



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-0303

Mail Stop 4561

August 31, 2006

Andrew D. Ory
Acme Packet, Inc.
71 Third Avenue
Burlington, Massachusetts 01803

Re: **Acme Packet, Inc.**
Amended Form S-1
Filed August 1, 2006
File No. 333-134683

Dear Mr. Ory,

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 information so we may better understand your disclosure. After reviewing this information, we may 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.

Prospectus Gatefold

1. Please revise your graphics to include a legend that identifies each symbol.

Prospectus Summary, page 1

2. We refer you to prior comment 7 and note the revisions to your prospectus as a result of our prior comment. In this regard, we note that you discuss cable service providers, wireline and mobile wireless telecommunications companies as "interactive communications service providers," in the third paragraph under the subsection "Overview." Please revise your Prospectus Summary to clarify the term "interactive communications service providers" to explain that the providers are made

up of cable service providers, wireline and mobile wireless telecommunications companies the first time you use this term.

Risk Factors, page 7

We rely on many distribution partners to assist in selling our products . . . , page 13

3. We refer you to prior comment 13. You disclose that many aspects of your “partner relationships are contractual in nature.” Please revise your disclosure to describe the nature of your contractual relationships with your distribution partners. For example, disclose any agreements that Acme has entered into with the referenced distribution partners and the general terms under which the agreements have been established. Also, to the extent applicable, revise to disclose whether you are dependent upon one or more distribution partners and the risks that result from your dependence. If you continue to believe that Acme is not materially dependent upon any one distribution partner, please advise of the basis of its belief in response to this comment.

Our dependence on outside contractors for critical manufacturing services . . . , page 19

4. Although we understand that Acme does not have written agreements with Jabil Circuit, Tyco Electronics or Benchmark Electronics, the disclosure should better describe any arrangements or agreements with the manufacturers it is dependent upon, whether written or otherwise. For example, we note that your disclosure on page 71 states that “products are purchased pursuant to purchase orders.” In this regard, the nature of the relationship between Acme and its manufacturers is necessary to evaluate the risk factor.

We purchase component parts used in our products from single or limited sources . . . , page 18

5. We refer you to prior comment 14. Please revise your risk factor to better describe the nature of the contracts between Acme and its suppliers of component parts. For example, expand your disclosure to describe the general provisions of your supply contracts that do not have a term greater than a year. If these contracts do not require that your suppliers fulfill any of your purchase orders, what provisions make up your supply contracts with your suppliers? Also, please advise of the basis for your belief that “[t]he Company does not believe that any of its agreements with its component vendors are material pursuant to Item 601(b)(10) of Regulation S-K,” as noted in your response to prior comment 14.

Management's Discussion and Analysis of Financial Conditions and Results of Operations, page 31

Overview, page 32

Background, page 32

6. We refer you to prior comment 18. We direct your attention to the disclosure that "new technologies may render the functionality of the SBC unnecessary." Please revise your disclosure to expand upon this statement and discuss the competing technologies that could render the functionality of the SBC unnecessary and the viability of these other technologies. This disclosure should provide a materially complete description of the future of the SBC industry and its future viability.

Results of Operations, page 39

Comparison of Six Months Ended June 30, 2005 and 2006, page 40

7. You disclose that Acme increased product sales both domestically and internationally. Please quantify. Similarly, quantify the amount that revenues increased from United States and Canadian customers. Further, your disclosure should quantify, where possible, the increase in direct product revenue and indirect revenue, respectively, as it relates to the concentration of your domestic and international revenues. Disclosure pursuant to other periods should be described in a similar manner.
8. Please expand your disclosure to discuss the "large deployments" that occurred during this period and quantify the amount of revenue attributable to these deployments. To the extent that "the growth in [y]our installed product base" resulted from these deployments, please explain. Additionally, your disclosure should discuss the other material reasons for the \$18.6 million increase in product revenue.

Comparison of Years Ended December 31, 2004 and 2005, page 44

9. We note your response to prior comment 21. As previously requested, your disclosure should be expanded to provide a materially complete discussion regarding the changes in your revenue internationally for each period disclosed. For example, we note that the percentage of your product revenue realized through sales in the United States and Canada have increased 9% from the year ended December 31, 2004 to the year ended December 31, 2005, 10% from the period ended June 30, 2005 to the period ended June 30, 2006 and 26% from the year ended December 31, 2003 to the year ended December 31, 2004. Please revise to explain with more specificity why there was a material change in the revenue realized through sales in the United

States and Canada and discuss your decreasing revenue generated from countries outside North America.

10. We note your response to prior comment 22. We continue to believe that your disclosure should be revised to further discuss the changes in your product software configuration mix. In lieu of quantifying your average selling price, you may provide narrative disclosure that describes the impact of your changing product configuration mix on your revenue. For example, as you note in your response, explain how the product configuration mix impacts the selling price of your products and discuss the relationship between the changing configuration mix and your increased revenue. Although we note your response to prior comment 20, it appears that a discussion regarding the mix of new customers versus existing customers may be necessary to provide a materially complete discussion of the changes in your product configuration mix which has contributed to the increase in product revenue.
11. Other than a change in the configuration mix of your products, it is unclear why your product revenue increased \$16.4 million in 2005. Please disclose any additional reasons for the increased revenue in 2005. In this regard, your disclosure should include a meaningful discussion to explain the cause of your increased revenues, including, but not limited to new products or increased sales of specific products and/or changes in the market for your products. To the extent applicable, corresponding revisions should be made to the disclosure regarding other periods.
12. We refer you to prior comment 24. We continue to note that product gross margin increased to 10% due to reduced per system costs paid to your third party manufacturer and increased percentage of revenue generated by your direct sales channel. Please revise to discuss the reasons for these changes. Also, provide appropriate trend information discussing your increased gross margin, including a discussion of your reduced per system costs and increasing direct sales that may continue to impact your gross margin moving forward. For example, what is the impact on your gross margin if the mix between direct sales and indirect sales continue to change? How is your increasing direct sales consistent with your intent to increase indirect sales discussed on page 69? Further, revise to explain why your gross margin on maintenance, support and service revenue was not accompanied by an increase in costs. Similar disclosure should be included for the discussion of your cost of revenue and gross profit for other periods.
13. You disclose on page 44 that in 2004, a “substantial portion” of your product revenue was realized through indirect sales in Asia and Europe. Please quantify the revenue increase that was attributable to indirect sales in Asia and Europe. Also, revise to disclose the reasons that revenue increased in these particular areas. See comment 10, above.

Business, page 57

General

14. We refer you to prior comment 27 and note your response that it is Acme's belief that the disclosure of the dollar amount of backlog orders would be misleading because all orders may be cancelled at any time prior to shipment. In view of your response, it appears that your concerns regarding the disclosure of your backlog may be addressed by explanatory language in your prospectus. Please revise accordingly. See Item 101(c)(1)(viii) of Regulation S-K.
15. We refer you to your response to prior comment 28. Please revise your disclosure to provide a cross-reference to the graphic illustration of network interconnects and locations that is on the inside front cover of the prospectus.
16. We refer you to prior comment 29. Although you have revised your prospectus to provide further explanation of some referenced industry terms, it appears that there is additional disclosure that requires explanation. For example, for foundation purposes, please revise to explain the term Internet Protocol. Due to the nature of your business and your products a cursory understanding of the term Internet Protocol is necessary. For example, it should be clear from your disclosure that Internet Protocol is the method by which data is sent from one computer to another on the Internet. Further, revise your disclosure to explain the term "carrier-class platform" as it relates to the SBCs you have designed. We remind you that explanatory language regarding industry terms should be disclosed the first time the term is used in the prospectus.

Our Products, page 65

17. You discuss signaling and media control on pages 60 and 67. Please revise to explain the signaling function and the media function and clarify the distinction between having the media control and the signaling control supported on the same hardware platform and on two separate hardware platforms.

Distribution Partners, page 67

18. We note your response to prior comment 35. Please advise of the basis for your belief that Acme is not materially dependent on any one of its distribution partners and that no individual agreement with a distribution partner is material pursuant to 601(b)(10) of Regulation S-K.
19. We direct you to the discussion regarding the agreements typically entered into with your distribution partners. Please expand your discussion to disclose the typical

duration of the agreements. If the agreements are “at-will” or do not have a pre-determined duration, please disclose.

20. We refer you to the partial listing of your distributors and resellers. Please revise to disclose the criteria that was used by Acme to choose the named distributors and resellers. Similarly, revise to disclose the criteria used to choose the partial listing of your end-users named on page 70.

Customers, page 67

21. We refer you to prior comment 36. In response to this comment, you advise that Acme has not had sales in any one of the 55 individual foreign countries that generated a significant or material portion of its revenues during any one of the past three fiscal years. Please advise of the basis of your belief. Your response should advise of the percentage of sales to all countries over 10% and be accompanied by an analysis why sales to these countries are not material. See Rule 418 to the Securities Act. In this regard, we direct you to the disclosure on page 44 that in 2004, a substantial portion of your product revenue was realized through indirect sales channels in Japan and Italy. See Item 101(d)(1)(C) of Regulation S-K.
22. We note your response to prior comment 37. Please disclose that Acme has not entered into any purchase agreements with its customers and that purchase orders are utilized to sell its products. Also, your disclosure should briefly describe the relationship that is established between Acme and its customers as a result of the fact that purchase orders are utilized.

Manufacturing, page 68

23. You disclose that Acme contracts “substantially all of [its] manufacturing to Jabil Circuit.” Please revise to quantify. Also, although you disclose that Acme does “not have long-term supply contracts with any of [its] component suppliers,” the nature of the relationship between Acme and its component suppliers is unclear. Please revise to explain this relationship.

Intellectual Property, page 72

24. Please revise to disclose the number of provisional patent applications and separately disclose the number of non-provisional patent applications. Also, explain the purpose and the benefits of filing a non-provisional rather than a provisional application.

Principal and Selling Stockholders, page 85

25. We note your response to prior comment 43. Please advise of the natural persons that hold the voting and dispositive power of Advanced Technology Ventures VII L.P and

Canaan Equity Partners II LLC. For example, to the extent that either entity is held by a majority shareholder that exerts voting and/or dispositive power, please advise. Alternatively, if the entities are controlled by a board or designees, please advise of the size of the board and/or the number of designees and their identities. See Rule 418 to the Securities Act. Also, be advised that we continue to believe that the disclosure of the natural persons who exercise voting and/or dispositive powers over the shares held of record by those entities not publicly held must be disclosed in the registration statement. See Rule 13d-3, Item 507 of Regulation S-K, Interp. I.60 of Telephone Interp. Manual (July 1997) and Interp.4S of Reg. S-K section of the supplement to the Telephone Interp. Manual (March 1999). In this regard, we refer you to Instruction C to Schedule 13D.

Shares Eligible for Future Sale, Page 92

Lock-Up Agreements, page 93

26. We refer you to your response to prior comment 44. Although we understand that Acme is not a party to the lock-up agreement and does not have rights or obligations under the lock-up agreement, Item 601(b)(10)(i) of Regulation S-K states that “[o]nly contracts need be filed as to which the registrant or subsidiary of the registrant is a party or has succeeded to a party by assumption or assignment *or in which the registrant or such subsidiary has a beneficial interest*” (emphasis added). Accordingly, upon re-filing your registration statement, please file a form of lock-up agreement.

Stock-Based Compensation, page F-14

27. Tell us why disclosure was added regarding the impact of adopting SFAS 123(R) on the Company’s operations for periods after June 30, 2006. Indicate the factors that you cannot predict with certainty and indicate how these factors impact your historical financial statements. In addition, tell us how your critical accounting policy disclosures address these factors.

Net Income (Loss) Per Share, page F-17

28. We note your response to prior comment no. 49 of our letter dated June 29, 2006 and the revised disclosures within this footnote. Provide your calculation for allocating net income to basic and diluted for both preferred stockholders and common stockholders. Explain why the amounts allocated under “basic” as compared to “diluted” are different. If the difference is the result of applying the “as-if-converted” method, explain why the weighted-average shares of common stock outstanding used in computing income per share does not include the conversion of preferred shares “as-if-converted.” In addition, tell us why the 125,000 warrants are not being

included in the weighted-average shares of common stock outstanding used to compute the diluted income per share.

Stock-Based Compensation, pages 37 – 39

29. We have considered your response to comment 51 of our letter dated June 29, 2006 and have the following comments:

- Expand the table on page 38 to indicate whether the valuation used to determine the fair value of the equity instruments granted on each grant date was contemporaneous or retrospective. See paragraph 179b of the AICPA Practice Aid.
- Tell us why the multiple of revenues used in the December 23, 2005 Report was 2.58 while the multiple of revenue used in both the March 15, and May 15, 2006 Report was 4.4. That is, explain why this assumption changed.
- Explain why you apply the “discount for lack of marketability” to the Weighted Value instead of only to the “remaining private” value. We refer you to Section I27 and I28 and S8.4.2 of the AICPA Practice Aid that applies the discount to value assigned for remaining private only.
- Refer to the “Probability Weighted Value per Common Share” analysis in the valuation report dated May 15, 2006. Explain why you only assigned a probability of 60% for an IPO when the value assigned is significantly more than Sale above LP. Indicate how this percentage correlates to the stage of the IPO process for the company.

30. We have considered your response to comment 55 of our letter dated June 29, 2006 and have the following comments:

- a) Expand your disclosures to incorporate a summary of your response in order to explain the differences between the fair values of the underlying common stock at each valuation date, including the difference between the most recent fair value and the midpoint of your IPO offering range. In addition, your response should also address the difference between the recent fair value and the midpoint of your IPO offering range.
- b) Your response to comment 55 refers us to your response to comment 51. It does not appear that you have revised your disclosures, as requested. Please revise to provide the following information for each issuance of equity instruments on a grant date for which you did not obtain contemporaneous valuations performed by an unrelated valuation specialist. See paragraph 182 of the Practice Aid.

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- Discuss the significant factors, assumptions, and methodologies used in determining the fair value of the underlying common stock and
- Discuss each significant factor contributing to the difference between the fair value as of the date of each grant and the fair value as determined by a contemporaneous valuation by an unrelated valuation specialist obtained subsequent to the grants but prior to the IPO; and
- Disclose the valuation alternative selected for each grant date and the reason management chose not to obtain a contemporaneous valuation by an unrelated valuation specialist, if one was not obtained.

* * * *

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 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.

We direct your attention to Rule 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

You may contact Tammy Tangen at (202) 551-3443 or Stephen Krikorian at (202) 551-3488 if you have questions regarding comments on the financial statements and related matters. Please contact Jeffrey Werbit at (202) 551-3456, Anne Nguyen Parker at (202) 551-3611, or me at (202) 551-3462 with any other questions.

Sincerely,

Mark P. Shuman
Branch Chief – Legal

cc: Julio E. Vega, Esquire
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Andrew D. Ory
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