UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

SCHEDULE TO

(RULE 14d-100)

Tender Offer Statement Under Section 14(d)(1) or 13(e)(1) of the Securities Exchange Act of 1934

INVITROGEN CORPORATION

(Name of Subject Company (Issuer))

INVITROGEN CORPORATION

(Names of Filing Corporation (Issuer))

2.0% Convertible Senior Notes due 2023

1.5% Convertible Senior Notes due 2024

(Title of Class of Securities)

46185RAF7, 46185RAE0, 46185RAH3 and 46185RAG5

(CUSIP Numbers of Classes of Securities)

GREGORY T. LUCIER

CHAIRMAN, PRESIDENT AND CHIEF EXECUTIVE OFFICER

INVITROGEN CORPORATION

1600 FARADAY AVENUE

CARLSBAD, CA 92008

TELEPHONE: (760) 603-7200

(Name, address and telephone number of person authorized to receive notices and

communications on behalf of filing persons)

COPIES TO:

JEFFREY T. BAGLIO, ESQ.

PAUL B. JOHNSON, ESQ.

GRAY CARY WARE & FREIDENRICH LLP

4365 EXECUTIVE DRIVE, SUITE 1100

SAN DIEGO, CA 92121-2133

TELEPHONE: (858) 677-1400

CALCULATION OF FILING FEE

Title of Each Class of Securities to be	Amount to be	Proposed Maximum Aggregate Price	Proposed Maximum Aggregate Offering	Amount of
Registered(1)	Registered	Per Unit	Price(5)	Registration Fee(5)
2.0% Convertible Senior Notes due 2023	\$350,000,000(2)	100%(4)	\$349,125,000(4)(6)	\$44,234
1.5% Convertible Senior Notes due 2024	\$450,000,000(3)	100%(4)	\$448,875,000(4)(6)	\$56,873

- (1) This Schedule TO relates to the exchange by Invitrogen of (a) an aggregate principal amount of up to \$350,000,000 of Invitrogen s new 2.0% Convertible Senior Notes due 2023 (the New 2.0% Notes), for a like principal amount of Invitrogen s currently outstanding 2.0% Convertible Senior Notes due 2023 (the Existing 2.0% Notes) and an exchange fee and (b) an aggregate principal amount of up to \$450,000,000 of Invitrogen s new 1.5% Convertible Senior Notes due 2024 (the New 1.5% Notes and together with the New 2.0% Notes the New Notes), for a like principal amount of Invitrogen s currently-outstanding 1.5% Convertible Senior Notes due 2024 (the Existing 1.5% Notes and together with the Existing 2.0% Notes, the Existing Notes) and an exchange fee.
- This amount is the maximum principal amount of Invitrogen s issued and outstanding Existing 2.0% Notes that Invitrogen may receive from tendering
- This amount is the maximum principal amount of Invitrogen s issued and outstanding Existing 1.5% Notes that Invitrogen may receive from tendering holders.
- Exclusive of accrued interest and distributions, if any.
- The registration fee of \$101,107 has been paid in connection with the Company s Registration Statement on Form S-4, filed concurrently with this Schedule TO. The amount of the registration fee was calculated, pursuant to Rule 457(f) under the Securities Act of 1933, as amended, based on \$798,000,000, the outstanding principal balance as of November 9, 2004 of the Existing 2.0% Notes and Existing 1.5% Notes that Invitrogen may receive from tendering holders, after deducting an aggregate exchange fee of \$2,000,000.
- Estimated solely for the purpose of calculating the Registration Fee pursuant to Rule 457(f) under the Securities Act of 1933, as amended. These amounts reflect a reduction for an exchange fee of \$2.50 for each \$1,000 principal amount of the Notes.
- Check the box if any part of the fee is offset as provided by Rule 0-11(a)(2) and identify the filing with which the offsetting fee was previously paid. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

Amount Previously Paid: None Filing Party: Not applicable

Form or Registration No.: Not applicable

Date Filed: Not applicable

Check the box if the filing relates solely to preliminary communications made before the commencement of a tender offer.

Check the appropriate boxes below to designate any transactions to which the statement relates:

- third-party tender offer subject to Rule 14d-1.
- issuer tender offer subject to Rule 13e-4.
- going-private transaction subject to Rule 13e-3.
- amendment to Schedule 13D under Rule 13d-2.

Check the following box if the filing is a final amendment reporting the results of the tender offer: "

This Tender Offer Statement on Schedule TO is being filed by Invitrogen Corporation pursuant to Section 13(e) of the Securities Exchange Act of 1934, as amended, in connection with its offer to exchange (a) an exchange fee and an aggregate principal amount of up to \$350,000,000 of Invitrogen s New 2.0% Notes for a like principal amount of Invitrogen s currently outstanding 2.0% Convertible Senior Notes due 2023 (the *Existing 2.0% Notes*) and an exchange fee and (b) an exchange fee and an aggregate principal amount of up to \$450,000,000 of Invitrogen s New 1.5% Notes, for a like principal amount of Invitrogen s currently-outstanding 1.5% Convertible Senior Notes due 2024 (the *Existing 1.5% Notes* and together with the Existing 2.0% Notes, the *Existing Notes*). The maximum principal amount of New 2.0% Notes and New 1.5% Notes (collectively, the *New Notes*) that may be issued in these exchange offers is \$800,000,000. The maximum amount of the aggregate exchange fee payable in these exchange offers is anticipated to be \$2,000,000.

These exchange offers are subject to the terms and conditions set forth in the prospectus, subject to completion, dated November 9, 2004 (the *Prospectus*) and in the related Letter of Transmittal which are a part of the registrant s Registration Statement on Form S-4 (the *Registration Statement*) filed with the Securities and Exchange Commission concurrently with this Schedule TO.

The information in the Registration Statement, including all exhibits thereto, is incorporated herein by reference in answer to all of the items in this Schedule TO, except as otherwise set forth below.

Item 1. Summary Term Sheet.

The information in the Registration Statement under the heading Summary The Exchange Offers is incorporated herein by reference.

Item 2. Subject Company Information.

- (a) *Name and Address*. Invitrogen Corporation (*Invitrogen*) is the issuer and the subject company. Its address is 1600 Faraday Avenue, Carlsbad, CA 92008. Its telephone number is (760) 603-7200.
- (b) Securities. As of September 30, 2004 there was approximately \$350,000,000 aggregate principal amount of Existing 2.0% Notes outstanding and there was approximately \$450,000,000 aggregate principal amount of Existing 1.5% Notes outstanding.
- (c) *Trading Market and Price*. The Existing 2.0% Notes and the Existing 1.5% Notes are not listed on any national securities exchange. The Existing Notes are eligible for trading on The Portal Market of the National Association of Securities Dealers, Inc. However, there is no established public reporting or trading system for the Existing Notes and trading in the Existing Notes has been limited and sporadic.

Item 3. Identity and Background of Filing Person.

(a) The information set forth in Item 2(a) above; the information in Item 10 of Invitrogen s Annual Report on Form 10-K for the fiscal year ended December 31, 2003; and the information in the Registration Statement under the heading Summary Recent Developments is hereby incorporated by reference. The business address and business telephone number of each of the persons specified in Instruction C to Schedule TO, as

applicable to Invitrogen, is the same as for Invitrogen as stated in Item 2(a) above.

Item 4. Terms of the Transaction.

(a)(1) *Material Terms*. The information in the Registration Statement under the headings Summary The Exchange Offers, Summary Summary of Differences between the Existing Notes and the New Notes, The Exchange Offers, Description of the Existing Notes, Description of the New 2.0% Notes, Description of the New 1.5% Notes, and Certain United States Federal Income Tax Considerations is incorporated herein by reference.

(b) Purchases. No Existing Notes are to be purchased from any officers, director or affiliate of Invitrogen.

Item 5. Past Contacts, Transaction, Negotiations and Agreements

(e) Agreements Involving the Subject Company s Securities. None.

Item 6. Purposes of the Transaction and Plans or Proposals.					
(a) <i>Purpose</i> . The information in the Registration Statement under the heading Summary The Exchange Offers Purpose of the exchange offers is incorporated herein by reference.					
(b) <i>Use of Securities Acquired</i> . The information in the Registration Statement under the heading Use of Proceeds is incorporated herein by reference.					
(c) Plans					
(1) None.					
(2) None.					
(3) The information in the Registration Statement under the headings Summary The Exchange Offers and Summary The Exchange Offers Purpose of the Exchange Offers is incorporated herein by reference.					
(4) None.					
(5) None.					
(6) None.					
(7) None.					
(8) None.					
(9) None.					

(10) None.

Item 7. Source and Amount of Funds or Other Consideration.
(a) Source of Funds. The information in the Registration Statement under the heading Summary The Exchange Offers is incorporated herein by reference.
(b) <i>Conditions</i> . The information in the Registration Statement under the heading The Exchange Offers Conditions for the Completion of the Exchange Offers is incorporated herein by reference.
(d) Borrowed Funds. None.
Item 8. Interest in Securities of the Subject Company.
(a) Securities Ownership. None.
(b) Securities Transactions. During the past 60 days, Invitrogen has not executed any transaction in the Existing Notes nor is Invitrogen aware of any such transaction during that period by any of the following person: (1) any person named in Instruction C of Schedule TO promulgated by the Securities and Exchange Commission, as such Instruction relates to Invitrogen, or any associate or majority-owned subsidiary of Invitrogen, or (3) any executive officer or director of any subsidiary of Invitrogen.
Item 9. Person/Assets, Retained, Employed, Compensated or Used.
(a) <i>Solicitations or Recommendations</i> . The information in the Registration Statement under the heading The Exchange Offers Fees and Expenses is incorporated herein by reference.
(b) <i>Employees and corporate assets</i> . Invitrogen s officers, directors and employees may solicit noteholders by mail, telephone, personally or otherwise, without additional compensation.

Item 10. Financial Statements.
(a) Financial Information
(1) The information on pages 43 through 77 in Invitrogen s Annual Report on Form 10-K for the fiscal year ended December 31, 2003 is incorporated herein by reference.
(2) The information on pages 2 through 17 of Invitrogen s Quarterly Report on Form 10-Q for the quarter ended September 30, 2004 is incorporated herein by reference.
(3) The information in the Registration Statement under the heading Ratio of Earnings to Fixed Charges is incorporated herein by reference
(4) At September 30, 2004, the book value per share was \$36.19.
(b) Pro forma Information. Not applicable.
Item 11. Additional Information.
(a) Agreements Regulatory Requirements and Legal Proceedings
(1) The information in Invitrogen's Annual Report on Form 10-K for the fiscal year ended December 31, 2003 under the captions Executive Compensation, Director Compensation and Certain Relationships and Related Transactions is incorporated herein by reference.
(2) The only regulatory requirements that must be met are those imposed by applicable securities laws.
(3) Not applicable.
(4) Not applicable.
(5) None.

(b) Other Material Information. None.

Item 12. Exhibits.

Exhibit Number	Description of Document
(a)(1)(A)	Form of Letter of Transmittal, incorporated by reference to Exhibit 99.1 to the Registration Statement.
(a)(1)(B)	Form of Letter to Brokers, Dealers, Commercial Banks, Trust Companies and Other Nominees, incorporated by reference to Exhibit 99.2 to the Registration Statement.
(a)(1)(C)	Form of Letter to Clients for Use by Brokers, Dealers, Commercial Banks, Trust Companies and Other Nominees, incorporated by reference to Exhibit 99.3 to the Registration Statement.
(a)(1)(D)	Form of Notice of Guaranteed Delivery, incorporated by reference to Exhibit 99.4 to the Registration Statement.
(a)(2)	None.
(a)(3)	None.
(a)(4)	Prospectus, incorporated herein by reference to Part I of the Registration Statement.
(a)(5)(i)	Press Release issued by Invitrogen, incorporated by reference to Exhibit 99.1 to Invitrogen s Current Report on Form 8-K filed on November 9, 2000 and pursuant to Rule 425.
(b)	None.
(d)	None.
(g)	None.
(h)	None.

SIGNATURE

After due inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

INVITROGEN CORPORATION

By /s/ David F. Hoffmeister

Name: David F. Hoffmeister Title: Chief Financial Officer

Dated: November 8, 2004

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