

August 21, 2007

Mail Stop 3561

By U.S. Mail and facsimile to (512) 683-6913

James Truchard
Chief Executive Officer
National Instruments Corporation
11500 North Mopac Expressway
Austin, TX 78759

**Re: National Instruments Corporation
Definitive 14A
Filed April 2, 2007
File No. 0-25426**

Dear Mr. Truchard:

We have limited our review of your definitive proxy statement to your executive compensation and other related disclosure and have the following comments. Our review of your filing is part of the Division's focused review of executive compensation disclosure.

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 filings. 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 me at the telephone number listed at the end of this letter.

In some comments we have asked you to provide us with additional information so we may better understand your disclosure. Please do so within the time frame set forth below. You should comply with the remaining comments in all future filings, as applicable. Please confirm in writing that you will do so and also explain to us how you intend to comply. Please understand that after our review of all of your responses, we may raise additional comments.

If you disagree with any of these comments, 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.

Certain Relationships and Related Transactions

1. Please describe your policies and procedures for the review, approval, or ratification of transactions required to be reported under Item 404(a) of Regulation S-K. Disclose whether the policies and procedures are in writing, and if not, how such policies and procedures are evidenced. Please refer to Item 404(b)(1)(i)-(iv) of Regulation S-K.

Director Compensation

2. With respect to the stock awards reported in the third column, clarify in the footnote the grant date fair value of each award computed in accordance with FAS 123R and the assumptions made in the valuation by reference to a discussion of those assumptions in National Instruments' financial statements, footnotes to the financial statements, or discussion in the Management's Discussion and Analysis. See the Instruction to Item 402(k)(2)(iii) and (iv) of Regulation S-K and the Instruction to Item 402(k).
3. Please disclose by footnote to the appropriate column the grant date fair value of each option award computed in accordance with FAS 123R and the assumptions made in the valuation of option awards made in 2006.

Compensation Discussion and Analysis

4. You state that you assemble peer group executive compensation data and compare your executive compensation levels with those of other technology companies that you believe to be comparable in terms of market capitalization and annual revenue. Identify these peer group companies against which you have benchmarked your compensation. Clarify how these companies and survey data are used to determine total compensation or individual elements of compensation. Refer to Item 402(b)(2)(xiv) of Regulation S-K.
5. As a general matter, your Compensation Discussion and Analysis does not appear to fully respond to the requirements of Item 402(b) of Regulation S-K. Please provide a more detailed discussion and more thorough analysis of each element of compensation. Please refer to Item 402(b) and Section II.B. of Release No. 33-8732A and revise to provide appropriate information pursuant to the item requirement. For example, describe more fully each element of compensation, why you choose to pay the annual incentive element, how you determine the amount for each element to pay and how each compensation component and your decisions regarding these elements fit into your overall compensation objectives and their impact regarding other elements. In addition, Item 402(b)(2) of Regulation S-K sets forth examples of material information that could be appropriate for discussion in your Compensation Discussion and Analysis. To this extent, it is unclear from your disclosure what consideration you have given to several of the illustrative examples

contained in this disclosure guideline. We specifically refer you to paragraphs (i)-(iii), and (vi) of Item 402(b)(2) of Regulation S-K.

6. You provide some description of how company performance affects annual bonuses and equity-based awards, but only a general discussion and little analysis of the effect of individual performance, even though your disclosure suggests it is a factor considered by the compensation committee. Please expand your disclosure to provide additional qualitative, and if applicable, quantitative detail and analysis of how individual performance contributed to actual 2006 compensation for the named executive officers. For example, disclose the financial and operations goals within a named executive officer's individual area of responsibility, the general guidelines the committee looks to in assessing execution of such goals and whether certain factors or goals are considered more determinative of compensation levels than others. Further, discuss, in greater detail, the growth and profitability measures of the sales commission program that your Senior Vice President of Sales and Marketing participates in and provide clear disclosure of the specific objectives targeted to reward achievement in the Annual Incentive Program. See Item 402(b)(2)(vii) of Regulation S-K.

Annual Company Cash Performance Bonus Program

7. Disclose the targeted level of year over year revenue growth excluding growth from recent acquisitions that needed to be achieved in order for all employees to receive an additional 1% payout under the Annual Performance Bonus Program or provide a supplemental analysis as to why it is appropriate to omit this target pursuant to Instruction 4 to Item 402(b) of Regulation S-K. Refer to Item 402(b)(2)(v) of Regulation S-K. To the extent that it is appropriate to omit specific targets and you provide disclosure pursuant to Instruction 4 to Item 402(b) of Regulation S-K, general statements regarding the level of difficulty, or ease, associated with achieving performance goals either corporately or individually are not sufficient. In discussing 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 poses a reasonable risk of competitive harm.

Change of Control Considerations

8. Your 1994 Incentive Plan and 2005 Incentive Plan provides that in the event of a change of control, all unvested RSUs and stock options held by executive and non-executive employees shall immediately vest in full. Please substantially revise this section to include all of the information contemplated by Item 402(j) of Regulation S-K. For instance, describe the circumstances that would be considered a change of control resulting in the immediate vesting of RSUs and stock options, quantify the estimated payments and benefits, and explain any material conditions or obligations

applicable to the receipt of the payment or benefit. Please refer to Item 402(j)(1)-(5) of Regulation S-K and the Instructions to Item 402(j).

Summary Compensation Table

9. With respect to the amounts listed in the stock awards column, disclose by footnote the assumptions made in determining the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with FAS 123R. The discussion of the assumptions may be made by reference to a discussion of those assumptions in the financial statements, footnotes to the financial statements, or discussion in the Management's Discussion and Analysis. See the Instruction to Item 402(c)(2)(v) and (vi) of Regulation S-K.

Outstanding Equity Awards

10. You state in footnote 1 that these options vest as to 1/120 of the award on each monthly anniversary of the vesting commencement date, subject to acceleration based upon your financial performance. Please clarify the circumstances which would trigger this acceleration.

Please respond to our comments by September 21, 2007, or tell us by that time when you will provide us with a response.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

When you respond to our comments, please provide, in writing, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

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In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in connection with our review of your filing or in response to comments.

Please contact me at (202) 551-3357 with any questions.

Sincerely,

Pamela Howell
Special Counsel