VAN MAAREN JAN PAUL

Form 4/A

December 27, 2004

FORM 4

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

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

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

OMB APPROVAL	
OMB Number:	3235-0287
Expires:	January 31, 2005
Estimated average burden hours per response...	0.5

(Print or Type Responses)

1. Name and Address of Reporting Person [*] VAN MAAREN JAN PAUL	2. Issuer Name **and** Ticker or Trading Symbol AXCELIS TECHNOLOGIES INC [ACLS]	5. Relationship of Reporting Person(s) to Issuer (Check all applicable)
(Last) (First) (Middle)	3. Date of Earliest Transaction (Month/Day/Year) 12/27/2004	_____ Director _____ 10% Owner __X__ Officer (give title _____ Other (specify below) below) VP and GM, CCS
C/O AXCELIS TECHNOLOGIES, INC., 108 CHERRY HILL DRIVE		
(Street)	4. If Amendment, Date Original Filed(Month/Day/Year) 12/27/2004	6. Individual or Joint/Group Filing(Check Applicable Line) _X_ Form filed by One Reporting Person ___ Form filed by More than One Reporting Person
BEVERLY, MA 01915		
(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			

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

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

SEC 1474 (9-02)

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

1. Title of Derivative	2. Conversion	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if	4. Transaction	5. Number of Derivative	6. Date Exercisable and Expiration Date	7. Title and Amount o Underlying Securities

1

Security (Instr. 3)	or Exercise Price of Derivative Security		any (Month/Day/Year)	Code (Instr. 8)			Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)		(Month/Day/Year)		(Instr. 3 and 4)	
				Code	V		(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares
Stock option (right to buy)	$ 7.97		12/27/2004	A[(1)]			12,500		06/25/2008[(2)]	06/25/2014	Common Stock	12,500

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
VAN MAAREN JAN PAUL C/O AXCELIS TECHNOLOGIES, INC. 108 CHERRY HILL DRIVE BEVERLY, MA 01915			VP and GM, CCS	

Signatures

Lynnette C. Fallon, as attorney-in-fact for Jan Paul van Maaren	12/27/2004
[**]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) Granted Pursuant to the Axcelis Technologies, Inc. 2000 Stock Plan.

(2) Excercisable as to 25% of the total shares on each of 6/25/2005, 6/25/2006, 6/25/2007 and 6/25/2008.

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.