

| OMB APPROVAL                                 |           |
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**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP**

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

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

|  |           |              |   |  |  |  |  |  |
|--|-----------|--------------|---|--|--|--|--|--|
| 1. Name and Address of Reporting Person*<br><u>Bintz William J</u> |           |              | 2. Issuer Name and Ticker or Trading Symbol<br><u>AXCELIS TECHNOLOGIES INC [ ACLS ]</u> |  |  | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable)<br>Director 10% Owner<br><input checked="" type="checkbox"/> Officer (give title below) Other (specify below)<br><u>EVP, Prod. Dev., Eng. &amp; Mktg</u> |  |  |
| (Last)   | (First)   | (Middle)     | 3. Date of Earliest Transaction (Month/Day/Year)<br><u>07/15/2011</u>                   |  |  | 6. Individual or Joint/Group Filing (Check Applicable Line)<br><input checked="" type="checkbox"/> Form filed by One Reporting Person<br>Form filed by More than One Reporting Person  |  |  |
| <u>108 CHERRY HILL DRIVE</u>                                       |           |              | 4. If Amendment, Date of Original Filed (Month/Day/Year)                                |  |  |  |  |  |
| (Street)   |           |              |   |  |  |  |  |  |
| <u>BEVERLY</u>   | <u>MA</u> | <u>01915</u> |   |  |  |  |  |  |
| (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                      |                             |   |  |   |
| <u>Common Stock</u>             | <u>07/16/2011</u>                    |  | <u>F</u>                       |   | <u>793</u> | <u>D<sup>(1)</sup></u>  | <u>\$1.6<sup>(2)</sup></u> | <u>45,109<sup>(3)</sup></u> | <u>D</u>  |  |   |

**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 Securities Underlying Derivative Security (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: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) |
|--|--|--------------------------------------|--|--------------------------------|---|--|-----|--|-------------------|---|--|--|---|--|
|  |  |                                      |  | Code                           | V | (A)  | (D) | Date Exercisable   | Expiration Date   |   |  |  |   |  |
| <u>Stock option (right to buy)</u>         | <u>\$1.6</u>   | <u>07/15/2011</u>                    |  | <u>A<sup>(4)</sup></u>         |   | <u>150,000</u>   |     | <u>07/15/2015<sup>(5)</sup></u>                          | <u>07/15/2021</u> | <u>Common Stock</u>   | <u>150,000</u>                             | <u>\$0</u>   | <u>150,000</u>  | <u>D</u>   |

**Explanation of Responses:**

- Shares withheld by the Company equal to tax liability of the executive officer incident to the vesting of restricted stock units issued in accordance with Rule 16b-3.
- Represents the closing price of the common stock on July 18, 2011 (the first trading day after the vesting date).
- Of the shares held as of July 16, 2011, 11,955 were issuable on vesting of restricted stock units granted the executive under the 2000 Stock Plan and are subject to forfeiture. A portion of these shares will be withheld by the Company on vesting to satisfy tax withholding requirements.
- Granted pursuant to the Axcelis Technologies, Inc. 2000 Stock Plan.
- To become exercisable as to 25% of the shares on each of 7/15/2012, 7/15/2013, 7/15/2014 and 7/15/2015.

Lynnette C. Fallon, as attorney 07/19/2011  
in fact for William Bintz

\*\* Signature of Reporting Person Date

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

\* 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).

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

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 Number.