



UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549-3561

Mail Stop 3561

July 29, 2009

Mr. Timothy Carnahan  
Chief Executive Officer and President  
CYIOS Corporation  
1300 Pennsylvania Avenue, Suite 700  
Washington, D.C. 20004

**Re: CYIOS Corporation**  
**Form 10-KSB for Fiscal Year Ended December 31, 2007**  
**Filed March 31, 2008**  
**Form 10-QSB for Fiscal Quarter Ended March 31, 2008**  
**Filed May 14, 2008**  
**Form 10-Q for Fiscal Quarter Ended June 30, 2008**  
**Filed August 14, 2008**  
**Form 10-Q for Fiscal Quarter Ended September 30, 2008**  
**Filed November 14, 2008**  
**Form 10-Q for Fiscal Quarter Ended March 31, 2009**  
**Filed May 14, 2009**  
**File No. 0-27243**

Dear Mr. Carnahan:

We have reviewed your response to our comment letter dated May 28, 2009 and have the following additional comments. Where indicated, we think you should revise your documents 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 provide a written response to our comments. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so that we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Form 10-KSB for Fiscal Year Ended December 31, 2007

Note H – Stock Options and Warrants, page F-33

1. Please address the following additional items related to your response to comment one in our letter dated May 28, 2009:

- As previously requested in the third bullet point, for each year for which an income statement is provided, disclose the weighted-average grant-date fair value of equity options or other equity instruments granted during the year and the total fair value of shares vested during the year. Refer to paragraph A240.c of SFAS 123(R).
- In response to the fourth bullet point, you disclose that the method used to estimate the fair value of the awards granted under the share-based payment arrangements was the value of the stock at the date the stock option was granted. It appears from your response and your disclosure that you may be using the intrinsic value method to value your stock options rather than an option pricing model such as the Black-Scholes-Merton method. If so, please provide a detailed explanation of why you believe that the use of the intrinsic value method is allowable under GAAP. Refer to paragraphs 15 through 27 of SFAS 123(R). Otherwise, please revise your disclosure to provide for each year for which an income statement is presented a description of the method used during the year to estimate the fair value of share-based compensation awards, including the expected term, expected volatility, expected dividends, risk-free rate(s) and any discount for post-vesting restrictions and the method for estimating it. Refer to paragraph A240.e of SFAS 123 (R).
- In response to the fifth bullet point, you disclose that cash payment was received in an amount equal to the share price at the grant date times the number of shares granted and that no tax benefit was realized from the stock options exercised during the years ended December 31, 2007 and 2006. We have the following observations:
  - We would expect you to only receive cash proceeds from the shares purchased upon the exercise of stock options rather than from the grant of stock options.
  - In Note H you disclose that 1,812,300 stock options were exercised at a weighted-average exercise price of \$ 0.18 during fiscal 2006 and 1,974,000 stock options were exercised at a weighted-average exercise price of \$0.26 during fiscal 2007. In this regard, it appears cash proceeds were \$326,214 in fiscal 2006 and \$513,240 in fiscal 2007.
  - On your Statements of Cash Flows, you disclose that you received proceeds from the issuance of common stock of \$18,200 during fiscal 2007 and \$561,711 during fiscal 2006 and on your Balance Sheet you disclose that you had a stock subscription receivable of \$121,000 at December 31, 2007.
  - In Note H you disclose that you granted 304,000 and 92,300 shares of unrestricted stock during the years ended December 31, 2007 and 2006, respectively, and that your Statement of Operations for the years

ended December 31, 2007 and 2006 included expense of \$12,200 and \$58,975, respectively, for unrestricted stock compensation.

- On your Statements of Stockholders' Deficit, you disclose that you recorded the issuance of 1,812,300 shares of common stock at \$567,711 during fiscal 2006 and 1,974,000 shares of common stock at \$27,200 (\$148,200 less \$121,000 for the stock subscription receivable) during fiscal 2007. Since these issuances appear to represent the exercise of stock options, it is unclear where the issuance of unrestricted stock is reflected on your Statements of Stockholder's Deficit.

Please reconcile the amounts disclosed in Note H with the amounts presented in your Balance Sheet, Statements of Cash Flows and Statements of Stockholders' Deficit. If upon further review, you now believe that your financial statements should be revised, please explain your revisions and show us what your revised disclosures will look like. If you do not believe that your financial statements require revision, you should revise your disclosures related to issuances of common stock and stock-based compensation so that a reader can understand your disclosures. Please provide a similar reconciliation of the amounts related to stock issuances and stock-based compensation presented in your financial statements in your Form 10-K for the year ended December 31, 2008 as well. Additionally, explain to us why your disclosure for the weighted average price per share for fiscal 2007 changed from the 2007 Form 10-K to the 2008 Form 10-K.

Proposed Form 10-Q/A for the Fiscal Quarter Ended June 30, 2008

Item 4. Controls and Procedures, page 19

2. In your conclusion, please state that your disclosure controls and procedures were effective at the reasonable assurance level.

Proposed Form 10-Q/A for the Fiscal Quarter Ended March 31, 2009

Exhibit 31.1

3. We have reviewed your response to comment seven in our letter dated May 28, 2009. As previously requested, please revise your certification to include the internal control over financial reporting language of paragraph 4(b). Refer to Item 601(b)(31) of Regulation S-K.

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Upon resolution of our comments, please amend your filings to include the changes you proposed to make in response to our comment letters.

As appropriate, please amend your filings and respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your responses to our comments and provides any requested information. Detailed response letters greatly facilitate our review. Please submit your response letter on EDGAR. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

You may contact Sondra Snyder at (202) 551-3332, or in her absence, Sarah Rottman at (202) 551-3340 if you have questions regarding comments on the financial statements and related matters. Please contact me at (202) 551-3344 with any other questions.

Sincerely,

William H. Thompson  
Branch Chief