



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 6010

August 31, 2007

VIA U.S. MAIL and FACSIMILE

Gregory H. Browne
Cyberonics, Inc.
Chief Financial Officer
100 Cyberonics Boulevard
Houston, Texas 77058

RE: Cyberonics, Inc.
Form 10-K for the fiscal year ended April 27, 2007
Filed July 6, 2007
Form 10-K for the fiscal year ended April 28, 2006
File No. 000-19806

Dear Mr. Browne:

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.

Form 10-K for the fiscal year ended April 28, 2006

Consolidated Financial Statements

Note 1. Restatements, page F-7

1. Please tell us where you have provided the following disclosures related to the restatement for stock-based compensation:
 - Financial statement footnote disclosure reconciling previously filed annual and quarterly financial information to the restated financial information, on a line-by-line basis and for *each* material type of error separately.
 - Financial statement footnote disclosure of the nature and amount of each material type of error separately that is included in the cumulative adjustment to opening retained earnings.
 - Financial statement footnote disclosure for each annual period preceding the most recent three years, the information required by paragraph 45.c.2 of FASB Statement No. 123, the restated stock compensation cost that should have been reported for each fiscal year.

Refer to the sample letter sent in response to inquiries related to filing restated financial statements for errors in accounting for stock option grants, available at <http://www.sec.gov/divisions/corpfin/guidance/oilgasltr012007.htm>

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter with your response 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 responses to our comments.

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 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.

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In connection with responding 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 staff 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.

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 our review of your filing or in response to our comments on your filing.

You may contact Kristin Lochhead at (202) 551-3664 or me at (202) 551-3676 if you have questions. In this regard, please do not hesitate to contact Martin James, Senior Assistant Chief Accountant, at (202) 551-3671 with any other questions.

Sincerely,

Brian Cascio
Accounting Branch Chief