

FORM 4

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

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

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

(Print or Type Responses)

1. Name and Address of Reporting Person * Titinger Jorge	2. Issuer Name and Ticker or Trading Symbol KLA TENCOR CORP [KLAC]	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input type="checkbox"/> Director <input type="checkbox"/> 10% Owner <input checked="" type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below) SVP, Chief Admin Officer
(Last) (First) (Middle) C/O KLA-TENCOR CORPORATION, 160 RIO ROBLES	3. Date of Earliest Transaction (Month/Day/Year) 08/08/2007	
(Street) SAN JOSE, CA 95134	4. If Amendment, Date Original Filed (Month/Day/Year)	6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> Form filed by More than One Reporting Person
(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 (restricted stock units) (1)	08/08/2007	08/08/2007	A		25,000 (1)	A	\$ 0	62,600	D	
Common Stock								3,271 (2)	D	

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)
						Date Exercisable	Expiration Date					
				Code	V	(A)	(D)					

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Titinger Jorge C/O KLA-TENCOR CORPORATION 160 RIO ROBLES SAN JOSE, CA 95134			SVP, Chief Admin Officer	

Signatures

/s/ Jorge Titinger	08/10/2007
**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).

On September 19, 2006, the Reporting Person was granted a restricted stock unit covering up to 25,000 shares of the Issuer's Common Stock which are subject to both performance-vesting and service-vesting requirements. Following the completion of the Issuer's audited financial statements for the 2007 fiscal year, the Issuer's Board of Directors determined on August 8, 2007 the level at which the performance goals were attained, and based on that assessment, determined that the number of shares subject to the restricted stock units is 25,000. The Reporting Person will vest in 50% of the restricted stock units upon his completion of two years of service with the Issuer measured from September 19, 2006 and will vest in the remaining 50% upon his completion of an additional two years of service thereafter. The shares of common stock will be issued as the restricted stock units vest.

(1) Includes 337 shares acquired under the Employee Stock Purchase Plan ("ESPP") on February 1, 2007 and 334 shares acquired under the ESPP on June 29, 2007.

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

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