

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* Titinger Jorge <small>(Last) (First) (Middle)</small> C/O KLA-TENCOR CORPORATION, 160 RIO ROBLES <small>(Street)</small> SAN JOSE, CA 95130 <small>(City) (State) (Zip)</small>	2. Issuer Name and Ticker or Trading Symbol KLA TENCOR CORP [KLAC] 3. Date of Earliest Transaction (Month/Day/Year) 05/10/2007 4. If Amendment, Date Original Filed(Month/Day/Year)	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <small>Director</small> _____ <small>10% Owner</small> _____ <input checked="" type="checkbox"/> <small>Officer (give title below)</small> SVP, Chief Admin. Officer <small>Other (specify below)</small> _____ 6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> <small>Form filed by One Reporting Person</small> <input type="checkbox"/> <small>Form filed by More than One Reporting Person</small>
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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	02/01/2007		J		337	A	\$ 35.4365	2,600	D	
Common Stock	05/08/2007		M		10,000	A	\$ 34.67	12,600	D	
Common Stock	05/08/2007		S		10,000	D	\$ 56.25	2,600	D	
Common Stock-Restricted Stock Units								37,600	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)
				Code	V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Non-Qualified Stock Option (right to buy)	\$ 34.67	05/08/2007		M			10,000	01/28/2004	01/28/2013	Common Stock	10,000	\$ 56.25	25,000	D	
Non-Qualified Stock Option (right to buy)	\$ 39.34							09/16/2005	09/16/2014	Common Stock	19,500		19,500	D	
Non-Qualified Stock Option (right to buy)	\$ 40.66							10/27/2004	08/02/2014	Common Stock	1,200		1,200	D	

Non-Qualified Stock Option (right to buy)	\$ 45.16						10/27/2004	04/26/2014	Common Stock	2,000		2,000	D	
Non-Qualified Stock Option (right to buy)	\$ 47.95						09/26/2006	09/26/2012	Common Stock	17,000		17,000	D	
Non-Qualified Stock Option (right to buy)	\$ 53.86						10/27/2004	10/27/2013	Common Stock	3,200		3,200	D	
Non-Qualified Stock Option (right to buy)	\$ 58.10						10/27/2004	01/27/2014	Common Stock	1,600		1,600	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 95130			SVP, Chief Admin. Officer	

Signatures

By: /s/ John Kispert For: Jorge Luis Titinger		05/10/2007
<small>Signature of Reporting Person</small>		<small>Date</small>

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) Voluntary reporting of shares acquired through Employee Stock Purchase Plan

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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