



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

Mail Stop 6010

December 10, 2007

Via Facsimile and U.S. Mail

Mr. Randall Gausman
Chief Financial Officer
Rae Systems Inc.
3775 North First Street
San Jose, CA 95134

**Re: Rae Systems Inc.
Form 10-K for the Year Ended December 31, 2006
Form 10-Q for the Quarter Ended September 30, 2007
File No. 001-31783**

Dear Mr. Gausman:

We have reviewed your filings and your response letter dated November 7, 2007 and we have the following comments. We have limited our review of your filing to those items we have addressed in our comments. Where indicated, we think you should revise your documents in future filings in response to these comments. If you disagree, we will consider your explanation as to why our comments are 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 on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the Year Ended December 31, 2006

Consolidated Financial Statements, page F-1

Notes to Consolidated Financial Statements, page F-6

Note 8. Income Taxes, page F-18

1. We note your response to prior comment 1. We note that your analysis excludes the impact of the loss from the abandonment of a lease at your headquarters in evaluating whether your deferred tax assets are more likely than not to be realized. However, we note in the nine months ended September 30, 2007, you recorded a gain of \$595,000 relating to an adjustment to the lease abandonment accrual. Please explain to us how you have considered this non-recurring gain in your analysis for the projected 2007 results. If you have not considered this item, please revise your 2007 analysis to give consideration to this gain or tell us why you do not believe it warrants consideration in your analysis.
2. Further to the above, please confirm to us that you have also considered any “non-recurring” gains that are not necessarily indicative of future results.
3. We note that as of December 31, 2006, your four-year average adjusted income was \$1,087,000. Your projected amounts for 2007 indicate a four-year average adjusted income of \$394,000. In addition to the analysis provided in response to prior comment 1, please explain to us how management has considered the negative trend in your average adjusted income in reaching a conclusion that it is more likely than not that all of your deferred tax assets will be realizable.
4. We note your disclosures on page 19 of your September 30, 2007 Form 10-Q related to the determination of your valuation allowance for your deferred tax assets. Please revise this disclosure in future filings to discuss in greater detail the significant estimates and judgments that you make with respect to your deferred tax asset. In light of the current negative evidence regarding the future realization of your deferred tax assets, you should discuss the specific compensating positive factors that you considered in reaching your conclusion that it is more likely than not that your deferred tax asset will be realizable.

Mr. Randall Gausman
Rae Systems Inc.
December 10, 2007
Page 3

Item I. Financial Information, page 3

Notes to Condensed Consolidated Financial Statements, page 6

Note 15. Discontinued Operations, page 15

5. We note that your Board of Directors has approved the discontinuation of your mobile DVR business in order to reduce expenses. We further note that you intend to keep the acquired intangible property and to liquidate the tangible assets. Finally, it appears that you consider the majority of the assets of this business to have zero value. Please explain to us how your presentation of this business as a discontinued operation complies with paragraphs 27 and 30-44 of SFAS 144.
6. Further to the above, please explain to us the major components of the loss from discontinued operations for the nine months ended September 30, 2007. Explain how you have treated personnel expenses for employees who were reassigned for purposes of your discontinued operations presentation.

You may contact Tara Harkins, Staff Accountant, at (202) 551-3639 or me at (202) 551-3643 if you have questions regarding these comments. In this regard, do not hesitate to contact Martin James, Senior Assistant Chief Accountant, at (202) 551-3671.

Sincerely,

Kevin Vaughn
Branch Chief