



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

Mail Stop 3561

October 7, 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**  
**Form 10-Q for Fiscal Quarter Ended June 30, 2009**  
**Filed August 14, 2009**  
**File No. 0-27243**

Dear Mr. Carnahan:

We have reviewed your response to our comment letter dated July 29, 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

General

1. We note that your response to our comment letter dated July 29, 2009 includes your proposed changes to your Form 10-KSB for the fiscal year ended December

31, 2007. Please be aware that Form 10-KSB is no longer available on EDGAR, and you should file your amendment on Form 10-K utilizing the reduced disclosure requirements of a smaller reporting company.

Consolidated Statements of Cash Flows, page F-23

2. We note the changes made to your Statement of Cash Flows in response to our comments regarding your stock-based compensation. It appears that you have included non-cash transactions in the investing and financing sections of your statement of cash flows. If this is the case, please revise to present only amounts arising from receipts and payments of cash in these sections of your cash flows statement. You should separately disclose non-cash transactions. Please refer to paragraph 32 of SFAS 95.

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

3. Please address the following additional items related to your response to comment one in our letter dated July 29, 2009:
  - As previously requested in the first bullet point, for each year for which an income statement is provided, please disclose the weighted-average date fair value of equity options or other equity instruments granted during the year and the total fair value of shares and options vested during the year. Since you state in your response that the options granted during 2006 and 2007 are fully vested upon grant and are immediately exercised and you are using the fair value of the stock for the purposes of valuing these options, please disclose the grant dates and the market prices of your common stock on those dates. Please also disclose the total fair value of options/shares vested during each year. Please provide this information separately for the options granted and the stock issued for services during each year. Refer to paragraph A240.c of SFAS 123(R).
  - We reviewed your response to the third bullet point and have the following observations.
    - In Note H you disclose that in 2006 you granted 1,816,300 fully vested options with a weighted-average exercise price of \$0.18 per share and that 1,812,300 of these options were immediately exercised. You disclose that the aggregate intrinsic value of these shares was \$326,214, which would be the \$0.18 exercise price times the 1,812,300 shares exercised in 2006. However, in your Consolidated Statement of Stockholders' Deficit you recorded the issuance of 1,812,300 shares during 2006 at a value of \$567,711 or approximately \$0.31 per share. In addition, in your Consolidated Statement of Cash

Flows for 2006 you recorded proceeds from the issuance of common stock of \$508,736 and disclosed common stock issued in exchange for services valued at \$58,975, making the total value of common stock issued \$567,711 during 2006. It is unclear from your disclosure why the 1,812,300 shares issued in 2006 resulted in proceeds that were greatly in excess of proceeds that would be expected based on the stated exercise price of the options exercised in 2006. Please revise your disclosure to explain this apparent discrepancy. In addition, it appears that the shares issued for services may be included in the number of options granted and exercised. Tell us whether you issued options in exchange for services or shares in exchange for services, and if you issued shares, revise your disclosures to ensure that shares issued for services are not included in the number of options granted. Please separately disclose the number of shares issued for services and the number of shares issued upon exercise of stock options. For shares issued for services, also disclose the nature of the services and whether the stock was valued based on the fair value of the stock issued or the fair value of the services received and why.

- In Note H you disclose that in 2007 you granted 1,974,000 fully vested options at an exercise price of \$0.26 and that all of these options were immediately exercised. You disclose that the aggregate intrinsic value of these options was \$513,240 which would be the \$0.26 exercise price times the 1,974,000 options exercised in 2007. It appears from the disclosure in Note H that 1,978,000 options were exercised in 2007, and based on the stated exercise prices we expect proceeds to total \$513,960. However, in your Consolidated Statement of Stockholders' Deficit it appears that 2,074,000 shares were issued with a total value of \$148,400 and 100,000 shares were returned and cancelled for a total credit of \$200. In your Consolidated Statement of Stockholders' Deficit you recorded the issuance of a net of 1,974,000 shares during 2007 at a value of \$148,200 or approximately \$0.075 per share. In your Consolidated Statement of Cash Flows for 2007 you recorded net cash proceeds of \$6,029 from the issuance of common stock and disclosed common stock issued for non-cash consideration consisting of a \$130,000 Stock Subscription Receivable and \$12,200 of common stock issued for services, or common stock issued for a total of cash and non-cash consideration of \$148,229. It is unclear from your disclosure why the 1,974,000 shares issued in 2007 resulted in proceeds that were significantly less than proceeds that would be expected based on the stated exercise price of the options exercised in 2007. Please revise your disclosure to explain this apparent discrepancy. In addition, it appears that the shares issued for services may be included in the number of options granted and exercised. Tell

us whether you issued options in exchange for services or shares in exchange for services, and if you issued shares, revise your disclosures to ensure that shares issued for services are not included in the number of options granted. Please separately disclose the number of shares issued for services and the number of shares issued upon exercise of stock options. For shares issued for services, please also disclose the nature of the services and whether the stock was valued based on the fair value of the stock issued or the fair value of the services received and why. In addition, please revise your disclosure to clarify whether 2,074,000 or 1,974,000 options were actually granted during 2007 and the number of options actually exercised during 2007.

As previously requested in the last bullet point in comment one in our letter dated July 29, 2009, please reconcile the amounts disclosed in Note H with the amounts presented in your Consolidated Balance Sheet, Consolidated Statements of Cash Flows and Consolidated Statements of Stockholders' Deficit. If upon further review, you now believe your financial statements require revision, you should revise your disclosures related to issuance of common stock and stock-based compensation so that a reader can understand your disclosures. Please provide similar reconciliations 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 and your Form 10-Q for the quarter ended June 30, 2009. Additionally, please explain to us why your disclosure for the weighted average price per share for fiscal 2007 changed from the 2007 Form 10-KSB to the 2008 Form 10-K. If you conclude that your financial statements require revision, please tell us the consideration given to the guidance in SFAS 154 in your revised financial statements and to re-assessing your conclusions regarding the effectiveness of your disclosure controls and procedures for each period impacted and your conclusions regarding the effectiveness of your internal control over financial reporting for each annual period impacted.

Item 8A(T). Controls and Procedures, page 17

4. Please note that disclosure controls and procedures and internal control over financial reporting are not the same thing and that management is required to provide separate assessments of the effectiveness of disclosure controls and procedures and internal control over financial reporting. Refer to Items 307 and 308T of Regulation S-K. To clarify to your readers that management made separate assessments of the effectiveness of disclosure controls and procedures and internal control over financial reporting, you should provide separate disclosures concerning the effectiveness of each. Therefore, please remove the first sentence in the third paragraph under this heading as it refers to disclosure controls and procedures, and this information is already contained in the first paragraph under this heading. Similarly, remove the third sentence in the third

paragraph under this heading as it refers to disclosure controls and procedures, and your conclusion on disclosure controls and procedures is already contained in the first paragraph under this heading. Finally, revise the last sentence in the first paragraph under this heading to state that disclosure controls and procedures are effective at the reasonable assurance level. Please make these changes to your amended December 31, 2007 Form 10-K, and confirm to us that you will also make these changes in future Forms 10-K.

#### Certifications

5. The certifications of your principal executive and financial officers should be revised to be dated contemporaneously with the amended filings when filed.

#### Form 10-Q for the Fiscal Quarter Ended March 31, 2009

#### Certifications

6. We have reviewed the proposed revised certification provided in response to comment 3 in our letter dated July 29, 2009. Please revise your certification to reference the quarter ended March 31, 2009 rather than June 30, 2009.
7. In addition, please remove Mr. Carnahan's titles and positions from the first sentence of the certifications. The inclusion of his titles in that sentence has the effect of limiting the capacity of his certifications to those positions listed. He should continue to list his titles under his signature indicating that he is signing the certification as the Chief Executive Officer and Principal Financial Officer of the company. Please make this same change in all future filings.

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.

Mr. Timothy Carnahan  
CYIOS Corporation  
October 7, 2009  
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You may contact Sondra Snyder at (202) 551-3332 if you have questions regarding comments on the financial statements and related matters. Please contact me at (202) 551-3737 with any other questions.

Sincerely,

Jennifer Thompson  
Branch Chief