



DIVISION OF  
CORPORATION FINANCE

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

Mail Stop 6010

August 25, 2008

Via U.S. Mail and Facsimile to (978) 777-6570

William J. Schmidt  
Chief Financial Officer  
Ibis Technology Corporation  
32 Cherry Hill Drive  
Danvers, MA 01923

**Re: Ibis Technology Corporation**  
**Form 10-K for the Fiscal Year ended December 31, 2007**  
**Filed May 28, 2008**  
**Form 10-Q for the Fiscal Quarter ended June 30, 2008**  
**File No. 000-23150**

Dear Mr. Schmidt:

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 December 31, 2007

Item 8. Financial Statements and Supplementary Data, page 39

Note 2. Summary of Significant Accounting Policies, page 45

(k) Share-Based Compensation, page 47

1. We see that you have disclosed the amount of share-based compensation expense recognized under SFAS 123R on a per share basis for the years ended December 31, 2007 and 2006. We note that paragraph 84 of SFAS 123R permits the per-share disclosure of the effects of adoption of SFAS 123R only in the year of adoption. Accordingly, please revise future filings to no longer disclose the per share effect of share-based compensation.

Form 10-Q for the Fiscal Quarter ended June 30, 2008

Exhibit 31

2. We see that you have included management's report on internal control over financial reporting as required by Item 308T(a) of Regulation S-X in your Form 10-K. As such, your Section 302 certifications included with your Form 10-Q are required to include the introductory language in paragraph 4 that refers to the certifying officers' responsibility for establishing and maintaining internal control over financial reporting for the company. Please file an amendment to the Form 10-Q to include certifications that include the required language. You may provide an abbreviated amendment that consists of a cover page, explanatory note, signature page and paragraphs 1, 2, 4 and 5 of the certification. Please also apply this comment to your Form 10-Q for the fiscal quarter ended March 31, 2008.

As appropriate, please amend your filing and 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 amendment 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 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.

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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 Kevin Kuhar, Staff Accountant, at (202) 551-3662 or me at (202) 551-3554 if you have questions regarding these comments on the financial statements and related matters. In this regard, do not hesitate to contact Martin James, Senior Assistant Chief Accountant, at (202) 551-3671.

Sincerely,

Angela Crane  
Branch Chief