construction method for electric
3 and telephone cable, hence the [BEGIN SWIFTEL CONFIDENTIAL]
4 [END SWIFTEL CONFIDENTIAL] factor for buried cable is an
5 appropriate forward-looking value for Swiftel. For cable placed in conduit,
6 only telephone cable is placed in the conduit, hence the [BEGIN
7 SWIFTEL CONFIDENTIAL] [END SWIFTEL CONFIDENTIAL]
8 factor for underground cable. The Commission should use the [BEGIN
9 SWIFTEL CONFIDENTIAL] [END SWIFTEL CONFIDENTIAL]
10 factors in this case because they are fact-based and forward-looking as
11 opposed to arbitrary, selective or manipulative as alleged by Mr. Farrar.

12 4) Cost of Capital – Debt Percent – In lines 13-15 on page 39 of Mr. Farrar’s
13 testimony, Sprint agrees to use this factor if it is proven correct. During
14 preparation of this testimony, I reviewed the Swiftel chart of accounts and
15 have recalculated Swiftel’s debt to equity ratio including the current
16 portion of long-term liabilities, intra-company short-term liabilities and
17 long-term liabilities as shown in Exhibit 5. With these changes, Swiftel’s
18 12/31/05 capital structure was [BEGIN SWIFTEL CONFIDENTIAL]
19 [END SWIFTEL CONFIDENTIAL] debt and [BEGIN SWIFTEL
20 CONFIDENTIAL] [END SWIFTEL CONFIDENTIAL]. Using this
21 capital structure, the HAI Model was re-run. The resulting HAI Model
22 outputs and recalculation of Swiftel’s reciprocal compensation rate is
23 shown in Exhibit 9. The revised rate is \$0.01281.

1 5) Depreciation – As of 12/31/05, Swiftel has used the depreciation rates and
2 corresponding economic lives for each equipment category shown in
3 Exhibit 6. These depreciation rates are identical to the rates used in
4 Swiftel’s intrastate access cost study submitted to this Commission in 2006
5 for the test year 2005. Clearly the default values for depreciation rates are
6 not representative of Swiftel’s actual rates, the rates used in other rate
7 development proceedings nor do they take into account the forward-
8 looking, shortened useful equipment life of switching and transport
9 equipment. The Commission should use the Swiftel economic lives in this
10 case because they are forward-looking and fact-based as opposed to
11 arbitrary, selective or manipulative as alleged by Mr. Farrar.

12 6) Forward-Looking Network Operations Factor – Mr. Farrar’s testimony in
13 lines 7 and 8 on page 40 proposes an arbitrary value of 75% for this factor.
14 Based on my experience with small carriers like Swiftel, the
15 implementation of new technologies has not translated to reductions in
16 staff, training expenses or operating expenses. A major difference between
17 large carriers like Sprint and small carriers like Swiftel is the fact that there
18 is no way to properly staff fractional personnel levels. From an
19 operational standpoint, Swiftel needs to have trained, competent staff
20 including redundancy for backup during vacations, holidays, illnesses,
21 medical emergencies, disabilities, death and staff turnover. Switching
22 technicians and maintenance staff are critical to maintaining the
23 unsurpassed reliability of the PSTN and cannot be staffed at fractional

1 levels via out-sourcing. In a forward-looking environment, the costs of
2 software upgrades (generic releases) and software maintenance for
3 switching systems are increasing. Our adjustment to [BEGIN SWIFTEL
4 CONFIDENTIAL] [END SWIFTEL CONFIDENTIAL] is reality for
5 a small carrier like Swiftel as opposed to arbitrary, selective or
6 manipulative as alleged by Mr. Farrar.

7 **Q. ARE THE OTHER INPUT CHANGES NOT DETAILED ABOVE BASED**
8 **ON SWIFTEL SPECIFIC, FORWARD-LOOKING INFORMATION?**

9 **A.** Yes.

10 **Q. WHY DID MARTIN GROUP USE THE DEFAULT END OFFICE**
11 **SWITCHING CONSTANT TERM?**

12 **A.** Based on costs shown in Exhibit 7, Martin Group completed forward-looking cost
13 estimates for Swiftel in conjunction with another reciprocal compensation
14 proceeding. Comparing the forward-looking costs with the original installed
15 switch costs for Swiftel shown in Exhibit 8, shows that Swiftel is not experiencing
16 anything close to a 31% decline in per line switching costs as stated in Mr. Farrar's
17 testimony in lines 11 and 12 on page 41. The Commission should use the default
18 value for this input because it is an accurate, forward-looking representation of
19 Swiftel as opposed to arbitrary, selective or manipulative as alleged by Mr. Farrar.

20 **Q. WHAT IS YOUR ASSESSMENT OF SPRINT'S CLAIM THAT THE**
21 **HOST REMOTE CLI ASSIGNMENTS SHOULD BE DEFINED AND**
22 **HOST-REMOTE ASSIGNMENT VARIABLE SHOULD BE ENABLED?**

23 **A.** Using the default value produces a [BEGIN SWIFTEL CONFIDENTIAL]

1 **[END SWIFTEL CONFIDENTIAL]** rate per minute, as revised earlier in this
2 testimony. The results based on this method yields reasonable rates as supported
3 by the fact that Swiftel's composite rate is lower than the lowest rate produced by
4 the HAI Model in the Iowa proceedings. This composite rate is also lower than
5 both the composite rate developed based on Swiftel's interstate access rates
6 (NECA) and the rates calculated as part of Swiftel's intrastate cost study.

7 It is my opinion if the host/remote default is revised to be enabled, then the
8 host/remote transport should be billed based on NECA's rate structure for
9 host remote switch arrangements. NECA members bill a termination at each
10 end of the transport leg. Therefore Swiftel would bill two terminal
11 terminations with each segment of transport, one at the host and one at the
12 remote.

13 **Q. WHAT IS YOUR ASSESSMENT OF SPRINT'S PROPOSAL TO USE**
14 **BILL AND KEEP FOR RECIPROCAL COMPENSATION?**

15 **A.** Especially in a start up situation that has no historical data to back up the
16 assumption, it is perfectly logical and economical for the carriers to measure the
17 traffic and depending upon the dollar amounts to be exchanged, either complete
18 the payments to each other or hold the billings until a mutually agreed upon dollar
19 threshold is reached.

20 The parties, of course, should bill at a rate established by the Commission.

21 **Q. WHY DO YOU BELIEVE THAT THE FCC HAS NOT MANDATED**
22 **THAT SWIFTEL ESTABLISH A SINGLE POI FOR THE SOUTH**
23 **DAKOTA LATA?**

1 **A.** Mr. Farrar conveniently cites a requirement under the interconnection rules of
2 Section 251(c)(2)(B) in support of his assertion. Interestingly enough, Sprint has
3 purposely not requested interconnection under the provisions of Section 251(c).
4 They have only requested interconnection under Sections 251(a) and (b), which do
5 not contain the technically feasible point in the network language. In addition,
6 South Dakota is unusual in this regard since it is a single LATA state. As a result
7 of this characteristic, Sprint could move its single LATA POI to the Qwest tandem
8 in Rapid City. This scenario would force Swiftel to interconnect at the furthest
9 point from its network in the LATA. The Qwest tandem in Rapid City is nearly
10 *seven times further from Swiftel's serving territory than Sprint's Sioux Falls POP.*
11 Since the interconnection trunks are distance sensitive, this scenario would
12 increase the costs identified in Swiftel's petition for suspension request (TC07-
13 007), which assumed an interconnection point in Sioux Falls, also by a factor of
14 *seven which would clearly be economically burdensome for Swiftel.*

15 **Q. CAN YOU SUMMARIZE YOUR TESTIMONY?**

16 **A.** Yes, I summarize my comments about the HAI Model, bill and keep and finally
17 the single LATA POI issue. First, the HAI Model is designed to develop UNE
18 costs, including those for switching and transport costs that are used to derive a
19 reciprocal compensation rate, and has been used in several states including
20 Virginia, Nevada, and California for that purpose. Second, the changes to the
21 default inputs used in the model are Swiftel specific and forward-looking and
22 *should be used in the derivation of Swiftel's reciprocal compensation rate.* Third,
23 no decrease in the default value for the End Office Switching Constant Term is

1 warranted because a Swiftel specific forward-looking pricing study completed in
2 late 2002 demonstrated that Swiftel's switching costs had not declined since 1995
3 when this input was set.

4 I recommend that the parties measure all reciprocal compensation traffic and bill at
5 the rate established by this Commission.

6 It is my opinion that allowing a LATA-wide POI in South Dakota could produce
7 transport obligations for Swiftel that would be economically burdensome.

8 **Q. DOES THIS COMPLETE YOUR TESTIMONY?**

9 **A.** Yes it does.