



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

Mail Stop 3720

September 12, 2007

Rian J. Wren
President and Chief Executive Officer
Neutral Tandem, Inc.
One South Wacker Drive
Suite 200
Chicago, IL 60606

Re: **Neutral Tandem, Inc.**
Registration Statement on Form S-1/A
Amended on August 13, 2007
File no. 333-140127

Dear Mr. Wren:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with supplemental information so we may better understand your disclosure. After reviewing this information, we may or may not raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

General

1. On page two and elsewhere, you cite the Local Exchange Routing Guide, an industry standard guide maintained by Telcordia, as the source of certain industry information. Please provide us with marked copies of the Local Exchange

Routing Guide to support such information. Confirm for us that this document is publicly available.

Prospectus Summary, page 1

2. We reissue prior comment six. Your summary continues to include detailed and redundant information about your business. For example, is some of the information under “Our Industry” so material that it warrants summary disclosure? Also, you repeat information appearing under “Our Company” and “Our Industry.” Please revise to reduce the length of and amount of detail in your summary.

Our Company, page 1

3. We note your revisions in response to prior comment five. However, where you state a percentage increase in revenues from the prior comparable period, please revise to also state the percentage change in net income from such prior period. This disclosure should be revised on pages 29 to 30 and 47 as well.
4. In addition to disclosing the portion of your revenues attributable to the different categories of customers generally, please revise your references to the names of specific customers to explain their significance to you in terms of revenues. See prior comment eight.

Our Strategy, page 4

5. Disclose the basis for your characterization of your network as “unique.”
6. You state that after expansion into 24 additional markets, you will have a potential addressable market of 482 million telephone numbers assigned to competitive carriers in “those markets.” However, on page 53 you state that the expansion into new markets will increase your potential addressable market to 482 million telephone numbers. Please revise your disclosure on page four as well as on page 51 to clarify.

Summary Condensed Consolidated Financial and Other Data, page 7

Selected Historical Consolidated Financial and Other Data, page 28

7. We note your response to prior comments 11 and 43. In addition to the “Pro Forma As Adjusted” column, please present separately a “pro forma” column which excludes the effects of the initial public offering. This pro forma information should only reflect the automatic conversion of your preferred convertible stock to common stock and should be consistent with the pro forma information presented on the face of your balance sheet on page F-3.

8. We note your response to prior comments 11 and 44. It appears that the automatic conversion of your preferred convertible stock is included in the calculation of the diluted earnings per share. As previously requested, please present pro forma basic and diluted earnings per share giving effect to the automatic conversion of preferred convertible stock for the most recent fiscal year and interim period. Also, present pro forma earnings (loss) per share giving effect to the reverse stock split for all periods presented when it has been “legally effected.” Further, revise the MD&A to discuss this split including the pro forma effects of the split.

Summary Condensed Consolidated Financial and Other Data, page 7

9. We note your response to prior comment 12. As previously requested, please disclose how EBITDA assists in analyzing and benchmarking the performance and value of your business. Also, disclose why EBITDA is meaningful for investors to “analyze operating results without the impact of depreciation and amortization, interest and income tax expense” and how EBITDA “provides insight into [y]our profitability trends.”

Risk Factors, page 8

During the six months ended June 30, 2007, we delivered 58% of our terminating traffic to five carriers., page 13

10. Please revise to include a cross-reference to discussion elsewhere in your prospectus of the Level 3 dispute.

Use of Proceeds, page 24

11. Despite your cross reference to the MD&A and Business sections added in response to comment 15, those sections contain only general discussions of your planned expansion into new markets. Please revise your MD&A to include a detailed discussion of the specific components of your planned business expansion, such as purchasing new switch equipment and hiring additional personnel, and the estimated costs associated with each component (to the extent practicable).

Management’s Discussion and Analysis of Financial Condition and Results of Operations, page 29

Financial Operation Overview, page 30

12. Provide an expanded discussion (quantified, if possible) of any expected increases in expenses described through this section, to the extent known. For example, address the “significant future expenses” associated with the development of new

- services, deployment of additional infrastructure, expansion into new markets and legal costs. We note your revised disclosure in response to prior comment 18 regarding the costs associated with a single switch start-up on page 30, but revise to discuss and quantify these and the other categories of significant future expenses identified in the context of your plan to expand into 24 new markets in 12 months. To the extent material and practicable, please revise to also discuss and quantify the legal costs associated with the Level 3 disputes.
13. Revise the overview discussion under “Revenue” to address whether management expects the decrease in the average free per minute to continue in future periods and, if so, the impact this will have on the company’s revenues.

Stock-based Compensation, page 34

14. We note your response to prior comments 24 and 53. Please incorporate the supplemental information in your revised disclosure of factors that affected the fair value of your common stock as of each valuation date.
15. We note your response to prior comment 28. We understand that you will disclose the significant factors contributing to the difference, if any, between the IPO price and the fair value of your stock as of each grant date during the last twelve months in a subsequent amendment as such information becomes available. We may have additional comments after we review the disclosures.
16. Please refer to your disclosure in the penultimate paragraph on page 36. It appears that you employed a different stock valuation methodology in 2006 which took into consideration growth in revenue and other factors. Please identify the valuation methodology that you utilized and disclose how it is weighted in relation to other methodologies utilized if any, and if used in lieu of the income and market approaches, why it is more appropriate.

Results of Operations, page 38

17. Please expand your MD&A to assess and quantify the potential financial impact of adverse outcomes with respect to your Level 3 disputes. We note that you terminate 10.8% of your traffic to Level 3, but please describe and quantify the significance in terms of financial performance of your ability to terminate traffic to Level 3. Also discuss the fact that you no longer terminate traffic to Level 3 in “additional states,” as described on page 63, and address the impact on your results of operations.

Year Ended December 31, 2006 Compared to Year Ended December 31, 2005, page 40

18. We note that, in response to prior comment 30, you quantified the reduced minutes that you processed for the combined SBC and AT&T entity on page 10. To the extent material, please also revise your disclosure on page 40 to include this information and quantify its impact as an offset to your revenue increase.

Impairment of fixed assets, page 41

19. Please tell us how you are accounting for the remaining \$2.4 million carrying value of the equipment under SFAS 144. We note that the new equipment became operational in February and March of 2007.

Liquidity and Capital Resources, page 42

20. We note your revised disclosure in response to prior comment 31. Please revise further to discuss and explain what you mean by “sufficient to fund our operations for the foreseeable future.” For example, does this take into account your specific growth plans over the next 12 months? Does it take into account any more general growth plans beyond 12 months? Your disclosure should give investors a better understanding of the liquidity needs, including their timing, that are considered “foreseeable” by management in both the short and long-term.

Contractual Cash Obligations, page 45

21. Please tell us why you did not include purchase commitments, if any, in the table herein.

Our Business, page 47

22. We note your addition of the phrase “and other providers” under the bullet-point titled “Expand our customer base” on page 52 and the phrase “other providers and certain end users” in the Summary on page 1 and the new first sentence under the heading “Our Customers” on page 52. Since most of your disclosure focuses on your services to competitive carriers, please revise to briefly describe the nature of such other providers and end users and their significance to your business.

Compensation Discussion and Analysis, page 68

23. We note that your Compensation Discussion and Analysis has not changed significantly since your original filing. Instruction 2 to Regulation S-K Item 402(b) states that CD&A should cover certain actions regarding executive compensation that were taken after the end of the most recent fiscal year. Please confirm for us in your response letter that you do not believe additional disclosure is necessary or, alternatively, revise your CD&A accordingly.

Our Compensation Methodology, page 68

24. Please revise to identify the specific elements of compensation benchmarked, including whether the consultant benchmarked total compensation. Please also revise to identify the members of the peer group developed by the consultant and used in the benchmarking analyses. We note that you retained the consultant in 2005. Revise to indicate whether you continue to work with the consultant and how benchmarking is factored into your more recent compensation decisions and is expected to be factored into your future decisions.

Elements of Compensation, page 68

25. Please revise to quantify the specific company performance goals used as factors in determining annual cash incentive bonuses, stock option grants and otherwise. Disclose the objective targets and minimum threshold levels that must be reached for payment to the executives to the extent you have not done so already. See Item 402(b)(2)(v) of Regulation S-K. To the extent that you believe disclosure of the targets would result in competitive harm such that the targets may be omitted under Instruction 4 to Item 402(b) of Regulation S-K, provide us in your response letter with a detailed analysis as to why the information should be afforded confidential treatment. Then, in your filing, to the extent that you have a sufficient basis to keep the information confidential, discuss how difficult it would be for the executive or how likely it would be for the company to achieve the undisclosed performance target or threshold levels. See Instruction 4 to Item 402(b) of Regulation S-K. Note that general statements regarding the level of difficulty or ease associated with achieving performance measures are not sufficient. In discussing how difficult it will be for an executive or how likely it will be for the company to achieve the target levels or other factors, provide as much detail as necessary without providing information that would result in competitive harm.
26. Please revise to explain in more detail the individual annual performance objectives of each of the named executive officers and how such objectives are measured in considering the annual cash incentive bonuses.
27. Please revise to explain in more detail how the actual bonus amounts and stock option grants for the named executive officers for the year ended December 31, 2006 were determined, including, but not limited to, the achievement and/or lack of achievement of performance goals and targets and the individual performance of the named executive officers.

28. Please revise to discuss the difference in compensation levels and types among the named executive officers and the reasons for those differences, including how such differences fit into the company's overall compensation objectives and philosophies. For example, you should explain the following:
- the differences in salaries, bonuses awarded, and stock options awarded;
 - why certain of your named executive officers receive perquisites and others do not; and
 - why Mr. Lopez is compensated quarterly and the other named executive officers are not.

These are merely examples. We refer you to Securities Act Release 8732A, Section II.B.1.

Role of Executive Officers in Executive Compensation, page 72

29. You mention management's recommendations to the Compensation Committee on page 68 and elsewhere. Please revise to clarify the role management plays in recommending compensation and whether or not named executive officers participate in compensation analyses or decisions affecting their own compensation.
30. You note on page 74 that, in addition to the authority of the Compensation Committee, the full board of directors also has authority to administer the 2007 Long-Term Equity Incentive Plan. With a view towards disclosure, please advise us in your response letter whether the board of directors has similar authority over all compensation decisions.

2007 Long-Term Equity Incentive Plan, page 74

31. Please revise to discuss the factors the Compensation Committee will consider in determining which forms of compensation to award under the 2007 Long-Term Equity Incentive Plan. Please also revise to explain how each of the different forms of compensation permitted under the Plan fit into the company's overall compensation objectives and philosophies.

Summary Compensation Table, page 78

32. Please revise footnote 1 and, as applicable, the Option Awards column to reflect the amount recognized for financial statement reporting purposes in accordance with FAS 123(R), rather than the grant date fair value. Refer to Regulation S-K Item 402(c)(2)(vi) and the Instruction thereto.

33. Please revise to indicate and itemize by footnote the compensation that Messrs. Hynes and Wren received for their service as directors. Refer to Instruction 3 to Regulation S-K Item 402(c).

Outstanding Equity Awards at Fiscal Year End, page 79

34. Please revise footnote 1 to clarify that the market value of your stock was calculated as of the end of the last completed fiscal year as required by Instruction 3 to Regulation S-K Item 402(f)(2). Additionally, since your stock did not have a closing market price as of such date, revise to explain how you determined such price or include a cross-reference to disclosure of your methodology elsewhere in the prospectus.
35. Please revise to disclose by footnote to the appropriate columns the vesting dates for each of the outstanding option and stock awards disclosed in this table. Refer to Instruction 2 to Regulation S-K Item 402(f)(2).

Option Exercises and Stock Vested, page 79

36. Please revise footnote 1 and, as applicable, the amounts disclosed in the table to clarify that the values realized on vesting reported in the table were calculated using the market value of your stock as of the vesting dates as required by Instruction 1 to Regulation S-K Item 402(g)(2). Additionally, revise to explain how you determined such market value or include a cross-reference to disclosure of your methodology elsewhere in the prospectus.

Potential Payments Upon Termination, page 79

Potential Payments Upon Change of Control and Termination, page 80

37. Please revise your disclosure to quantify the value of the benefits disclosed in these sections using the market value of your stock as of the end of your last completed fiscal year. Please also provide disclosure of your methodology in determining the market value of your stock or include an appropriate cross-reference.

Director Compensation and Benefits, page 82

38. Please revise footnote 1 to the table and, as applicable, the Option Awards column to reflect the amount recognized for financial statement reporting purposes in accordance with FAS 123(R), rather than the grant date fair value. Refer to Regulation S-K Item 402(k)(2)(iv) and the Instruction thereto.
39. Please revise to disclose by footnote: (i) the grant date fair value of the awards in the table; and (ii) the aggregate number of outstanding awards for each director. Refer to the Instruction to Regulation S-K Item 402(k)(2)(iii) and (iv).

Principal and Selling Shareholders, page 87

40. We reference the disclosure appearing in the second paragraph. Advise us why the last column does not include “any shares issuable upon exercise of warrants or options” to the extent those instruments are exercisable within 60 days. Refer to Exchange Act Rule 13d-3(d)(1)(i). In addition, it is unclear why you refer to “warrants to be exercised by certain selling stockholders.” In this regard, you state in your response to prior comment ten that all warrants have been issued to Venture Lending & Leasing, yet that party is not listed in the table as a selling stockholder.

The Reclassification, page 90

41. Please state here the applicable original issue prices for each share of preferred stock of each series and the applicable series conversion prices. We note that you provided this information in your response to prior comment 38, but did not include it in your revised disclosure. Also disclose the anticipated conversion ratio upon the completion of the IPO.

Underwriters, page 99

Directed Share Program, page 101

42. Please revise to state whether broker-dealers registered with the NASD will be able to participate in the directed share program.

Consolidated Statements of Operations, page F-4

43. We note your response to prior comments 11 and 44. As previously requested, please present pro forma basic and diluted net income per share giving effect to the automatic conversion of preferred convertible stock for the most recent fiscal year. Also, present pro forma net income per share giving effect to the reverse stock split for all periods presented when it has been “legally effected.”

Note 6. Debt, page F-14

44. We note your response to prior comment 32. We understand that a two-thirds majority vote of shareholders of all the preferred convertible shares may require you to redeem all or any portion of these shares any time after February 1, 2011. In this regard, please tell us how you considered FSP 150-5 and concluded that the warrants are not required to be classified as a liability.
45. Please disclose that you were in compliance with all the covenants under your debt agreements during all periods presented.

8. Preferred Stock, page F-16

46. We note that the conversion price is based on a fixed price adjusted for the conversion price in effect at the time of conversion. Please tell us the nature of the adjusted conversion price and how the price is determined.

10. Verizon, page F-19

47. We note your response to prior comment 51. Please disclose your accounting policy for the accrual of legal costs related to the loss contingency. The policy should indicate which legal costs are accrued and the circumstances under which an accrual is required. Refer to EITF D-77. Also, it appears that the disputed amount of \$1.4 million is less than the amount disclosed in your response. Please revise or advise.

Part II

Item 16. Exhibits and Financial Statement Schedules, page II-4

48. Please remember that we will need adequate time to review and comment upon your exhibits that have not been filed or submitted yet.
49. Since exhibit 10.53 is not the subject of a confidential treatment request, please revise your exhibit list to remove the annotation to the contrary.
50. We note your response to prior comment 33. Regardless of your belief that there are no "significant differences" between the form of customer agreement filed as exhibit 10.32 and the company's master service agreement with T-Mobile, you should file any and all contracts with T-Mobile as exhibits to the registration statement or advise us why you are not required to do so under Item 601(b)(10) of Regulation S-K.

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As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested supplemental information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

Mr. Rian J. Wren
Neutral Tandem, Inc.
September 12, 2007
Page 11

You may contact Kathryn Jacobson, Staff Accountant, at (202) 551-3365 or Dean Suehiro, Senior Staff Accountant, at (202) 551-3810 if you have questions regarding comments on the financial statements and related matters. Please contact John Harrington, Attorney-Adviser, at (202) 551-3576, or me at (202) 551-3810 with any other questions.

Sincerely,

/s/ Michele Anderson
Legal Branch Chief

cc: Gerald T. Nowak
Andrew J. Terry
Theodore A. Peto
Kirkland & Ellis LLP
Via facsimile: (312) 861-2200