

HARRINGTON MARK A
 Form 4
 September 19, 2006

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, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person *
 HARRINGTON MARK A

2. Issuer Name and Ticker or Trading Symbol
 TRIMBLE NAVIGATION LTD /CA/ [TRMB]

5. Relationship of Reporting Person(s) to Issuer
 (Check all applicable)

(Last) (First) (Middle)

3. Date of Earliest Transaction (Month/Day/Year)
 09/18/2006

___ Director ___ 10% Owner
 Officer (give title below) ___ Other (specify below)
 Vice President

C/O TRIMBLE NAVIGATION LIMITED, 935 STEWART DRIVE
 (Street)

4. If Amendment, Date Original Filed(Month/Day/Year)

6. Individual or Joint/Group Filing(Check Applicable Line)
 Form filed by One Reporting Person
 ___ Form filed by More than One Reporting Person

SUNNYVALE, CA 94085

(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 (D) Price | | | |
| Common Stock | 09/18/2006 | | M | 3,000 A \$ 25.3333 | 3,703 | D | |
| Common Stock | 09/18/2006 | | S ⁽¹⁾ | 3,000 D \$ 47.4933 | 703 | D | |

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

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SEC 1474 (9-02)

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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. Amount or Number of Shares |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|-------------------------------|
| Employee Stock Option | \$ 25.3333 | 09/18/2006 | | M | 3,000 | ⁽²⁾ 01/15/2014 | Common Stock | 3,000 |

Reporting Owners

| Reporting Owner Name / Address | Relationships | | | |
|---|---------------|-----------|----------------|-------|
| | Director | 10% Owner | Officer | Other |
| HARRINGTON MARK A C/O TRIMBLE NAVIGATION LIMITED 935 STEWART DRIVE SUNNYVALE, CA 94085 | | | Vice President | |

Signatures

/s/ Mark
Harrington 09/19/2006
**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) This sale reported in this form 4 was effected pursuant to a Rule 10b5-1 plan adopted by the reporting person on May 31, 2006.
- (2) This option is exercisable 20% at the end of the first year and 1.67% a month thereafter.

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.