



DIVISION OF
CORPORATION FINANCE

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

April 28, 2014

Via E-mail

David G. Tacelli
Chief Executive Officer
LTX-Credence Corporation
825 University Avenue
Norwood, MA 02062

**Re: LTX-Credence Corporation
Registration Statement on Form S-3
Filed April 3, 2014
File No. 333-195033**

Dear Mr. Tacelli:

We have limited our review of your registration statement to those issues we have addressed in our comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. Where you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

Fee Table

1. Please revise the third sentence of footnote (1) to your fee table to reflect the language of Rule 416(a).

Incorporation by Reference, page 2

2. Please revise the second bullet point on this page to clarify, if true, that you are incorporating by reference your Form 10-Q for the fiscal quarter ended on January 31, 2014 instead of January 31, 2013.

3. Given your disclosure on page 12 of your most recent Form 10-Q regarding your acquired business' \$40 million contribution to revenue, it appears that product sales excluding the acquisition decreased. Please tell us the reasons for the decrease and provide us your analysis of why your discussion of your net sales on page 27 of that Form 10-Q adequately provides all disclosure that Regulation S-K Item 303 requires in this regard. Likewise, please provide us your analysis of how your disclosure permits investors to understand (1) the magnitude of your change in gross profit absent the effect of acquisitions, and (2) the portion of your increased selling, general and administrative expenses that reflect continuing expenses due to acquisitions as opposed to one-time fees.

Description of Debt Securities, page 7

4. From your disclosure on this page and in the antepenultimate bullet point on page 8, it appears that your debt securities may be guaranteed. Please note that any guaranties should be registered for sale at the time the debt securities are registered for sale. Accordingly, please revise your fee table to include guaranties. In this regard, we note that any additional obligors must be added as co-registrants. Alternatively, if the debt securities will not be guaranteed, please revise your disclosure on pages 7 and 8 accordingly.

Exhibit 5.1

5. Please tell us why this opinion addresses Class A common stock, while your registration statement – including your fee table and prospectus cover – does not refer to Class A.
6. We note the list of documents identified in the first full paragraph on page 2 of this exhibit. To satisfy your obligation under Regulation S-K Item 601(b)(5), you should file an opinion that is based on all relevant facts, not merely selected documents listed by counsel. Please file a revised opinion that does not indicate the contrary.

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 the information the Securities Act of 1933 and all applicable Securities Act rules require. 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.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;

- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

Please contact Brian Soares at (202) 551-3580 or me at (202) 551-3617 with any questions.

Sincerely,

/s/ Russell Mancuso

Russell Mancuso
Branch Chief

cc (via e-mail): Erika L. Robinson, Esq.
Wilmer Cutler Pickering Hale and Dorr LLP