

FORM 4

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

OMB APPROVAL	
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STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

(Print or Type Responses)

1. Name and Address of Reporting Person* Merrill Lynch Ventures LP 2001		2. Issuer Name and Ticker or Trading Symbol SENOYX INC [SNMX]		5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input type="checkbox"/> Director <input checked="" type="checkbox"/> 10% Owner <input type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below)	
(Last)	(First)	(Middle)	3. Date of Earliest Transaction (Month/Day/Year) 06/25/2004		
4 WORLD FINANCIAL CENTER, 23RD FLOOR			4. If Amendment, Date Original Filed(Month/Day/Year)		6. Individual or Joint/Group Filing (Check Applicable Line) <input type="checkbox"/> Form filed by One Reporting Person <input checked="" type="checkbox"/> Form filed by More than One Reporting Person
(Street)			NEW YORK, NY 10080		
(City)	(State)	(Zip)	Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned		

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock, \$.001 par value per share	06/25/2004		C		2,857,141	A	(1)	2,857,141	D (2)	

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned
(e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Underlying Securities (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of Derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	V		(A)	(D)					
Series E Pfd	(3)	06/25/2004		C		3,448,394	(4)	(5)	Common Stock	(5)	0	D (2)	

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Merrill Lynch Ventures LP 2001 4 WORLD FINANCIAL CENTER, 23RD FLOOR NEW YORK, NY 10080		X		
MERRILL LYNCH VENTURES LLC 4 WORLD FINANCIAL CENTER, 23RD FLOOR NEW YORK, NY 10080		X		
Merrill Lynch Group, Inc 4 WORLD FINANCIAL CENTER, 23RD FLOOR NEW YORK, NY 10080		X		
MERRILL LYNCH & CO INC 4 WORLD FINANCIAL CENTER, 23RD FLOOR NEW YORK, NY 10080		X		

Signatures

Frank Marinaro, VP, Merill Lynch Ventures, LLC, general partner of Merrill Lynch Ventures L.P. 2001		06/25/2004
*Signature of Reporting Person		Date
Frank Marinaro, VP of Merrill Lynch Ventures, LLC		06/25/2004

**Signature of Reporting Person		Date
Frank Marinaro, Attorney-in-Fact of Merrill Lynch Group, Inc.		06/25/2004
**Signature of Reporting Person		Date
Frank Marinaro, Attorney-in-Fact of Merrill Lynch & Co., Inc.		06/25/2004
**Signature of Reporting Person		Date

Explanation of Responses:

* If the form is filed by more than one reporting person, *see* Instruction 4(b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. *See* 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

(1) N/A - Securities were issued upon conversion of convertible preferred stock.

(2) The Reporting Person is a partnership in which Merrill Lynch Ventures, LLC is a general partner, which is a wholly-owned subsidiary of Merrill Lynch Group, Inc., which is a wholly-owned subsidiary of Merrill Lynch & Co., Inc. Each of the Reporting Owners disclaims beneficial ownership of these securities.

(3) .82854286-for-1

(4) Immediate.

(5) N/A

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure.

Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.