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

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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

	Reporting Per	rson*		ssuer Name	and '	Ticker o	r Tra	dina Syn	nhal		5. Relation	ship of Ren	orting Person	n(s) to Issue	
	1. Name and Address of Reporting Person * Tsai Bin-Ming Ben			2. Issuer Name and Ticker or Trading Symbol KLA TENCOR CORP [KLAC]							5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner				
(Last) (First) (Middle) C/O KLA-TENCOR CORPORATION, 160 RIO ROBLES				3. Date of Earliest Transaction (Month/Day/Year) 02/13/2007						X Officer (give title below) Other (specify below)  Executive Vice President					
(Street) SAN JOSE, CA 95130			4. If	4. If Amendment, Date Original Filed(Month/Day/Year)						6. Individual or Joint/Group Filing(Check Applicable Line) _X_ Form filed by One Reporting PersonForm filed by More than One Reporting Person					
<u>,                                      </u>	(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	Exec any	any		f Code (Instr. 8)				of (D)	Beneficia Reported	ly Owned Following Transaction(s)		Form:	7. Nature of Indirect Beneficial
			(Moi			Code	V	Amoun	(A) or (D)	Price	Ì	istr. 3 and 4)			Ownership (Instr. 4)
Stock-Res	stricted	02/13/2007				A		50,000	A	\$ 0 (2)	50,000			D	
Stock											2,915			D	
		Table II -				t Acquire	conta the fo d, Dis	ained in orm dis sposed o	this for plays a f, or Ben	rm ar curre reficia	e not requently valid	ired to res	spond unle	ss	1474 (9-02)
1. Title of 2. Derivative Conversion Security or Exercise (Instr. 3)		Year) Execution D	ate, if	4. f Transaction Code		mber	6. Date Exercisable and Expiration Date (Month/Day/Year)		7. T Am Und	Title and count of derlying	Derivative Security	Derivative Securities	Owners Form of	11. Natur of Indirec Beneficia	
Price of Derivative Security		(Month/Day	Year)	(Instr. 8)	Sector Acquired (A) Display of (Instance)	urities quired or posed D) etr. 3,						(Instr. 5)	Owned Following Reported	Security Direct (I or Indirects)	(Instr. 4)
				Code V	(A)	(D)	Date Exerc			n Titl	Amount or Number of Shares				
	Stock-Res (1) Stock  Eport on a s  Conversion or Exercise trice of Derivative	Stock-Restricted Stock S	Stock-Restricted (Month/Day/Year)  Stock	E, CA 95130  (State)  2. Transaction Date (Month/Day/Year)  (Month/Day/Year)  Stock-Restricted (Month/Day/Year)  (Month/Day/Year)  Table II - Deriv (e.g., 1)  Conversion To Exercise (Month/Day/Year)  Table III - Deriv (e.g., 1)  (Month/Day/Year)  (Month/Day/Year)	Execution Date (Month/Day/Year)  Stock-Restricted (Month/Day/Year)  Stock  Execution Date (Month/Day/Year)  Stock  Table II - Derivative Secur (e.g., puts, calls, varieties of the conversion of the execution Date (Month/Day/Year)  Table II - Derivative Secur (e.g., puts, calls, varieties of the execution Date (Month/Day/Year)  Transaction Date (Month/Day/Year)  Stock  Table II - Derivative Secur (e.g., puts, calls, varieties of the execution Date (Month/Day/Year)  Transaction Date (Month/Day/Year)  Transaction Date (Month/Day/Year)  Transaction Date (Month/Day/Year)	Stock-Restricted (Month/Day/Year)  Table II - Derivative Securities beneficially owner (Leg., puts, calls, warrand any (Month/Day/Year))  Table II - Derivative Securities beneficially owner (Leg., puts, calls, warrand any (Month/Day/Year))  Table II - Derivative Securities beneficially owner (Leg., puts, calls, warrand any (Month/Day/Year))  Table II - Derivative Securities beneficially owner (Leg., puts, calls, warrand any (Month/Day/Year))  Table II - Derivative Securities beneficially owner (Leg., puts, calls, warrand any (Month/Day/Year))  Table II - Derivative Securities beneficially owner (Leg., puts, calls, warrand any (Month/Day/Year))  Table II - Derivative Securities beneficially owner (Leg., puts, calls, warrand any (Month/Day/Year))	Execution Date (Month/Day/Year)    Code   Code   Code   Code	E, CA 95130  (State)  (Zip)  Table I - Non-Derivative Execution Date, if (Instr. 8)  Code V  Stock-Restricted (Instr. 8)  Stock  Perort on a separate line for each class of securities beneficially owned directly or instruction (Le.g., puts, calls, warrants, options, and instruction (Month/Day/Year)  Table II - Derivative Securities Acquired, Disconversion (Month/Day/Year)  Table II - Derivative Securities Acquired, Disconversion (Month/Day/Year)  A Stock  Table II - Derivative Securities Acquired (Le.g., puts, calls, warrants, options, and Instruction (Month/Day/Year)  Table II - Derivative Securities Acquired (Line of Code (Instr. 8)  Derivative Securities Acquired (Month/Day/Year)  Table II - Derivative Securities Acquired (Month/Day/Year)  Disposed of (D) (Instr. 3, 4, and 5)  Date Execution Date (Instr. 8)  Date Date Execution Date (Instr. 3, 4, and 5)	Execution Date (Month/Day/Year)  Stock-Restricted (Month/Day/2 ar)  Stock (Month/Day/Year)  Stock (Mon	E, CA 95130    Cap   Cap   Cap   Cap	E, CA 95130  (State)  (Zip)  Table I - Non-Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)  Stock-Restricted (Stock)  Stock  Perport on a separate line for each class of securities beneficially owned directly or indirectly.  Table II - Derivative Securities Acquired, Disposed of, or Beneficial (E.g., puts, calls, warrants, options, convertible securities)  Table II - Derivative Securities Acquired, Disposed of, or Beneficial (A) or Disposed of, or Beneficial (B) of Date (C.g., puts, calls, warrants, options, convertible securities)  Acquired (A) or Disposed of, or Beneficial (C.g., puts, calls, warrants, options, convertible securities)  Acquired (A) or Disposed of, or Beneficial (C.g., puts, calls, warrants, options, convertible securities)  Acquired (A) or Disposed of, or Beneficial (C.g., puts, calls, warrants, options, convertible securities)  Acquired (A) or Disposed of, or Beneficial (C.g., puts, calls, warrants, options, convertible securities)  Acquired (A) or Disposed of, or Beneficial (C.g., puts, calls, warrants, options, convertible securities)  Acquired (A) or Disposed of, or Beneficial (C.g., puts, calls, warrants, options, convertible securities)  Acquired (A) or Disposed of, or Beneficial (C.g., puts, calls, warrants, options, convertible securities)  Acquired (A) or Disposed of, or Beneficial (C.g., puts, calls, warrants, options, convertible securities)  Acquired (A) or Disposed of, or Beneficial (C.g., puts, calls, warrants, options, convertible securities)  Acquired (A) or Disposed of, or Beneficial (C.g., puts, calls, warrants, options, convertible securities)  Beneficial (C.g., puts, calls, warra	E, CA 95130  (State)  (Zip)  Table I - Non-Derivative Securities Acquired, Disposed of (D) (Instr. 3)  (Month/Day/Year)  (Month/Day/Year)  2. Transaction Date (Month/Day/Year)  (Month/Day/Year)  (Month/Day/Year)  (Month/Day/Year)  (Month/Day/Year)  (Month/Day/Year)  (A) or Disposed of (D) (Instr. 3, 4 and 5)  (Instr. 3)  (A) or Disposed of (D) (Instr. 3 and 5)  (Instr. 3)  (Instr. 4)  (Instr. 5)  (Instr. 6)  (Instr. 7)  (Instr. 7)  (Instr. 8)  (Instr. 3)  (I	Carrier   Carr	Stock-Restricted   O2/13/2007   A   So,000   A   So,000	Cap   Cap

## Reporting Owners

		Relationships						
Reporting Owner Name / Address		Director	10% Owner	Officer	Other			
160 RIO R	TENCOR CORPORATION			Executive Vice President				

# **Signatures**

Bin-Ming B Tsai	02/15/2007		
**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).
- (1) Each restricted stock unit represents a contingent right to receive one share of KLAC common stock.
- (2) The restricted stock units vest in two equal installments. The first half vests two years from grant date. The second half vests after four years from grant date.

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.