



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

October 21, 2009

Via U.S. Mail and Facsimile to (913) 647-0132

Todd A. Daniels
Chief Financial Officer
Elecsys Corporation
846 N. Mart-Way
Olathe, KS 66061

**Re: Elecsys Corporation
Form 10-K for the Fiscal Year ended April 30, 2009
Filed July 22, 2009
File No. 001-15057**

Dear Mr. Daniels:

We have reviewed your filings and have the following comments. We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. Where indicated, we think you should revise your Form 10-K and Form 10-Q 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 April 30, 2009

Item 8. Financial Statements and Supplementary Data, page 28

Note 2. Acquisition of Assets, page 38

1. We note you disclose that you engaged an independent third party valuation expert to assist in the allocation of excess purchase price to intangible assets and to determine the intangible assets useful life related to your acquisition of Radix. Please describe to us the nature and extent of the role played by the valuation firm in determining the amounts included in your financial statements and clarify the extent to which any statements are attributed to the valuation firm as opposed to your management. In this regard, we also refer you to the guidance provided in Question 141.02 of the Compliance and Disclosure Interpretations on Securities Act Sections, which can be found at <http://www.sec.gov/divisions/corpfin/guidance/sasinterp.htm>, which explains the circumstances under which a valuation firm would be named and its consent included in registration statements, including those into which you incorporate your Form 10-K by reference.
2. Additionally, please provide us with a similar analysis of your acquisition of MBBS S.A. as disclosed on page 16 of your Form 10-Q for the fiscal quarter ended July 31, 2009. We note that you have provided nearly identical disclosure as it relates to the reliance on a third party valuation expert.

Item 9A(T). Controls and Procedures, page 50

(a) Evaluation of disclosure controls and procedures, page 50

3. We note your disclosure that your Chief Executive Officer and Chief Financial Officer concluded that your disclosure controls and procedures are effective "to provide reasonable assurance that information required to be disclose in our periodic filings under the Exchange Act is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosure." 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 in those filings 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). Please also apply this comment to your Form 10-Q for the fiscal quarter ended July 31, 2009.

(c) Changes in internal controls, page 51

4. We see your disclosure that there were “no significant changes in the Company’s internal control over financial reporting or in other factors... subsequent to the date of the evaluation”. Item 308(T)(b) of Regulation S-K requires you to disclose any change in your internal control over financial reporting that occurred during the your last fiscal quarter that has materially affected, or is reasonably likely to materially affect, your internal control over financial reporting. Please confirm for us in your response whether they were any changes required to be disclosed by Item 308(T)(b) of Regulation S-K for the fiscal quarters ended April 30, 2009 and July 31, 2009. In addition, please also revise future filings to disclose any changes that meet the requirements of Item 308(T)(b) of Regulation S-K.

Exhibit 31.1 and 31.2

5. We note that you present management’s report on internal control over financial reporting on page 50 of the 10-K as required by Item 308T of Regulation S-K. As such, your certifications are required to include the introductory language in paragraph 4 of the certification that refers to the certifying officers' responsibility for establishing and maintaining internal control over financial reporting for the company. Please refer to Item 601(b)(31) of Regulation S-K and file an amendment to your Form 10-K for the year ended April 30, 2009 that include corrected and newly dated certifications. This comment also applies to your Form 10-Q for the period ended July 31, 2009. You may provide an abbreviated amendment for each of your Form 10-K and Form 10-Q that consist of a cover page, explanatory note, signature page and paragraphs 1, 2, 4 and 5 of the certification.
6. We note that that you replaced the word “report” with “annual report” in paragraphs 2, 3 and 4(a) of the certifications provided with your Form 10-K. In addition, we noted that you have replaced “report” with “quarterly report” and “registrant” with “small business issuer” in your Form 10-Q for the period ended July 31, 2009. When you amend your filings, please also revise the certifications to present them in the exact form as set forth in Item 601(b)(31) of Regulation S-K without any modifications. Please also apply this comment to future filings.

As appropriate, please amend your Form 10-K and Form 10-Q and respond to these comments within 30 calendar days or tell us when you will provide us with a response. You may wish to provide us with marked copies of the amendments to expedite our review. Please furnish a cover letter with your amendments 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 amendments and 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.

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) 551-3640 if you have questions regarding these comments on the financial statements and related matters. In our absence, you may also contact Jeffrey Jaramillo, Accounting Branch Chief, at (202) 551-3212 with any questions.

Sincerely,

Julie Sherman
Accounting Reviewer