



DIVISION OF  
CORPORATION FINANCE

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

Mail Stop 6010

April 4, 2008

Via U.S. Mail and Fax (408) 635-4378

Kevin C. Eichler  
Chief Financial Officer  
Credence Systems Corporation  
1421 California Circle  
Milpitas, California 95035

**Re: Credence Systems Corporation**  
**Form 10-K for the fiscal year ended November 3, 2007**  
**Filed January 17, 2008**  
**Form 10-Q for the fiscal quarter ended February 2, 2008**  
**File No. 000-22366**

Dear Mr. Eichler:

We have reviewed your filings and your response letter dated March 26, 2008 and have the following comments. Where indicated, we think you should revise your future filings 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 on any other aspects 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 November 3, 2007

Item 8. Financial Statements and Supplementary Data, page 55

Note 1. Organization and Summary of Significant Accounting Policies, page 62

Other Balance Sheet Components, page 72

1. In your response to prior comment 4 from our letter dated February 27, 2008, you stated that the spare parts are exchanged for the customers' material under warranty or paid service contract agreements and that these assets are not used in your property and equipment. You stated that you believe the spare parts are long-term other assets rather than inventory. You also noted that you amortize the spare parts on a straight line basis over five years based on the length of time the parts remained in the spares part long term other assets pool before they were scrapped. Please tell us why you believe it is appropriate to continue to reflect a long-term asset and amortize that asset if the asset has been used/exchanged with a customer under your warranty or paid service contract agreements.

Form 10-Q for the Quarterly Period Ended February 2, 2008

Controls and Procedures, page 33

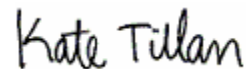
2. We note your disclosure that your "chief executive officer and chief financial officer have concluded that [y]our disclosure controls and procedures (as defined in Securities Exchange Act Rules 13a-15(e) and 15d-15(e)) are effective to provide reasonable assurance that the information required to be disclosed by [you] in reports that [you] file or submit under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms." The language that is currently included after the word "effective" in your disclosure appears to be superfluous, since the meaning of "disclosure controls and procedures" is established by Rule 13a-15(e) of the Exchange Act. Please remove the language in your future filings or revise the disclosure so that the language that appears after the word "effective" is substantially similar in all material respects to the language that appears in the entire two-sentence definition of "disclosure controls and procedures" set forth in Rule 13a-15(e).

3. Further, we note your reference to reasonable assurance in your conclusion. Please revise future filings to state clearly, if true, that your disclosure controls and procedures are *designed to* provide reasonable assurance of achieving their objectives and that your principal executive officer and principal financial officer concluded that your disclosure controls and procedures are effective at that reasonable assurance level. In the alternative, remove the reference to the level of assurance of your disclosure controls and procedures. Please refer to Section II.F.4 of Management's Reports on Internal Control Over Financial Reporting and Certification of Disclosure in Exchange Act Periodic Reports, SEC Release No. 33-8238, available on our website at <<http://www.sec.gov/rules/final/33-8238.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.

You may contact Praveen Kartholy, Staff Accountant, at (202) 551-3778 or me at (202) 551-3604 if you have questions regarding these comments. In this regard, do not hesitate to contact Brian Cascio, Accounting Branch Chief, at (202) 551-3676.

Sincerely,



Kaitlin Tillan  
Assistant Chief Accountant