



DIVISION OF
CORPORATION FINANCE

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

April 27, 2011

Avi S. Katz
Chief Executive Officer and Chairman of the Board
GigOptix, Inc.
2300 Geng Road, Suite 250
Palo Alto, CA 94303

Re: GigOptix, Inc.
Amendment No. 1 to Registration Statement on Form S-4
Filed April 11, 2011
File No. 333-172620

Dear Dr. Katz:

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.

Prospectus Cover Page

1. We note your response to our prior comment number 4; however, your disclosure still does not make clear what the formula is intended to achieve for Endwave shareholders. If, for example, the goal is that Endwave shareholders receive 42.5% of the combined company, please state this here.

Q. What will Endwave stockholders receive..., page 1

2. Refer to the last sentence on page 1. Please reconcile the number of shares that GigOptix would issue if the merger closed April 8, 2011 with the number of shares in the example on your cover page.

Q. How much of GigOptix..., page 2

3. It is not clear why your disclosure throughout indicates the number of shares that will be issued to Endwave shareholders and restricted stock unit holders, when you will also be issuing shares to in-the-money option holders. Please clarify throughout, before describing the pricing formula, that you will issue shares to (1) current holders of Endwave common stock, (2) holders of Endwave restricted stock units, and (3) holders of in-the-money options.

Summary, page 5

4. Regarding your response to prior comment 11, please file your agreements with Alcatel-Lucent or tell us why they should not be filed.
5. Please revise the summary disclosure to quantify potential benefits to insiders as you have done on page 150.

Risk Factors, page 18

6. Please disclose as a risk factor the limitation on the use of Endwave's substantial net operating loss carryforwards that you disclose on page 175. Your disclosure should include the effects on your income and cash flow.

Strategic Considerations, page 137

7. Regarding the supplemental materials provided in response to prior comment 1, we note that your disclosure in the Form S-4 does not include all the strategic considerations on page 105 of the supplemental materials. Please revise or advise.

Opinion of Endwave's Financial Advisor, page 139

8. Please disclose the quantitative results of the historical stock price analysis.
9. In light of the results of the premiums paid analysis and the historical stock price analysis, please advise as to the process Merriman followed in its fairness conclusion.
10. Please tell us who prepared the 2 supplemental "Model" documents and explain how those documents were used by the parties.

Opinion of GigOptix's Financial Advisor, page 144

11. Refer to the February 3, 2011 supplemental materials prepared by Roth Capital Partners. Please tell us how the estimated numbers provided on page 20 impacted Roth's opinion and the GigOptix Board's recommendation to approve the transaction. Provide similar

information about the estimates set forth on page 122 of the supplemental materials of Merriman from February 4, 2011.

12. Please tell us where you have disclosed the information set forth in note (1) on page 39 of the February 3, 2011 supplemental materials prepared by Roth Capital Partners and the impact that this assumption would have if incorrect.

Discounted Cash Flow Analysis, page 146

13. Please explain why Roth chose the equity value range of \$9.9 million to \$17.4 million. In this regard, please discuss the data in the box on page 39 of the supplemental materials of Roth from February 3, 2011. Please also address how Roth made its fairness conclusion in light of the fact that the range of values appears to be below the consideration paid, even on the high end.

Material U.S. Federal Income Tax..., page 171

14. We note that the first sentence in this section continues to indicate that the disclosure is the opinion of tax counsel. Because it appears that Exhibits 8.1 and 8.2 constitute counsel's opinion, this section is in fact not the opinion of counsel. Please revise as appropriate.

Additional Information..., page 174

15. Please clarify your disclosure in the first full paragraph on page 175 to indicate the extent to which the net operating loss carryforwards will be limited by the merger and how that is determined. Please provide summary disclosure to this effect as well.

Security Ownership..., page 175

16. Regarding your response to prior comment 31, please tell us what steps you have taken to obtain the information relating to voting power over the shares held by National Instruments in the table on page 176 and the entities on the table on page 178 for which you have not provided the requested information.

Annex C

17. It is unclear how the revisions in the penultimate paragraph of the opinion operate to remove any limitations on reliance. We note, for example, the statement that the analysis and letter "were prepared solely for the benefit, information and use of, and were addressed only to the Board." We therefore reissue prior comment 32.

Exhibit 8.1

18. Please note that the tax opinion must opine as of the date of effectiveness. Please submit a revised opinion.

Exhibit 8.2

19. Please note that the tax opinion must opine as of the date of effectiveness. Please submit a revised opinion.

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.

Avi S. Katz
GigOptix, Inc.
April 27, 2011
Page 5

You may contact Gabriel Eckstein at (202) 551-3286 or me at (202) 551-3528 with any questions.

Sincerely,

Amanda Ravitz
Assistant Director

cc (via fax): Jeffrey C. Selman, Esq.
Nixon Peabody LLP