

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 10-Q

(Mark One)

**QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES
EXCHANGE ACT OF 1934**

For the quarterly period ended June 30, 2007

or

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES
EXCHANGE ACT OF 1934**

For the transition period from to

Commission file number 000-30941

AXCELIS TECHNOLOGIES, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

34-1818596

(IRS Employer Identification No.)

108 Cherry Hill Drive

Beverly, Massachusetts 01915

(Address of principal executive offices, including zip code)

(978) 787-4000

(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No .

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer Non-accelerated filer

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act) Yes No

As of August 7, 2007 there were 102,122,877 shares of the registrant's common stock outstanding.

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PART 1 - - FINANCIAL INFORMATION

Item 1. Financial Statements.

**Axcelis Technologies, Inc.
Consolidated Statements of Income
(In thousands, except per share amounts)
(Unaudited)**

	Three months ended June 30,		Six months ended June 30,	
	2007	2006	2007	2006
Revenue				
Systems	\$ 67,361	\$ 67,734	\$ 118,425	\$ 120,138
Services	41,272	46,863	85,674	90,944
Royalties, primarily from SEN	1,440	3,043	3,500	4,479
	<u>110,073</u>	<u>117,640</u>	<u>207,599</u>	<u>215,561</u>
Cost of revenue	66,483	69,698	122,759	128,577
Gross profit	<u>43,590</u>	<u>47,942</u>	<u>84,840</u>	<u>86,984</u>
Operating expenses				
Research and development	17,598	18,191	35,826	36,403
Sales and marketing	13,146	11,569	26,084	22,176
General and administrative	10,194	11,419	20,670	22,272
Amortization of intangible assets	656	627	1,312	1,239
Restructuring charges	—	399	—	94
	<u>41,594</u>	<u>42,205</u>	<u>83,892</u>	<u>82,184</u>
Income from operations	1,996	5,737	948	4,800
Other income (expense)				
Equity income of SEN	1,905	6,146	6,573	8,362
Interest income	1,146	1,915	2,600	3,566
Interest expense	(1,566)	(2,446)	(3,235)	(4,087)
Other—net	275	1,339	251	684
	<u>1,760</u>	<u>6,954</u>	<u>6,189</u>	<u>8,525</u>
Income before income taxes	3,756	12,691	7,137	13,325
Income taxes (credits)	(988)	547	(280)	636
Net income	<u>\$ 4,744</u>	<u>\$ 12,144</u>	<u>\$ 7,417</u>	<u>\$ 12,689</u>

Net income per share

Basic	\$	0.05	\$	0.12	\$	0.07	\$	0.13
Diluted		0.05		0.12		0.07		0.13
Shares used in computing basic and diluted income per share								
Basic		101,609		100,958		101,551		100,921
Diluted		102,503		101,080		102,463		101,098

See accompanying Notes to Consolidated Financial Statements

Axcelis Technologies, Inc.
Consolidated Balance Sheets
(In thousands)
(Unaudited)

	June 30, 2007	December 31, 2006
ASSETS		
Current assets		
Cash and cash equivalents	\$ 63,782	\$ 140,451
Marketable securities	18,000	63,200
Restricted cash	15,168	11,019
Accounts receivable, net	79,696	73,635
Inventories, net	175,939	160,107
Prepaid expenses and other current assets	36,621	26,639
Total current assets	<u>389,206</u>	<u>475,051</u>
Property, plant and equipment, net	68,468	66,678
Investment in SEN	123,295	126,688
Goodwill	46,773	46,773
Intangible assets	12,237	13,549
Restricted cash, long-term portion	—	1,137
Other assets	30,940	24,117
	<u>\$ 670,919</u>	<u>\$ 753,993</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	\$ 24,684	\$ 37,312
Accrued compensation	15,731	26,996
Warranty	5,567	5,229
Income taxes	817	3,906
Deferred revenue	40,642	28,811
Current portion of convertible subordinated debt	—	74,217
Other current liabilities	8,614	13,670
Total current liabilities	<u>96,055</u>	<u>190,141</u>
Convertible subordinated debt	78,375	76,887
Long-term deferred revenue	2,905	5,054
Other long-term liabilities	6,881	4,349
Stockholders' equity		
Preferred stock	—	—
Common stock	102	101
Additional paid-in capital	475,514	469,967
Treasury stock	(1,218)	(1,218)
Retained earnings	17,000	9,583
Accumulated other comprehensive loss	(4,695)	(871)
	<u>486,703</u>	<u>477,562</u>
	<u>\$ 670,919</u>	<u>\$ 753,993</u>

See accompanying Notes to Consolidated Financial Statements

(In thousands)
(Unaudited)

	Six months ended June 30,	
	2007	2006
Operating activities		
Net income	\$ 7,417	\$ 12,689
Adjustments required to reconcile net income to net cash used for operating activities		
Depreciation and amortization	9,169	8,852
Amortization of intangible assets	1,312	1,239
Accretion of premium on convertible subordinated debt	1,488	457
Stock compensation expense	2,430	2,574
Undistributed income of SEN	(6,573)	(8,362)
Changes in operating assets and liabilities		
Accounts receivable	(5,723)	(23,435)
Inventories	(14,883)	(18,579)
Other current assets	(9,762)	(2,733)
Accounts payable and other current liabilities	(27,646)	5,562
Deferred revenue	9,682	2,342
Income taxes	(786)	(550)
Cash dividend from SEN	5,677	—
Other assets and liabilities	(11,263)	(4,428)
Net cash used for operating activities	(39,461)	(24,372)
Investing activities		
Purchases of marketable securities	—	(48,544)
Sales and maturities of marketable securities	45,200	47,764
Expenditures for property, plant and equipment	(6,243)	(2,109)
Increase in restricted cash	(3,012)	(711)
Net cash (used for) provided by investing activities	35,945	(3,600)
Financing activities		
Proceeds from issuance of convertible subordinated debt	—	24,217
Repayment of convertible subordinated debt	(74,217)	—
Proceeds from the exercise of stock options	956	1,264
Proceeds from employee stock purchase plan	996	1,006
Net cash (used for) provided by financing activities	(72,265)	26,487
Effect of exchange rate changes on cash	(888)	(585)
Net decrease in cash and cash equivalents	(76,669)	(2,070)
Cash and cash equivalents at beginning of period	140,451	71,417
Cash and cash equivalents at end of period	<u>\$ 63,782</u>	<u>\$ 69,347</u>

See accompanying Notes to Consolidated Financial Statements

Axcelis Technologies, Inc.
Notes To Consolidated Financial Statements (Unaudited)
(All tabular amounts in thousands, except per share amounts)

Note 1. Nature of Business and Basis of Presentation

Axcelis Technologies, Inc. (“Axcelis” or the “Company”), is a producer of ion implantation, dry strip, thermal processing and curing equipment used in the fabrication of semiconductors in the United States, Europe and Asia. In addition, the Company provides extensive aftermarket service and support, including spare parts, equipment upgrades, and maintenance services to the semiconductor industry. The Company owns 50% of the equity of a joint venture with Sumitomo Heavy Industries, Ltd. in Japan. This joint venture, which is known as SEN Corporation, an SHI and Axcelis Company (“SEN”), licenses technology from the Company relating to the manufacture of specified ion implantation products and has exclusive rights to manufacture and sell these products in the territory of Japan. SEN is the leading producer of ion implantation equipment in Japan.

The accompanying unaudited consolidated financial statements have been prepared in accordance with generally accepted accounting principles for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements. In the opinion of management all adjustments, which are of a normal recurring nature, considered necessary for a fair presentation have been included. Operating results for the interim periods presented are not necessarily indicative of the results that may be expected for other interim periods or for the year as a whole.

The balance sheet at December 31, 2006 has been derived from the audited financial statements at that date but does not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements.

For further information, refer to the consolidated financial statements and footnotes thereto included in Axcelis Technologies, Inc.’s annual report on Form 10-K for the year ended December 31, 2006.

Note 2. Stock-Based Compensation

2000 Stock Plan

The Company maintains the Axcelis Technologies, Inc. 2000 Stock Plan (the "2000 Plan"), a stock award and incentive plan which permits the issuance of options, restricted stock, restricted stock units, and performance awards to selected employees, directors and consultants of the Company. The 2000 Plan originally reserved 18.5 million shares of common stock for future grant, which amount was subsequently increased to 33.2 million shares of common stock. The 2000 Plan expires in 2012. At June 30, 2007 there were 18.4 million shares of common stock available for future grant. At June 30, 2007 and 2006, stock awards outstanding under the 2000 Plan included stock options, restricted stock, and restricted stock units.

Expiration of non-qualified stock options or stock appreciation rights is based on award agreements. Non-qualified stock options typically expire ten years from date of grant, but, if approved by the Board of Directors, may have a stated term in excess of ten years. Incentive stock option awards expire ten years from the date of grant. Generally, options granted to employees terminate upon termination of employment. Under the terms of the 2000 Plan, the exercise price, determined by the Board of Directors, may not be less than the fair market value of a share of the Company's common stock on the date of grant. Stock options granted to employees generally vest over a period of four years while stock options granted to non-employee members of the Company's Board of Directors generally vest over a period of six months and, once vested, are not affected by the director's termination of service to the Company. The Company settles stock option exercises with newly issued common shares.

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Generally, unvested restricted stock and restricted stock unit awards expire upon termination of service to the Company. Restricted stock or restricted stock unit awards granted to employees generally vest over a period of four years while restricted stock or restricted stock units granted to members of the Company's Board of Directors generally vest over a period of six months. The Company settles restricted stock units upon vesting with newly issued common shares.

Under the 2000 Plan, fair market value is defined as the closing price of a share of the common stock on the Nasdaq Global Market, as of any applicable date, as long as the Company's shares are traded on such exchange.

The amount of stock-based compensation recognized during a period is based on the value of the portion of the awards that are ultimately expected to vest. SFAS 123R requires forfeitures to be estimated at the time of grant and the estimates to be revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. The term "forfeitures" is distinct from "cancellations" or "expirations" and represents only the unvested portion of the surrendered stock-based award. The Company currently expects, based on a historical analysis, a forfeiture rate of 10% per year, except for executive officer awards, which are expected to forfeit at a rate of 5% per year.

Under Statement of Financial Accounting Standard (SFAS) No. 123R the Company recognized stock-based compensation expense of \$1.3 million and \$2.4 million for the three and six months ended June 30, 2007, respectively, and \$1.3 million and \$2.6 million for the three and six months ended June 30, 2006, respectively. SFAS No. 123R also requires the benefits of tax deductions in excess of recognized compensation cost to be reported as a financing cash flow, rather than as an operating cash flow. Because the Company does not recognize the benefit of tax deductions in excess of recognized compensation cost due to its cumulative net operating loss position, the adoption of SFAS No. 123R had no impact on the Company's consolidated statement of cash flows for the six months ended June 30, 2007 and 2006.

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Grant-Date Fair Value

The Company uses the Black-Scholes option pricing model to calculate the grant-date fair value of an award. The fair values of options outstanding during the periods shown were calculated using the following assumptions:

	Three months ended June 30,		Six months ended June 30,	
	2007	2006	2007	2006
Weighted-average expected volatility	58.4%	56.9%	58.4%	56.9-59.0%
Weighted-average expected term (in years)	4.2	4.2	4.2	4.2
Risk-free interest rate	4.7-5.1%	5.0%	4.7-5.1%	4.3-5.0%
Expected dividend yield	0%	0%	0%	0%

Expected volatility—The Company considers a number of factors when estimating volatility under the pricing model. For options granted prior to fiscal 2006, the Company used historical volatility to estimate the grant-date fair value of stock options. The Company's current method of estimating expected volatility for all stock options relies on a combination of historical and implied volatility. The Company currently believes that the use of this blended volatility results in a more accurate estimate of the grant-date fair value of employee stock options because it more accurately reflects the market's current expectations of future volatility.

Expected term—Weighted average expected term was calculated using a forward looking lattice model of the Company's stock price incorporating a suboptimal exercise factor and a projected post-vest forfeiture rate.

Risk-free interest rate—The yield on zero-coupon U.S. Treasury securities for a period that is commensurate with the expected term assumption is used as the risk-free interest rate.

Expected dividend yield—Expected dividend yield was not considered in the option pricing formula since the Company does not pay dividends and has no current plans to do so in the future.

Stock Options

The following table summarizes the stock option activity for the six months ended June 30, 2007:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value
Outstanding at December 31, 2006	12,805	\$ 11.68		
Granted	43	6.61		
Exercised	(166)	5.76		
Canceled	(36)	6.31		
Expired	(783)	11.57		
Outstanding at June 30, 2007	<u>11,863</u>	<u>\$ 11.78</u>	<u>4.88</u>	<u>\$ 2,315</u>
Exercisable at June 30, 2007	<u>10,842</u>	<u>\$ 12.30</u>	<u>4.57</u>	<u>\$ 1,622</u>
Options Vested or Expected to Vest at June 30, 2007 (1)	<u>11,757</u>	<u>\$ 11.83</u>	<u>4.91</u>	<u>\$ 305</u>

(1) In addition to the vested options, the Company expects a portion of the unvested options to vest at some point in the future. Options expected to vest is calculated by applying an estimated forfeiture rate to the unvested options.

The total intrinsic value of options exercised during the three and six months ended June 30, 2007 was \$0.2 and \$0.3 million, respectively. The total intrinsic value of options exercised during the six months ended June 30, 2006 was \$0.2 million. There were no options exercised during the three months ended June 30, 2006. The total fair value of stock options vested during the three and six months ended June 30, 2007 was \$1.7 million and \$1.8 million, respectively. The total fair value of stock options vested during the three and six months ended June 30, 2006 was \$2.3 million and \$2.4 million, respectively. As of June 30, 2007, there was \$2.5 million of total forfeiture adjusted unrecognized compensation cost related to non-vested stock options granted under the 2000 Plan. That cost is expected to be recognized over a weighted-average period of 1.85 years. Cash received from options exercised was \$1.0 and \$1.3 million during the six months ended June 30, 2007 and 2006, respectively.

Restricted Stock and Restricted Stock Units

Restricted stock units ("RSUs") represent the Company's unfunded and unsecured promise to issue shares of the common stock at a future date, subject to the terms of the RSU Award Agreement and the 2000 Plan. The purpose of these awards is to assist in attracting and retaining highly competent employees and directors and to act as an incentive in motivating selected employees and directors to achieve long-term corporate objectives. The fair value of restricted stock unit and restricted stock awards is charged to expense ratably over the requisite service period.

Changes in the Company's non-vested restricted stock and restricted stock units for the six months ended June 30, 2007 follow:

	Shares/units	Weighted- Average Grant Date Fair Value per Share
Outstanding at December 31, 2006	1,831	\$ 6.44
Granted	1	7.69
Vested	(66)	5.97
Forfeited	(17)	6.37
Outstanding at June 30, 2007	<u>1,749</u>	<u>6.46</u>

The fair value of the Company's restricted stock and restricted stock units was calculated based upon the fair market value of the Company's stock at the date of grant. As of June 30, 2007, there was \$6.9 million of total forfeiture adjusted unrecognized compensation cost related to nonvested restricted stock and restricted stock units, which is expected to be amortized over a weighted average amortization period of 2.53 years.

Employee Stock Purchase Plan

The Employee Stock Purchase Plan (the "Purchase Plan") provides effectively all Axcelis employees the opportunity to purchase common stock of the Company at less than market prices. Purchases are made through payroll deductions of up to 10% of the employee's salary, subject to certain caps set forth in the Purchase Plan. Employees may purchase Axcelis common stock at 85% of the market value of the Company's common stock on the day the stock is purchased. The purchase price may be adjusted by a committee of the Board of Directors.

Compensation expense is computed as the benefit of discounted stock price, amortized to compensation expense straight-line over each offering period of six months. Compensation expense the three and six month periods ended June 30, 2007 was \$0.1 million and \$0.2 million, respectively. Compensation expense for the three and six month periods ended June 30, 2006 was \$0.1 million and \$0.2 million, respectively. As of June 30, 2007, there were a total of 3.9 million shares reserved for issuance and available for purchase under the Purchase Plan. There were 0.2 million and 0.4 million shares purchased under the Purchase Plan during the three and six months ended June 30, 2007, respectively.

Note 3. Net Income Per Share

SFAS No. 128, "Earnings Per Share," requires two presentations of earnings per share, "basic" and "diluted." Basic earnings per share is computed by dividing income available to common stockholders (the numerator) by the weighted-average number of common shares outstanding (the denominator) for the period. The computation of diluted earnings per share is similar to basic earnings per share, except that the denominator is increased to include the number of additional common shares that would have been outstanding if the potentially dilutive common shares had been issued.

For purposes of computing diluted earnings per share, weighted average common shares outstanding do not include stock options and restricted stock awards with an exercise price inclusive of unrecognized compensation expense which exceeded the average fair market value of the Company's common stock for the period, as the effect would be anti-dilutive. In addition, 3.9 million shares of common stock for the assumed conversion of the Company's convertible debt for the three and six months ended June 30, 2007, and 7.5 million shares of common stock for the assumed conversion of the Company's convertible debt for the three and six months ended June 30, 2006, computed using the if converted method, were excluded from the computation of diluted earnings per share as the effect of conversion would be anti-dilutive. These stock options, restricted stock awards, and conversions could, however, become dilutive in future periods.

A reconciliation of net income and shares used in computing basic and diluted earnings per share follows:

	Three months ended June 30,		Six months ended June 30,	
	2007	2006	2007	2006
	(In thousands, except per share data)			
Income available to common stockholders	\$ 4,744	\$ 12,144	\$ 7,417	\$ 12,689
Weighted average common shares outstanding used in computing basic net income per share	101,609	100,958	101,551	100,921
Incremental shares	894	122	912	177
Weighted average common shares outstanding used in computing diluted net income per share	102,503	101,080	102,463	101,098
Net income per share				
Basic	\$ 0.05	\$ 0.12	\$ 0.07	\$ 0.13
Diluted	0.05	0.12	0.07	0.13

Note 4. Comprehensive Income

The components of comprehensive income follow:

	Three months ended June 30,		Six months ended June 30,	
	2007	2006	2007	2006
	(in thousands)			
Net income	\$ 4,744	\$ 12,144	\$ 7,417	\$ 12,689
Other comprehensive income (loss):				
Foreign currency translation adjustments	(4,953)	4,523	(3,828)	5,897
Unrealized gain (loss) on marketable securities	2	(1)	4	8
Comprehensive income (loss)	\$ (207)	\$ 16,666	\$ 3,593	\$ 18,594

Note 5. Inventories

The components of inventories follow:

	June 30, 2007	December 31, 2006
	(in thousands)	
Raw materials	\$ 101,294	\$ 93,197
Work-in-process	41,631	44,587
Finished goods (completed systems)	33,014	22,323
	\$ 175,939	\$ 160,107

Note 6. Product Warranty

The Company offers a one to three year warranty for all of its products, the terms and conditions of which vary depending upon the product sold. For all systems sold, the Company accrues a liability for the estimated cost of standard warranty at the time of system shipment and defers the portion of systems revenue attributable to the fair value of non-standard warranty. Costs for non-standard warranty are expensed as incurred. Factors that affect the Company's warranty liability include the number of installed units, historical and anticipated product failure rates, material usage and service labor costs. The Company periodically assesses the adequacy of its recorded liability and adjusts the amount as necessary.

Changes in the Company's product warranty liability are as follows:

	Six months ended June 30,	
	2007	2006
	(in thousands)	
Balance at December 31	\$ 6,472	\$ 7,166
Warranties issued during the period	3,484	4,267
Settlements made during the period	(3,006)	(3,497)
Changes in liability for pre-existing warranties during the period	(295)	(1,810)
Balance at June 30	<u>\$ 6,655</u>	<u>\$ 6,126</u>
Amount classified as current	\$ 5,567	\$ 5,276
Amount classified as long-term	1,088	850
Balance at June 30	<u>\$ 6,655</u>	<u>\$ 6,126</u>

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Note 7. Convertible Subordinated Debt

In January 2002, the Company completed an offering of \$125 million of 4.25% Convertible Subordinated Notes due January 15, 2007 (the "Old Notes").

On May 2, 2006, the Company entered into an exchange and purchase agreement pursuant to which the holder of an aggregate of approximately \$50.8 million of the Old Notes agreed to exchange its Old Notes for \$50.8 million in aggregate principal amount of the Company's newly issued 4.25% Convertible Senior Subordinated Notes due January 15, 2009 (the "New Notes"), plus accrued and unpaid interest on the Old Notes through but excluding May 2, 2006, the closing date of the exchange. In addition, the Company issued an additional \$24.2 million of New Notes, resulting in an aggregate of \$75 million of New Notes outstanding.

The New Notes are unsecured senior indebtedness of the Company and bear interest at the rate of 4.25% per annum. Interest is payable on January 15 and July 15 of each year, commencing July 15, 2006. The New Notes mature on January 15, 2009. At maturity, the Company is required to repay the outstanding principal of the New Notes, plus a maturity premium of 11.125% of such principal, resulting in an effective annual yield to maturity of approximately 8.0%.

The principal amount of the New Notes, together with the accreted portion of the maturity premium, which increases over the term of the notes, as of the conversion date, are convertible at the option of the holder, at any time on or prior to maturity, into shares of the Company's common stock at a conversion price equal to \$20.00 per share, which also was the conversion price of the Old Notes, subject to adjustment in certain circumstances.

In accordance with the Financial Accounting Standards Board's (FASB) Emerging Issues Task Force Issue No. 96-19, "Debtor's Accounting for a Modification or Exchange of Debt Instruments," the Company considered the terms of the New Notes to be "substantially different" from the terms of the Old Notes. As such, the Company wrote off approximately \$0.2 million of debt issuance costs related to the Old Notes to interest expense during the quarter ended June 30, 2006. In addition, debt issuance costs of approximately \$0.2 million related to the New Notes are being amortized to interest expense over the term of the New Notes.

On January 15, 2007, the Company paid \$74.2 million to redeem the remaining Old Notes.

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Note 8. Income Taxes

In June 2006, the FASB issued Financial Interpretation No. 48, "Accounting for Uncertainty in Income Taxes" (FIN 48), which clarifies the accounting for uncertainty in income taxes recognized in a company's financial statements in accordance with FASB Statement No. 109, "Accounting for Income Taxes." The interpretation prescribes a recognition threshold and measurement attribute criteria for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. The interpretation also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure and transition.

The Company and its subsidiaries file income tax returns in the U.S. federal jurisdiction, and various states and foreign jurisdictions. The Company and all foreign subsidiaries are subject to income tax examinations by tax authorities for all years dating back to 2001. The Company's policy is to recognize interest related to unrecognized tax benefits as interest expense and penalties as operating expenses. Accrued interest and penalties are insignificant at June 30, 2007. The Company believes that it has appropriate support for the income tax positions taken and to be taken on its tax returns and that its accruals for tax liabilities are adequate for all open years based on an assessment of many factors including past experience and interpretations of tax law applied to the facts of each matter.

The Company adopted the provisions of FIN 48 on January 1, 2007. The adoption of FIN 48 did not impact the consolidated financial condition, results of operations or cash flows. At January 1, 2007, the Company had unrecognized tax benefits of approximately \$5.1 million, of which approximately \$2.8 million has reduced the Company's deferred tax assets and the offsetting valuation allowance and of which \$2.3 million is included in other long-term liabilities. The Company does not anticipate any significant change in these unrecognized tax benefits in 2007. To the extent these unrecognized tax benefits are ultimately recognized, they will impact the effective tax rate in a future period.

At December 31, 2006, the Company had \$108.5 million of deferred tax assets relating to net operating loss carryforwards, tax credit carryforwards and other temporary differences (principally in the United States, Europe, and Asia), which are available to reduce income taxes in future years. SFAS No. 109 "Accounting for Income Taxes" requires that a valuation allowance be established when it is "more likely than not" that all or a portion of deferred tax assets will not be realized. A review of all available positive and negative evidence needs to be considered, including a company's performance, the market environment in which the company operates, length of carryback and carryforward periods, existing sales backlog, and projections of future operating results. Where there are cumulative losses in recent years, SFAS No. 109 creates a strong presumption that a valuation allowance is needed. This presumption can be overcome in very limited circumstances.

In 2003, the Company entered a three-year cumulative loss position and revised its projections of the amount and timing of profitability in future periods. As a result, the Company increased its valuation allowance to increase the carrying value of deferred tax assets to zero. While the Company is no longer in a cumulative loss position in the United States tax jurisdiction, the Company continues to maintain a full valuation allowance for deferred tax assets until sustainable future levels of profitability are evident. However, going forward, should the Company's return to profitability provide sufficient evidence, in accordance with the provisions of SFAS No. 109, to support the ultimate realization of income tax benefits attributable to net operating losses, tax credit carryforwards, and other deductible temporary differences, a reduction in the valuation allowance may be recorded and the carrying value of deferred tax assets may be restored, resulting in a non-cash credit to earnings.

Note 9. Significant Customers

In the three months ended June 30, 2007, two customers accounted for approximately 13% and 10% of revenue, respectively. In the six months ended June 30, 2007, two customers each accounted for approximately 14% of revenue. In the three months ended June 30, 2006, two customers accounted for approximately 16% and 12% of revenue, respectively. In the six months ended June 30, 2006, two customers accounted for approximately 14% and 11% of revenue, respectively. For the three and six months ended June 30, 2007 and 2006, no other customer accounted for more than 10% of revenue.

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Note 10. Contingencies

Litigation

From time to time, the Company may be subject to legal proceedings and claims arising from the conduct of its business including litigation related to intellectual property matters, customer contract matters, employment claims and environmental matters. At June 30, 2007, the Company is not a party to any material legal proceedings.

Indemnifications

The Company's system sales agreements typically include provisions under which the Company agrees to take certain actions, provide certain remedies and defend its customers against third-party claims of intellectual property infringement under specified conditions and to indemnify customers against any damage and costs awarded in connection with such claims. The Company has not incurred any material costs as a result of such indemnifications and has not accrued any liabilities related to such obligations in the accompanying consolidated financial statements.

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Note 11. Recent Accounting Pronouncements

FIN 48

In June 2006, the FASB issued FASB Interpretation No. 48, *Accounting for Uncertainty in Income Taxes — an interpretation of FASB Statement No. 109* (FIN 48). FIN 48 clarifies the accounting for uncertainty in income taxes recognized in an enterprise's financial statements in accordance with SFAS 109, *Accounting for Income Taxes*. FIN 48 prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. FIN 48 also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure, and transition. FIN 48 is effective for fiscal years beginning after December 15, 2006. The adoption of FIN 48 did not have a material impact on the Company's financial condition, results of operations or liquidity.

SFAS 157

In September 2006, the FASB issued SFAS No. 157, *Fair Value Measurements*, which defines fair value, establishes a framework for measuring fair value, and expands disclosures about fair value measurements. Where applicable, this statement simplifies and codifies related guidance within generally accepted accounting principles (GAAP). This statement is effective for financial statements issued for fiscal years beginning after November 15, 2007, and interim periods within those fiscal years. The Company is currently analyzing the expected impact from adopting this statement but currently does not believe its adoption will have a significant impact on the financial position or results of operations of the Company.

SFAS 158

In September 2006, the FASB issued SFAS No. 158, *Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans — An Amendment of FASB Statements No. 87, 88, 106, and 132R* (SFAS 158). SFAS 158 requires sponsoring employers to recognize the funded status of pension and other postretirement benefit plans on their balance sheets and to recognize changes in the funded status in the year the changes occur. It also requires the measurement date of plan assets and obligations to occur at the end of the employer's fiscal year. SFAS 158 is effective for the Company at the end of fiscal 2006, except for the change in measurement date, which is effective for the Company in fiscal 2007. The adoption of SFAS 158 did not impact the Company's financial condition, results of operations or liquidity and is not expected to have a material impact in future periods.

SFAS 159

In February 2007, the FASB issued SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities Including an amendment of FASB Statement No. 115*. This statement permits entities to choose to measure many financial instruments and certain other items at fair value that are not currently required to be measured at fair value. The decision to measure items at fair value can be made on an instrument-by-instrument basis, but once the decision is made, it is permanent. This statement will be effective for the Company's fiscal year 2009. The Company is in the process of evaluating the impact of this statement on its financial statements.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Certain statements in "Management's Discussion and Analysis of Financial Condition and Results of Operations" are forward-looking statements that involve risks and uncertainties. Words such as may, will, should, would, anticipates, expects, intends, plans, believes, seeks, estimates and similar expressions identify such forward-looking statements. The forward-looking statements contained herein are based on current expectations and entail various risks and uncertainties that could cause actual results to differ materially from those expressed in such forward-looking statements. Factors that might cause such a difference include, among other things, those set forth under "Liquidity and Capital Resources" and "Risk Factors" and those appearing elsewhere in this Form 10-Q. Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect management's analysis only as of the date hereof. We assume no obligation to update these forward-looking statements to reflect actual results or changes in factors or assumptions affecting forward-looking statements.

Overview

Axcelis Technologies, Inc. ("Axcelis," "we," "us," or "our"), is a producer of ion implantation, dry strip, thermal processing and curing equipment used in the fabrication of semiconductors in the United States, Europe and Asia. In addition, we provide extensive aftermarket service and support, including spare parts, equipment upgrades, and maintenance services. We own 50% of the equity of a joint venture known as SEN Corporation, an SHI and Axcelis Company, or "SEN," with Sumitomo Heavy Industries, Ltd. in Japan. SEN licenses technology from us relating to the manufacture of specified ion implantation products and has exclusive rights to manufacture and sell these products in the territory of Japan. SEN is the leading producer of ion implantation equipment in Japan.

The semiconductor capital equipment industry has in the past been subject to significant cyclical swings in capital spending by semiconductor manufacturers. Capital spending is influenced by demand for semiconductors and the products using them, the utilization rate and capacity of existing semiconductor manufacturing facilities and changes in semiconductor technology, all of which are outside of our control. As a result, our revenues and gross margins, to the extent affected by increases or decreases in volume, could fluctuate from year to year and period to period. Our gross margins are also affected by the introduction of new products. We typically become more efficient in manufacturing products as they mature. We expect gross margins to be under substantial pressure in the second half of 2007 due to sales of our new single wafer implant products. Our expense base is largely fixed and does not vary significantly with changes in volume. Therefore, we could experience fluctuations in operating results and cash flows depending on our revenues as driven by the level of capital expenditures by semiconductor manufacturers.

The sizable expense of building, upgrading or expanding a semiconductor fabrication facility is increasingly causing semiconductor companies to contract with foundries to manufacture their semiconductors. In addition, consolidation and joint venturing within the semiconductor manufacturing industry is increasing. We expect these trends to continue to reduce the number of our potential customers. This growing concentration of Axcelis' customers may increase competitive pricing as higher percentages of our total revenues are tied to the buying decisions of a particular customer or a small number of customers.

The years 2005 and 2006 were transition years in implant products and technology. While customers continue to buy multi-wafer tools, many customers have shifted primarily to single wafer tools for high current applications. Because we did not have a single wafer high current product, we experienced a significant loss of market share in 2005. We introduced our single wafer Optima MD product (for medium current applications) in 2005 and our single wafer Optima HD product (for high current applications) in 2006. Our single wafer tool for high energy applications is scheduled to be released in the second half of 2007. We expect these new single wafer products will enable us to regain market share.

Operating results for the current periods presented are not necessarily indicative of the results that may be expected for subsequent interim periods or for the year as a whole.

Critical Accounting Estimates

Management's discussion and analysis of our financial condition and results of operations are based upon Axcelis' consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate our estimates, including those related to revenue recognition, income taxes, intangibles, accounts receivable, inventory and warranty obligations. Management bases its estimates on historical experience and on various other assumptions that are

believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

The critical accounting estimates are those that we believe are the more significant judgments and estimates used in the preparation of our condensed consolidated financial statements. As of June 30, 2007 there have been no material changes to the critical accounting estimates as described in our Management's Discussion and Analysis of Financial Condition and Results of Operations and in the Notes to the consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2006.

Results of Operations

The following table sets forth our results of operations as a percentage of revenue for the periods indicated:

	Three months ended June 30,		Six months ended June 30,	
	2007	2006	2007	2006
Revenue				
Systems	61.2%	57.6%	57.0%	55.7%
Services	37.5	39.8	41.3	42.2
Royalties, primarily from SEN	1.3	2.6	1.7	2.1
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Cost of revenue	60.4	59.2	59.1	59.6
Gross profit	<u>39.6</u>	<u>40.8</u>	<u>40.9</u>	<u>40.4</u>
Other costs and expenses				
Research and development	16.0	15.5	17.3	16.9
Selling	11.9	9.8	12.6	10.3
General and administrative	9.3	9.7	10.0	10.3
Amortization of intangible assets	0.6	0.5	0.6	0.6
Restructuring	0.0	0.3	0.0	0.0
	<u>37.8</u>	<u>35.9</u>	<u>40.5</u>	<u>38.1</u>
Income from operations	1.8	4.9	0.5	2.2
Other income (expense)				
Equity income of SEN	1.7	5.2	3.2	3.9
Interest income	1.0	1.6	1.3	1.7
Interest expense	(1.4)	(2.1)	(1.6)	(1.9)
Other-net	0.3	1.1	0.1	0.3
	<u>1.6</u>	<u>5.9</u>	<u>3.0</u>	<u>4.0</u>
Income before income taxes	3.4	10.8	3.5	6.2
Income taxes (credits)	(0.9)	0.5	(0.1)	0.3
Net income	<u>4.3%</u>	<u>10.3%</u>	<u>3.6%</u>	<u>5.9%</u>

Three and six months ended June 30, 2007 in comparison to the three and six months ended June 30, 2006

Revenue

Revenue from system sales was \$67.4 million, or 61.2% of revenue for the three months ended June 30, 2007, compared with \$67.7 million, or 57.6% of revenue for the three months ended June 30, 2006. Revenue from system sales was \$118.4 million, or 57.0% of revenue for the six months ended June 30, 2007, compared with \$120.1 million, or 55.7% of revenue for the six months ended June 30, 2006.

Approximately 30.0% of revenue from system sales for the three months ended June 30, 2007 was from the sale of 200mm products and 70.0% of revenue was from the sale of 300mm products, compared with 51.5% and 48.5%, respectively, for three months ended June 30, 2006. For the six months ended June 30, 2007 approximately 31.1% of revenue from system sales was from the sale of 200mm products and 68.9% of revenue was from the sale of 300mm products, compared with 49.0% and 51.0%, respectively, for the six months ended June 30, 2006. Our results reflect the overall market trend towards 300mm products.

Services revenue, which includes spare parts, equipment upgrades and maintenance services, was \$41.3 million, or 37.5% of revenue for the three months ended June 30, 2007, compared with \$46.9 million, or 39.8% of revenue, for the three months ended June 30, 2006. Services revenue was \$85.7 million, or 41.3% of revenue for the six months ended June 30, 2007, compared with \$90.9 million, or 42.2% of revenue for the six months ended June 30, 2006. Services revenue fluctuates period to period based mainly on capacity utilization at customers' manufacturing facilities which affects the sale of spare parts.

A portion of the Company's revenue from system sales is deferred until installation and other services related to future deliverables are performed. The total amount of deferred revenue at June 30, 2007 and 2006 was \$43.5 million and \$43.7 million, respectively.

Royalty revenue was \$1.4 million, or 1.3% of revenue for the three months ended June 30, 2007, compared with \$3.0 million, or 2.6% of revenue for the three months ended June 30, 2006. Royalty revenue for the six months ended June 30, 2007 was \$3.5 million, or 1.7% of revenue, compared to \$4.5 million, or 2.1% of revenue for the six months ended June 30, 2006. Royalties are primarily earned under the terms of our license agreement with SEN. Revenue changes are mainly attributable to fluctuations in SEN sales volume based on demand for equipment by Japanese semiconductor manufacturers and the timing of shipments in Japan.

Revenue from sales of ion implantation products and services accounted for \$78.0 million, or 70.9% of total revenue in the three months ended June 30, 2007, compared with \$90.9 million, or 77.3%, of total revenue in the three months ended June 30, 2006. Revenue from sales of ion implantation products and services accounted for \$152.1 million, or 73.2% of revenue in the six months ended June 30, 2007, compared with \$167.2 million, or 77.6% of revenue in the six months ended June 30, 2006. We expect annual revenues from the sale of ion implantation products and services to average from 70% to 80% of total revenues.

Gross Profit

Gross profit was 39.6% of revenue in the three months ended June 30, 2007, compared with gross profit of 40.8% of revenue in the three months ended June 30, 2006. The gross profit decrease of 1.2 percentage points was the result of unfavorable parts and service volume (approximately 1.6 percentage points), unfavorable operating overheads (approximately 1.8 percentage points), and lower 100% margin SEN royalties (approximately 1.3 percentage points), offset by favorable systems volume, mix and deferrals (approximately 3.5 percentage points).

Gross profit was 40.9% of revenue in the six months ended June 30, 2007, compared with gross profit of 40.4% of revenue in the six months ended June 30, 2006. The gross profit increase of 0.5 percentage points was the result of favorable systems volume, mix and deferrals (approximately 3.1 percentage points), offset by unfavorable operating overheads (approximately 1.9 percentage points), lower 100% margin SEN royalties (approximately 0.4 percentage points), and unfavorable parts and service volume (approximately 0.3 percentage points).

Research and Development

Research and development expense was \$17.6 million in the three months ended June 30, 2007, a decrease of \$0.6 million, or 3.3%, compared with \$18.2 million in the three months ended June 30, 2006. The decrease was driven primarily by lower variable compensation expense (\$0.7 million) and lower development material costs (\$0.7 million) partially offset by increased development asset amortization and depreciation (\$0.5 million). Research and development expense was \$35.8 million in the six months ended June 30, 2007, a decrease of \$0.6 million, or 1.6%, compared with \$36.4 million in the six months ended June 30, 2006. The decrease was driven primarily by lower variable compensation costs (\$0.7 million), lower development material costs (\$0.5 million) and lower consulting costs (\$0.3 million), partially offset by increased development asset amortization and depreciation (\$0.9 million). We expect research and development spending to remain at this level throughout 2007 as the Company continues to invest heavily in new product development.

Research and development expense was attributable to the following activities in the first half of 2007: 56% for new product development, 30% for improvement of existing products, and 14% for product testing.

Selling

Selling expense was \$13.1 million in the three months ended June 30, 2007, an increase of \$1.6 million, or 13.6%, compared with \$11.6 million in the three months ended June 30, 2006. The increase was driven primarily by increased costs related to evaluation system support for our Optima platform (\$0.7 million), increased payroll costs (\$0.7 million), increased separation costs (\$0.4 million), increased stock compensation costs (\$0.3 million) and increased outside services (\$0.2 million) offset by lower commission expense (\$0.8 million) and lower variable compensation costs (\$0.2 million). Selling expense was \$26.1 million in the six months ended June 30, 2007, an increase of \$3.9 million, or 17.6%, compared with \$22.2 million in the six months ended June 30, 2006. The increase was driven primarily by increased costs related to evaluation system support for our Optima platform (\$1.8 million), increased payroll costs (\$1.4 million), increased separation costs (\$0.3 million), increased stock compensation costs (\$0.6 million) and increased outside services (\$0.3 million) offset by lower commissions expense (\$0.6 million).

General and Administrative

General and administrative expense was \$10.2 million in the three months ended June 30, 2007, a decrease of \$1.2 million, or 10.7%, compared with \$11.4 million in the three months ended June 30, 2006. The decrease was driven primarily by lower variable compensation costs (\$1.3 million) and lower depreciation expense (\$0.3 million), offset by increased professional fee expenses (\$0.5 million). General and administrative expense was \$20.7 million in the six months ended June 30, 2007, a decrease of \$1.6 million, or 7.2%, compared with \$22.3 million in the six months ended June 30, 2006. The decrease was driven primarily by lower variable compensation costs (\$1.7 million) and lower depreciation costs (\$0.6 million), offset by increased professional fee expenses (\$0.8 million).

Other Income (Expense)

Equity income attributable to SEN was \$1.9 million and \$6.6 million for the three and six months ended June 30, 2007, respectively. This is compared to equity income attributable to SEN of \$6.1 million and \$8.4 million for the three and six months ended June 30, 2006, respectively. Fluctuations

in equity income from SEN reflect changes in its sales volume and net income resulting from demand changes in the Japanese semiconductor market, and the timing of shipments in Japan.

Interest income of \$1.1 million and \$2.6 million for the three and six months ended June 30, 2007, respectively, primarily relates to interest earned on cash, cash equivalents and short-term investments. Interest income decreased by \$0.8 million and \$1.0 million from the three and six months ended June 30, 2006, respectively, due primarily to lower average cash balances, resulting from the repayment of \$74.2 million of long-term debt in January 2007.

Interest expense of \$1.6 million and \$3.2 million in the three and six months ended June 30, 2007, respectively, a decrease of \$0.8 million and \$0.9 million from the three and six months ended June 30, 2006, respectively, relates primarily to outstanding convertible senior subordinated notes which have an effective yield to maturity of 8%. The decrease in interest expense in 2007 is a direct result of the repayment of \$74.2 million of long-term debt in January 2007.

Income Taxes

Income taxes (credits) were \$(1.0) million and \$(0.3) million in the three and six months ended June 30, 2007. During the three month period ended June 30, 2007, we recorded tax benefits related to the realization of foreign tax credits, which will allow the Company to recover approximately \$1.2 million in tax refunds of amounts paid for alternative minimum taxes remitted for tax years 2004 through 2007.

In 2003, the Company entered a three-year cumulative loss position and revised its projections of the amount and timing of profitability in future periods. As a result, the Company increased its valuation allowance to increase the carrying value of deferred tax assets to zero. While the Company is no longer in a cumulative loss position in the United States tax jurisdiction, the Company continues to maintain a full valuation allowance for deferred tax assets until sustainable future levels of profitability are evident. However, going forward, should the Company's return to profitability provide sufficient evidence, in accordance with the provisions of SFAS No. 109, to support the ultimate realization of income tax benefits attributable to net operating losses, tax credit carryforwards, and other deductible temporary differences, a reduction in the valuation allowance may be recorded and the carrying value of deferred tax assets may be restored, resulting in a non-cash credit to earnings.

The Company incurs income tax expense relating principally to operating results of foreign entities in jurisdictions, principally in Asia, where we earn taxable income. We have significant net operating loss carryforwards in the United States and certain foreign jurisdictions, principally Europe, and, as a result, we do not currently pay significant income taxes in those jurisdictions and we do not recognize the tax benefit for such losses as discussed in Note 8 to the consolidated financial statements. Accordingly, our effective income tax rate is not meaningful.

Liquidity and Capital Resources

Cash, cash equivalents, and marketable securities at June 30, 2007 were \$81.8 million, compared with \$203.7 million at December 31, 2006. The \$121.9 million decrease in cash, cash equivalents, and marketable securities was mainly attributable to the repayment of \$74.2 million for the Company's 4.25% Convertible Subordinated Notes, cash used by operations (\$39.4 million) and capital expenditures (\$6.2 million). Cash used in operations was driven primarily by an increase in accounts receivable (\$5.7 million) caused by the timing of systems shipments, increased inventories (\$14.9 million) primarily to support the Optima product line, a decrease in accounts payable (\$12.6 million) and the reduction in accrued compensation (\$11.3 million) primarily due to the payout of the 2006 variable compensation plan and funding of the 2006 401(k) company match, which occurs annually during the first quarter of each year. We expect to generate positive cash flow during the second half of the year ending December 31, 2007.

Capital expenditures were \$6.2 million and \$2.1 million for the six months ended June 30, 2007 and 2006, respectively. We have no significant capital projects planned for 2007 and total capital expenditures for 2007 are projected to be less than \$10.0 million. Future capital expenditures beyond 2007 will depend on a number of factors, including the timing and rate of expansion of our business.

We have net operating loss and tax credit carryforwards the tax effect of which aggregate \$75.8 million at December 31, 2006. These carryforwards, which expire principally between 2018 and 2025, are available to reduce future income tax liabilities in the United States and certain foreign jurisdictions.

In 2006, Axcelis and Sumitomo Heavy Industries (SHI) agreed upon an annual dividend relating to SEN's fiscal year ended March 31, 2006. The two shareholders instructed SEN to dividend 40% of SEN's net earnings for that year. On January 31, 2007, Axcelis received a payment of approximately \$5.7 million representing its 50% share of the dividend. In 2007 the Company entered into an agreement with SHI pursuant to which SEN will be instructed to dividend 40% of its net income annually. On July 31, 2007 the Company received a dividend of \$6.8 million for SEN's fiscal year ended March 31, 2007.

As discussed in Note 7 to the consolidated financial statements, on May 2, 2006, we entered into an exchange and purchase agreement pursuant to which the holder of an aggregate of approximately \$50.8 million of our existing 4.25% Convertible Subordinated Notes due January 15, 2007 (the "Old Notes"), agreed to exchange its Old Notes for \$50.8 million in aggregate principal amount of our newly issued 4.25% Convertible Senior Subordinated Notes due January 15, 2009 (the "New Notes"), plus accrued and unpaid interest on the Old Notes through but excluding May 2, 2006, the closing date of the exchange. At maturity, the Company is required to repay the outstanding principal of the New Notes, plus a maturity premium of 11.125% of such principal, resulting in an effective annual yield to maturity of approximately 8.0%. In addition, we issued an additional \$24.2 million of New Notes, resulting in an aggregate of \$75 million of New Notes outstanding. We repaid the remaining \$74.2 million of outstanding Old Notes in January 2007. We believe that our existing cash balances and expected positive cash flows for 2007 and 2008 will allow us to repay the New Notes when they mature in 2009 without causing a liquidity issue.

We have outstanding standby letters of credit, bank guarantees and surety bonds in the amount of \$20.5 million to support certain operating lease obligations, workers' compensation insurance, and certain value added tax claims in Europe. At June 30, 2007, \$15.2 million of cash was pledged as collateral for certain outstanding standby letters of credit and bank guarantees, and is reflected as restricted cash on the consolidated balance sheet.

Axcelis' liquidity is affected by many factors. Some of these factors are based on normal operations of the business and others relate to the uncertainties of global economies and the semiconductor equipment industry. Although our cash requirements fluctuate based on the timing and extent of these factors, we believe that our existing cash and cash equivalents will be sufficient to satisfy our anticipated cash requirements.

Outlook

Our performance is directly related to semiconductor manufacturers' levels of capital expenditures to open new fabrication facilities and expand existing ones, as well as operational improvements we have implemented over the past several years. The level of capital expenditures by these manufacturers depends upon the current and anticipated market demand for semiconductors and the products utilizing them, the available manufacturing capacity in manufacturers' fabrication facilities, and the ability of manufacturers to increase productivity in existing facilities without incurring additional capital expenditures.

On August 1, 2007, we announced that Axcelis' revenues for the third quarter of 2007 are forecast in the range of \$110 million to \$120 million. Gross margins in the third quarter are expected to be slightly below second quarter levels as a result of revenue recognition on new products. We expect results of operations will be approximately \$0.02 per diluted share.

It is difficult to predict our customers' capital spending plans since they can change very quickly. At our current sales level, each sale, or failure to make a sale, could have a material effect on our results of operations in a particular quarter.

Item 3. Quantitative and Qualitative Disclosures about Market Risk.

As of June 30, 2007, there have been no material changes to the quantitative and qualitative information about market risk disclosed in Item 7A to our annual report on Form 10-K for the year ended December 31, 2006.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and principal financial officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rule 13a - 15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")) as of the end of the period covered by this quarterly report (the "Evaluation Date"). Based on this evaluation, our principal executive officer and principal financial officer concluded that, as of the Evaluation Date, these disclosure controls and procedures are effective.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rule 13a -15(f) under the Exchange Act) identified in connection with the evaluation of our internal control that occurred during our second quarter of 2007 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II - OTHER INFORMATION

Item 1. Legal Proceedings.

We are not a party to any material legal proceedings.

Item 1A. Risk Factors.

As of June 30, 2007, there have been no material changes to the risk factors disclosed in Item 1A to our annual report on Form 10-K for the year ended December 31, 2006.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

None.

Item 3. Defaults Upon Senior Securities.

None.

Item 4. Submission of Matters to a Vote of Security Holders.

The Annual Meeting of Stockholders of Axcelis Technologies, Inc. was held at our offices at 108 Cherry Hill Drive, Beverly, Massachusetts on May 9, 2007. Out of 101,544,879 shares of Common Stock (as of the record date of March 15, 2007) entitled to vote at the meeting, 95,003,799 shares, or 93.56%, were present in person or by proxy.

(a) Election of Directors. Each of the three directors nominated for election at the Annual Meeting was elected by a plurality of votes cast, to serve for a three year term ending in 2010, and until their successors are elected. The vote was as follows:

Nominee	Number of Votes For	Number of Votes Withheld
Michio Naruto	84,939,707	10,064,092
Patrick H. Nettles	84,905,371	10,098,428
Geoffrey Wild	84,986,733	10,017,066

(b) **Ratification of Appointment of Auditors.** A majority of the votes cast at the meeting were voted in favor of the proposal to ratify the appointment by the Board of Directors of Ernst & Young LLP as independent auditors of our financial statements for the year ending December 31, 2007. The following sets forth the tally of the votes cast on the proposal:

<u>Number of Votes For</u>	<u>Number of Votes Against</u>	<u>Number of Votes Abstaining</u>
94,783,558	119,675	100,566

(c) **Stockholder Proposal re Classified Board.** A majority of the votes cast at the meeting were voted in favor of the proposal received from stockholders of the Company to request that the Board of Directors take the necessary steps to declassify the Board of Directors and establish annual elections of directors, whereby directors would be elected annually and not by classes. The following sets forth the tally of the votes cast on the proposal:

<u>Number of Votes For</u>	<u>Number of Votes Against</u>	<u>Number of Votes Abstaining</u>	<u>Number of Broker Non- Votes</u>
73,412,262	6,869,560	297,927	14,424,050

Item 5. Other Information.

Amendment and Restatement of the Company's Bylaws. On August 8, 2007, the Company's Board of Directors adopted amended and restated bylaws for the Company in order to facilitate the Company's compliance with the Nasdaq Global Market listing requirement to allow direct registration of shares by January 1, 2008. These amended and restated bylaws became effective on August 8, 2007. Stockholder approval is not required. These Amended and Restated Bylaws are filed as Exhibit 3.2 to this Form 10-Q.

Regulation FD Disclosure – Amendment and Restatement of the Company's Certificate of Incorporation. On August 8, 2007, the Company's Board of Directors adopted an amended and restated certificate of incorporation, subject to stockholder approval, providing for the phase out of the Company's classified Board of Directors, commencing in 2009. The adoption of this proposed amended and restated certificate of incorporation will be submitted to the stockholders of the Company at the annual meeting of stockholders to be held in 2008, and, if adopted, shall apply to directors elected at subsequent annual meetings.

Item 6. Exhibits.

a) Exhibits are numbered in accordance with the Exhibit Table of Item 601 of Regulation S-K:

<u>Exhibit No</u>	<u>Description</u>
3.1	Amended and Restated Certificate of Incorporation of the Company. Incorporated by reference to Exhibit 3.1 of the Company's Registration Statement on Form S-1 (Registration No. 333-36330).
3.2	Bylaws of the Company, as amended as of August 8, 2007. Filed herewith.
3.3	Certificate of Designation of Series A Participating Preferred Stock, filed with the Secretary of State of Delaware on July 5, 2000. Incorporated by reference to Exhibit 3.3 of the Company's Form 10-K for the year ended December 31, 2000, filed with the Commission on March 30, 2001.
4.1	Specimen Stock Certificate, Incorporated by reference to Exhibit 4.1 of the Company's Registration Statement on Form S-1 (Registration No. 333-36330).
4.2	Rights Agreement between the Company and EquiServe Trust Company, N.A. Incorporated by reference to Exhibit 4.1 of the Company's Registration Statement on Form S-1 (Registration No. 333-36330).
4.3	Indenture between the Company and U.S. Bank National Association, as trustee, including the form of note, dated as of May 2, 2006. Incorporated by reference to Exhibit 4.12 of the Company's Report on Form 8-K filed with the Commission on May 4, 2006.
31.1	Certification of the Principal Executive Officer under Exchange Act Rule 13a-14(a)/15d-14(a) (Section 302 of the Sarbanes-Oxley Act), dated August 9, 2007. Filed herewith.

31.2	Certification of the Principal Financial Officer under Exchange Act Rule 13a-14(a)/15d-14(a) (Section 302 of the Sarbanes-Oxley Act), dated August 9, 2007. Filed herewith.
32.1	Certification of the Principal Executive Officer pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code (Section 906 of the Sarbanes-Oxley Act), dated August 9, 2007. Filed herewith.
32.2	Certification of the Principal Financial Officer pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code (Section 906 of the Sarbanes-Oxley Act), dated August 9, 2007. Filed herewith.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

AXCELIS TECHNOLOGIES, INC.

/s/ Stephen G. Bassett

DATED: August 9, 2007

By: Stephen G. Bassett

Executive Vice President and Chief Financial Officer
Duly Authorized Officer and Principal Financial Officer

**BY-LAWS
OF
AXCELIS TECHNOLOGIES, INC.**

Effective on August 8, 2007

ARTICLE I STOCKHOLDERS

SECTION 1.1. Place of Meetings. All meetings of stockholders shall be held at the principal office of the corporation or at such other place as may be named in the notice.

SECTION 1.2. Annual Meeting. The annual meeting of stockholders for the election of directors and the transaction of such other business as may properly come before the meeting shall be held on such date and at such hour and place as the directors or an officer designated by the directors may determine. If the annual meeting is not held on the date designated therefor, the directors shall cause the meeting to be held as soon thereafter as convenient.

SECTION 1.3. Special Meetings. Special meetings of the stockholders may be called at any time by the Chairman of the Board, the Chief Executive Officer, or by the Board of Directors.

SECTION 1.4. Notice of Meetings. Except where some other notice is required by law, written notice of each meeting of stockholders, stating the place, date and hour thereof and the purposes for which the meeting is called, shall be given by the Secretary not less than ten nor more than sixty days before the date fixed for such meeting, to each stockholder of record entitled to vote at such meeting. Notice shall be given personally to each stockholder or left at his or her residence or usual place of business or mailed postage prepaid and addressed to the stockholder at his or her address as it appears upon the records of the corporation. In case of the death, absence, incapacity or refusal of the Secretary, such notice may be given by a person designated either by the Secretary or by the person or persons calling the meeting or by the Board of Directors. A waiver of such notice in writing, signed by the person or persons entitled to said notice, whether before or after the time stated therein, shall be deemed equivalent to such notice. Attendance of a person at a meeting of stockholders shall constitute a waiver of notice of such meeting, except when the stockholder attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice. Except as required by statute, notice of any adjourned meeting of the stockholders shall not be required.

SECTION 1.5. Record Date. The Board of Directors may fix in advance a record date for the determination of the stockholders entitled to notice of or to vote at any meeting of stockholders, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action. Such record date shall not be more than 60 nor less than 10 days before the date of such meeting, nor more than 60 days before any other action to which such record date relates. If no record date is fixed, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day before the day on which notice is given, or, if notice is waived, at the close of business on the day before the day on which the meeting is held, and the record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating to such purpose. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall

apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

SECTION 1.6. Nomination of Directors. Only persons who are nominated in accordance with the following procedures shall be eligible for election as directors at any annual or special meeting of stockholders. Nominations of persons for election as directors may be made only by or at the direction of the Board of Directors, or by any stockholder entitled to vote for the election of directors at the meeting in compliance with the notice procedures set forth in this Section 1.6. Such nominations, other than those made by or at the direction of the Board of Directors, shall be made pursuant to timely notice in writing to the Secretary. To be timely, a stockholder's notice shall be delivered to or mailed and received at the principal executive offices of the corporation by the close of business on the Advance Notice Date. For the purposes of these by-laws, the "Advance Notice Date" shall be one of the following:

- (a) in the case of an annual meeting only, the date 90 days before the anniversary date of the prior year's meeting, if (i) there was an annual meeting in the prior year and (ii) the date of the current year's annual meeting is not more than 30 days before or after the anniversary date of the prior year's annual meeting; or
- (b) if clause (a) does not apply, the date 45 days prior to the date of the current year's annual meeting or a special meeting if at least 60 days' notice or prior public disclosure of the date of the current year's annual meeting or the special meeting is given or made; or
- (c) if neither clause (a) nor clause (b) applies, the date 15 days after the day on which notice of the date of the current year's annual meeting or the special meeting was mailed or public disclosure was made.

Such stockholder's notice shall set forth (a) as to each person whom the stockholder proposes to nominate for election or re-election as a director, (i) the name, age, business address and residence address of the person, (ii) the principal occupation or employment of the person, (iii) the class and number of shares of capital stock of the corporation that are beneficially owned by the person and (iv) any other information relating to the person that is required to be disclosed in solicitations for proxies for election of directors pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended, or any successor provision thereto; and (b) as to the stockholder giving the notice, (i) the name and record address of such stockholder and (ii) the class and number of shares of capital stock of the corporation that are beneficially owned by such stockholder.

The chairman of the meeting shall, if the facts warrant, determine and declare to the meeting that a nomination was not made in accordance with the foregoing procedure, and if the chairman should so determine, he or she shall so declare to the meeting and the defective nomination shall be disregarded.

SECTION 1.7. Advance Notice of Business at Annual Meetings. At any annual meeting of the stockholders, only such business shall be conducted as shall have been properly brought before the meeting. To be brought properly before an annual meeting, business must be either (a) specified in the notice of meeting (or any supplement thereto) given by or at the direction of the Chief Executive Officer, President or the Board of Directors, (b) otherwise properly brought before the meeting by or at the direction of the Board of Directors, or (c) properly brought before the meeting by a stockholder. In addition to any other applicable requirements, for business to be brought properly before an annual meeting by a stockholder, the stockholder must have given timely notice thereof in writing to the Chairman of the Board, if any, the Chief Executive Officer, the President or the Secretary. To be timely, a stockholder's notice must be delivered to or mailed and received at the principal executive offices of the corporation by the close of business on the Advance Notice Date as defined in Section 1.6 of Article I

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hereof. A stockholder's notice shall set forth as to each matter the stockholder proposes to bring before the annual meeting (a) a brief description of the business desired to be brought before the annual meeting and the reasons for conducting such business at the annual meeting, (b) the name and record address of the stockholder proposing such business, (c) the class and number of shares of the corporation that are beneficially owned by the stockholder and (d) any material interest of the stockholder in such business.

Notwithstanding anything in these by-laws to the contrary, no business shall be conducted at the annual meeting except in accordance with the procedures set forth in this Section 1.7, provided, however, that nothing in this Section 1.7 shall be deemed to preclude discussion by any stockholder of any business properly brought before the annual meeting in accordance with said procedure.

The chairman of an annual meeting shall, if the facts warrant, determine and declare to the meeting that business was not properly brought before the meeting in accordance with the foregoing procedure, and if the chairman should so determine, he or she shall so declare to the meeting and any such business not properly brought before the meeting shall not be transacted.

SECTION 1.8. Voting List. The officer who has charge of the stock ledger of the corporation shall make or have made, at least 10 days before every meeting of stockholders, a complete list of the stockholders, arranged in alphabetical order and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder for any purpose germane to the meeting, during ordinary business hours, for a period of at least 10 days before the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present. The stock ledger shall be the only evidence as to who are the stockholders entitled to examine the stock ledger, the list required by this section or the books of the corporation, or to vote at any meeting of stockholders.

SECTION 1.9. Quorum of Stockholders. At any meeting of the stockholders, the holders of a majority in interest of all stock issued and outstanding and entitled to vote upon a question to be considered at the meeting, present in person or represented by proxy, shall constitute a quorum for the consideration of such question, but in the absence of a quorum a smaller group may adjourn any meeting from time to time. When a quorum is present at any meeting, a majority of the votes properly cast shall, except where a different vote is required by law, by the Certificate of Incorporation or by these by-laws, decide any question brought before such meeting. Any election by stockholders shall be determined by a plurality of the votes cast by the stockholders entitled to vote at the election.

SECTION 1.10. Proxies and Voting. Unless otherwise provided in the Certificate of Incorporation, each stockholder shall at every meeting of the stockholders be entitled to one vote in person or by proxy for each share of the capital stock held of record by such stockholder, but no proxy shall be voted or acted upon after three years from its date, unless said proxy provides for a longer period. Persons holding stock in a fiduciary capacity shall be entitled to vote the shares so held, and persons whose stock is pledged shall be entitled to vote unless in the transfer by the pledgor on the books of the corporation the pledgee shall have been expressly empowered to vote thereon, in which case only the pledgee or the pledgee's proxy may represent said stock and vote thereon. Shares of the capital stock of the corporation belonging to the corporation or to another corporation, a majority of whose shares entitled to vote in the election of directors is owned by the corporation, shall neither be entitled to vote nor be counted for quorum purposes.

SECTION 1.11. Conduct of Meeting. Meetings of the stockholders shall be presided over by one of the following officers in the order specified and if present and acting: the Chairman or, in the event

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of the Chairman's absence or disability, the Vice Chairman, if any, or, in the event of the Vice Chairman's absence or disability, the Chief Executive Officer, or in the event of such person's absence or disability, a presiding officer chosen by a majority of the Board of Directors. The Secretary of the corporation, if present, or an Assistant Secretary, shall act as secretary of every meeting, but if neither the Secretary nor an Assistant Secretary is present the chairman of the meeting shall appoint a secretary of the meeting.

The Board of Directors may adopt such rules, regulations and procedures for the conduct of the meeting of stockholders as it shall deem appropriate. Except to the extent inconsistent with such rules and regulations as adopted by the Board of Directors, the chairman of the meeting shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board of Directors or prescribed by the chairman of the meeting, may include, without limitation, (i) the establishment of an agenda or order of business for the meeting, (ii) rules and procedures for maintaining order at the meeting and the safety of those present, (iii) limitations on attendance at or participation in the meeting to stockholders of record of the corporation, their duly authorized and constituted proxies or such other persons as the chairman of the meeting shall determine, (iv) restrictions on entry to the meeting after the time fixed for the commencement thereof, and (v) limitations on the time allotted to questions or comments by participants. Unless and to the extent determined by the Board of Directors or the chairman of the meeting, meetings of stockholders shall not be required to be held in accordance with the rules of parliamentary procedure.

SECTION 2.1. General Powers. The business and affairs of the corporation shall be managed by or under the direction of a Board of Directors, who may exercise all of the powers of the corporation that are not by law required to be exercised by the stockholders. In the event of a vacancy in the Board of Directors, the remaining directors, except as otherwise provided by law, may exercise the powers of the full Board until the vacancy is filled.

SECTION 2.2. Number; Election; Tenure and Qualification. Subject to any restrictions contained in the Certificate of Incorporation, the number of directors that shall constitute the whole Board shall be fixed by resolution of the Board of Directors. The directors shall be elected in the manner provided in the Certificate of Incorporation, by such stockholders as have the right to vote thereon. The number of directors may be increased or decreased by action of the Board of Directors. Directors need not be stockholders of the corporation.

SECTION 2.3. Enlargement of the Board. Subject to any restrictions contained in the Certificate of Incorporation, the number of the Board of Directors may be increased at any time, such increase to be effective immediately unless otherwise specified in the resolution, by vote of a majority of the directors then in office.

SECTION 2.4. Vacancies. Unless and until filled by the stockholders and except as otherwise determined by the Board of Directors in establishing a series of Preferred Stock as to directors elected by the holders of such series, any vacancy on the board of directors that results from an increase in the number of directors shall be filled only by a majority of the board of directors then in office, provided that a quorum is present, and any other vacancy occurring in the board of directors shall be filled by a majority of the directors then in office, even if less than a quorum, or by a sole remaining director. If at any time there are no directors in office, then an election of directors may be held in accordance with the General Corporation Law of the State of Delaware.

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SECTION 2.5. Resignation. Any director may resign at any time upon written notice to the corporation. Such resignation shall take effect at the time specified therein, or if no time is specified, at the time of its receipt by the Chairman, the Chief Executive Officer or the Secretary.

SECTION 2.6. Removal. Directors may be removed from office only as provided in the Certificate of Incorporation. The vacancy or vacancies created by the removal of a director may be filled by the stockholders at the meeting held for the purpose of removal or, if not so filled, by the directors in the manner provided in Section 2.4 of Article II hereof.

SECTION 2.7. Committees. The Board of Directors may, by resolution or resolutions passed by a majority of the whole Board of Directors, designate one or more committees, each committee to consist of one or more directors of the corporation. The Board of Directors may designate one or more directors as alternate members of any committee to replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of any member of any such committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of such absent or disqualified member. The Board of Directors shall have the power to change the members of any such committee at any time, to fill vacancies therein and to discharge any such committee, either with or without cause, at any time.

Any such committee, to the extent permitted by law and to the extent provided in the resolution of the Board of Directors or in these by-laws, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers that may require it.

A majority of all the members of any such committee may fix its rules of procedure, determine its action and fix the time and place, whether within or without the State of Delaware, of its meetings and specify what notice thereof, if any, shall be given, unless the Board of Directors shall otherwise by resolution provide. Each committee shall keep regular minutes of its meetings and make such reports as the Board of Directors may from time to time request.

SECTION 2.8. Meetings of the Board of Directors. Regular meetings of the Board of Directors may be held without call or formal notice at such places either within or without the State of Delaware and at such times as the Board may by vote from time to time determine. A regular meeting of the Board of Directors may be held without call or formal notice immediately after and at the same place as the annual meeting of the stockholders, or any special meeting of the stockholders at which a Board of Directors is elected.

Special meetings of the Board of Directors may be held at any place either within or without the State of Delaware at any time when called by the Chairman of the Board or, in the event of such person's absence or disability, by the Vice Chairman of the Board, if any, or, in the event of such person's absence or disability, by the Chief Executive Officer, or, in the event of such person's absence or disability, by the President or, in the event of such person's absence or disability, by a majority of the Board of Directors. Reasonable notice of the time and place of a special meeting shall be given to each director unless such notice is waived by attendance or by written waiver in the manner provided in these by-laws for waiver of notice by stockholders. Notice may be given by, or by a person designated by, the Secretary, the person or persons calling the meeting, or the Board of Directors. No notice of any adjourned meeting of the Board of Directors shall be required. In any case it shall be deemed sufficient notice to a director to send notice by mail at least seventy-two hours, or by telegram or fax at least forty-eight hours, before the meeting, addressed to such director at his or her usual or last known business or home address.

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Directors or members of any committee may participate in a meeting of the Board of Directors or of such committee by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and participation by such means shall constitute presence in person at such meeting.

SECTION 2.9. Quorum and Voting. A majority of the total number of directors shall constitute a quorum, except that when a vacancy or vacancies exist in the Board, a majority of the directors then in office (but not less than one-third of the total number of the directors) shall constitute a quorum. A majority of the directors present, whether or not a quorum is present, may adjourn any meeting from time to time. The vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board of Directors, except where a different vote is required by law, by the Certificate of Incorporation or by these by-laws.

SECTION 2.10. Compensation. The Board of Directors may fix fees for their services and for their membership on committees, and expenses of attendance may be allowed for attendance at each meeting. Nothing herein contained shall be construed to preclude any director from serving the corporation in any other capacity, as an officer, agent or otherwise, and receiving compensation therefor.

SECTION 2.11. Action Without Meeting. Any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting and without notice if a written consent thereto is signed by all members of the Board of Directors or of such committee, as the case may be, and such written consent is filed with the minutes of proceedings of the Board of Directors or of such committee.

ARTICLE III OFFICERS

SECTION 3.1. Number. The officers of the Corporation shall be chosen by the Board of Directors and may include, without limit, a Chairman of the Board of Directors, a Vice Chairman of the Board of Directors, a Chief Executive Officer, a President, one or more Vice Presidents, a Secretary, a Treasurer and such other officers as may be elected in accordance with Article III, Section 3.2 of these By-Laws. Any number of offices may be held by the same person. No officer need be a director of the Corporation. The Chairman of the Board of Directors shall be a non-executive position.

SECTION 3.2. Election. Unless otherwise determined by the Board of Directors, the officers of the Corporation shall be elected by the Board of Directors at the annual meeting of the Board of Directors, and shall be elected to hold office until the next succeeding annual meeting of the Board of Directors. Each officer shall hold office until his or her successor has been elected and qualified, or until his or her earlier death, resignation or removal.

SECTION 3.3. Compensation. Officers of the corporation shall be entitled to such salaries, compensation or reimbursement as shall be fixed or allowed from time to time by the Board of Directors or any committee thereof appointed for the purpose.

SECTION 3.4. Removal and Resignation; Vacancies. Any officer may be removed for or without cause at any time by the Board of Directors. Any officer may resign at any time by delivering a written notice of resignation, signed by such officer, to the Board of Directors, the Chief Executive Officer, or the President. Unless otherwise specified therein, such resignation shall take effect upon delivery. Any vacancy occurring in any office of the Corporation by death, resignation, removal or otherwise, shall be filled by the Board of Directors.

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SECTION 3.5. Authority and Duties of Officers. The officers of the Corporation shall have such authority and shall exercise such powers and perform such duties as may be specified in these By-Laws, except that in any event each officer shall exercise such powers and perform such duties as may be required by law.

SECTION 3.6. The Chairman. The Chairman, or, in the event of the Chairman's absence or disability, the Vice Chairman, or in the event of the Vice Chairman's absence or disability, a presiding officer chosen by a majority of the Board of Directors, shall preside at all meetings of the stockholders and of the Board of Directors and shall perform such other duties as may from time to time be assigned to the Chairman by the Board of Directors.

SECTION 3.7. The Vice Chairman. The Vice Chairman shall assist the Chairman and shall perform such other duties as may from time to time be assigned to the Vice Chairman by the Chairman or by the Board of Directors.

SECTION 3.8. The Chief Executive Officer. The Chief Executive Officer shall have general executive charge and control over the affairs of the Corporation, subject to the Board of Directors, shall see that all orders and resolutions of the Board of Directors are carried out, shall report thereon to the Board of Directors, and shall have such other powers and perform such other duties as shall be prescribed from time to time by the Board of Directors. In the absence of the President, the duties of the President shall be performed, and the President's powers may be exercised, by the Chief Executive Officer, or in the absence of the Chief Executive Officer, by such Vice President as shall be designated by the Chief Executive Officer, or failing such designation, such duties shall be performed and such powers may be exercised by each Vice President in the order described in Section 3.10, subject in any case to review and superseding action by the Chief Executive Officer.

SECTION 3.9. The President. The President shall have general and active management of the operations of the business of the Corporation, subject to the authority and direction of the Chief Executive Officer. The President shall have and exercise such further powers and duties as may be specifically delegated to or vested in the President from time to time by these By-Laws, the Chief Executive Officer or the Board of Directors. In the absence of the Chief Executive Officer, or in the event of the inability of or refusal to act by the Chief Executive Officer, or if the Board of Directors has not designated a Chief Executive Officer, the President shall perform the duties of the Chief Executive Officer, and, when so acting, shall have all of the powers and be subject to all of the restrictions upon the Chief Executive Officer.

SECTION 3.10. The Vice Presidents. Each Vice President shall perform such duties and exercise such powers as may be assigned to him or her from time to time by the Board of Directors, the Chief Executive Officer or the President.

In the case of a Vice President who is designated as the Chief Financial Officer, he or she shall perform such duties and exercise such powers as may be assigned to him or her from time to time by the Board of Directors or the Chief Executive Officer, including without limitation, the power and duty to render to the Board of Directors or the Chief Executive Officer, whenever requested, a statement of the financial condition of the Corporation, and to render a full financial report at the annual meeting of the stockholders, if called upon to do so, and to require from all officers or agents of the Corporation reports or statements giving such information as he or she may desire with respect to any and all financial transactions of the Corporation.

The Board of Directors may assign to any Vice President the title of Executive Vice President, Senior Vice President or any other title selected by the Board of Directors. In the absence of the President or in the event of his or her inability or refusal to act, the duties of the President shall be performed by the

when so acting, such officer shall have all the powers of and be subject to all the restrictions upon the President.

SECTION 3.11. Secretary and Assistant Secretaries. The Secretary shall attend all meetings of the Board of Directors and of the stockholders and record all the proceedings of such meetings in a book to be kept for that purpose, shall give, or cause to be given, notice of all meetings of the stockholders and special meetings of the Board of Directors, shall maintain, or cause to be maintained, a stock ledger and prepare, or cause to be prepared, lists of stockholders and their addresses as required and shall have custody of the corporate seal, which the Secretary or any Assistant Secretary shall have authority to affix to any instrument requiring it and attest by any of their signatures. The Board of Directors may give general authority to any other officer to affix and attest the seal of the corporation.

Any Assistant Secretary may, in the absence of the Secretary or in the event of the Secretary's inability or refusal to act, perform the duties and exercise the powers of the Secretary.

SECTION 3.12. Treasurer and Assistant Treasurers. The Treasurer shall have the custody of the corporate funds and securities, shall keep full and accurate accounts of receipts and disbursements in books belonging to the corporation and shall deposit all moneys and other valuable effects in the name and to the credit of the corporation in such depositories as may be designated by or pursuant to resolution of the Board of Directors. The Treasurer shall disburse the funds of the corporation upon the authorized depositories, taking proper vouchers for such disbursements.

Any Assistant Treasurer may, in the absence of the Treasurer or in the event of his or her inability or refusal to act, perform the duties and exercise the powers of the Treasurer.

SECTION 3.13. Additional Officers. The Board of Directors may appoint such other officers and agents as it may deem appropriate, and such other officers and agents shall hold their offices for such terms and shall exercise such powers and perform such duties as may be determined from time to time by the Board of Directors. The Board of Directors from time to time may delegate to any officer or agent the power to appoint subordinate officers or agents and to prescribe their respective rights, terms of office, authorities and duties. Any such officer or agent may remove any such subordinate officer or agent appointed by him or her, for or without cause.

ARTICLE IV STOCK

SECTION 4.1. Certificates of Stock. The shares of the corporation shall be represented by certificates or shall be uncertificated. Certificates for shares of stock, if any, shall be in such form as is consistent with the Certificate of Incorporation and applicable law. Each holder of stock represented by certificates shall be entitled to receive one or more stock certificates, signed by the Chairman or Vice-Chairman of the Board of Directors or by the President or a Vice President and by the Treasurer or an Assistant Treasurer or the Secretary or an Assistant Secretary, certifying the number of shares owned by the stockholder in certificated form.. Any or all signatures on any such certificates may be facsimiles. In case any officer, transfer agent or registrar who shall have signed or whose facsimile signature shall have been placed upon a certificate shall have ceased to be such an officer, transfer agent or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if he or she were such officer, transfer agent or registrar at the date of issue.

Each certificate for shares of stock that are subject to any restriction on transfer pursuant to the Certificate of Incorporation, the by-laws, applicable securities laws, or any agreement among any number of stockholders or among such holders and the corporation shall have conspicuously noted on the face or

back of the certificate either the full text of the restriction or a statement of the existence of such restriction.

SECTION 4.2. Transfers of Shares of Stock. Subject to the restrictions, if any, stated or noted on the stock certificates or in uncertificated share registration records, shares of stock may be transferred on the books of the corporation by the surrender to the corporation or its transfer agent of the certificate representing such shares properly endorsed or accompanied by a written assignment or power of attorney properly executed, and with such proof of authority or the authenticity of signature as the corporation or its transfer agent may reasonably require, or, in the case of uncertificated shares, by notification to the corporation or its transfer agent of the transfer of such shares, accompanied by written authorization properly executed. The corporation shall be entitled to treat the record holder of stock as shown on its books as the owner of such stock for all purposes, including the payment of dividends and the right to vote with respect to that stock, regardless of any transfer, pledge or other disposition of that stock, until the shares have been transferred on the books of the corporation in accordance with the requirements of these by-laws.

SECTION 4.3. Lost Certificates. A new stock certificate may be issued in the place of any certificate theretofore issued by the corporation and alleged to have been lost, stolen, destroyed or mutilated, upon such terms in conformity with law as the Board of Directors shall prescribe. The directors may, in their discretion, require the owner of the lost, stolen, destroyed or mutilated certificate, or the owner's legal representatives, to give the corporation a bond, in such sum as they may direct, to indemnify the corporation against any claim that may be made against it on account of the alleged loss, theft, destruction or mutilation of any such certificate, or the issuance of any such new certificate.

SECTION 4.4. Fractional Share Interests. The corporation may, but shall not be required to, issue fractions of a share. If the corporation does not issue fractions of a share, it shall (i) arrange for the disposition of fractional interests by those entitled thereto, (ii) pay in cash the fair value of fractions of a share as of the time when those entitled to receive such fractions are determined, or (iii) issue scrip or warrants in registered or bearer form, which shall entitle the holder to receive a certificate for a full share upon the surrender of such scrip or warrants aggregating a full share. A certificate for a fractional

share shall, but scrip or warrants shall not unless otherwise provided therein, entitle the holder to exercise voting rights, to receive dividends thereon, and to participate in any of the assets of the corporation in the event of liquidation. The Board of Directors may cause scrip or warrants to be issued subject to the conditions that they shall become void if not exchanged for certificates representing full shares before a specified date, or subject to the conditions that the shares for which scrip or warrants are exchangeable may be sold by the corporation and the proceeds thereof distributed to the holders of scrip or warrants, or subject to any other conditions that the Board of Directors may impose.

SECTION 4.5. Dividends. Subject to the provisions of the Certificate of Incorporation, the Board of Directors may, out of funds legally available therefor, at any regular or special meeting, declare dividends upon the capital stock of the corporation as and when they deem expedient.

ARTICLE V INDEMNIFICATION OF DIRECTORS AND OFFICERS

The corporation shall, to the extent legally permissible, indemnify each person who may serve or who has served at any time as a director or officer of the corporation or of any of its subsidiaries, or who at the request of the corporation may serve or at any time has served as a director, officer or trustee of, or in a similar capacity with, another organization or an employee benefit plan, against all expenses and liabilities (including counsel fees, judgments, fines, excise taxes, penalties and amounts payable in

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settlements) reasonably incurred by or imposed upon such person in connection with any threatened, pending or completed action, suit or other proceeding, whether civil, criminal, administrative or investigative, in which he may become involved by reason of his serving or having served in such capacity (other than a proceeding voluntarily initiated by such person unless he is successful on the merits, the proceeding was authorized by the corporation or the proceeding seeks a declaratory judgment regarding his own conduct); provided that no indemnification shall be provided for any such person with respect to any matter as to which he shall have been finally adjudicated in any proceeding not to have acted in good faith in the reasonable belief that his action was in the best interests of the corporation and, with respect to any criminal action or proceeding, he had reasonable cause to believe his conduct was unlawful or, to the extent such matter relates to service with respect to any employee benefit plan, in the best interests of the participants or beneficiaries of such employee benefit plan; and provided, further, that as to any matter disposed of by a compromise payment by such person, pursuant to a consent decree or otherwise, the payment and indemnification thereof have been approved by the corporation, which approval shall not unreasonably be withheld, or by a court of competent jurisdiction. Such indemnification shall include payment by the corporation of expenses incurred in defending a civil or criminal action or proceeding in advance of the final disposition of such action or proceeding, upon receipt of an undertaking by the person indemnified to repay such payment if he shall be adjudicated to be not entitled to indemnification under this article, which undertaking may be accepted without regard to the financial ability of such person to make repayment.

A person entitled to indemnification hereunder whose duties include service or responsibilities as a fiduciary with respect to a subsidiary or other organization shall be deemed to have acted in good faith in the reasonable belief that his action was in the best interests of the corporation if he acted in good faith in the reasonable belief that his action was in the best interests of such subsidiary or organization or of the participants or beneficiaries of, or other persons with interests in, such subsidiary or organization to whom he had a fiduciary duty.

For purposes of determining whether a person is entitled to indemnification hereunder, the termination of any action, suit or other proceeding by judgment, order, settlement (with or without court approval), conviction, or upon a plea of *nolo contendere*, or its equivalent, shall not create a presumption that the person did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that his conduct was unlawful.

Where indemnification hereunder requires authorization or approval by the corporation, such authorization or approval shall be conclusively deemed to have been obtained, and in any case where a director of the corporation approves the payment of indemnification, such director shall be wholly protected, if:

(i) the payment has been approved or ratified (1) by a majority vote of a quorum of the directors consisting of persons who are not at that time parties to the proceeding, (2) by a majority vote of a committee of two or more directors who are not at that time parties to the proceeding and are selected for this purpose by the full board (in which selection directors who are parties may participate), or (3) by a majority vote of a quorum of the outstanding shares of stock of all classes entitled to vote for directors, voting as a single class, which quorum shall consist of stockholders who are not at that time parties to the proceeding; or

(ii) the action is taken in reliance upon the opinion of independent legal counsel (who may be counsel to the corporation) appointed for the purpose by vote of the directors or in the manner specified in clauses (1), (2) or (3) of subparagraph (i); or

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(iii) the payment is approved by a court of competent jurisdiction; or

(iv) the directors have otherwise acted in accordance with the standard of conduct set forth in the Delaware General Corporation Law.

Any indemnification or advance of expenses under this article shall be paid promptly, and in any event within 30 days, after the receipt by the corporation of a written request therefor from the person to be indemnified, unless with respect to a claim for indemnification the corporation shall have determined that the person is not entitled to indemnification. If the corporation denies the request or if payment is not made within such 30 day period, the person seeking to be indemnified may at any time thereafter seek to enforce his rights hereunder in a court of competent jurisdiction and, if successful in whole or in part, he shall be entitled also to indemnification for the expenses of prosecuting such action. Unless otherwise provided by law, the burden of proving that the person is not entitled to indemnification shall be on the corporation.

The right of indemnification under this article shall be a contract right inuring to the benefit of the directors, officers and other persons entitled to be indemnified hereunder and no amendment or repeal of this article shall adversely affect any right of such director, officer or other person existing at the time of such amendment or repeal.

The indemnification provided hereunder shall inure to the benefit of the heirs, executors and administrators of a director, officer or other person entitled to indemnification hereunder. The indemnification provided hereunder may, to the extent authorized by the corporation, apply to the directors, officers and other persons associated with constituent corporations that have been merged into or consolidated with the corporation who would have been entitled to indemnification hereunder had they served in such capacity with or at the request of the corporation.

The right of indemnification under this article shall be in addition to and not exclusive of all other rights to which such director or officer or other persons may be entitled. Nothing contained in this article shall affect any rights to indemnification to which corporation employees or agents other than directors and officers and other persons entitled to indemnification hereunder may be entitled by contract or otherwise under law.

The corporation shall have power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation or is or was serving at the request of the corporation as a director, officer, trustee, employee or agent of another corporation, partnership, joint venture, trust, other enterprise or employee benefit plan against any liability asserted against such person and incurred by such person in any such capacity or arising out of such person's status as such, whether or not the corporation would have the power to indemnify such person against such liability under the provisions of the General Corporation Law of the State of Delaware.

ARTICLE VI GENERAL PROVISIONS

SECTION 6.1. Fiscal Year. Except as otherwise designated from time to time by the Board of Directors, the fiscal year of the corporation shall begin on the first day of January and end on the last day of December.

SECTION 6.2. Corporate Seal. The corporate seal shall be in such form as shall be approved by the Board of Directors. The Secretary shall be the custodian of the seal, and a duplicate seal may be kept and used by each Assistant Secretary and by any other officer the Board of Directors may authorize.

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SECTION 6.3. Certificate of Incorporation. All references in these by-laws to the Certificate of Incorporation shall be deemed to refer to the Certificate of Incorporation of the corporation, as in effect from time to time.

SECTION 6.4. Execution of Instruments. Unless otherwise determined by resolution of the Board of Directors, the Chief Executive Officer, the President, and Vice President, the Secretary or the Treasurer shall have power to execute and deliver on behalf and in the name of the corporation any instrument requiring the signature of an officer of the corporation, including deeds, contracts, mortgages, bonds, notes, debentures, checks, drafts and other orders for the payment of money. In addition, the Board of Directors, the President, each Vice President, the Treasurer and the Secretary may expressly delegate such powers to any other officer or agent of the corporation.

SECTION 6.5. Voting of Securities. Unless otherwise determined by resolution of the Board of Directors, the Chief Executive Officer, the President, any Vice President or any other officer shall have full power and authority on behalf of the corporation to attend any meeting of stockholders of any corporation in which the corporation may hold stock, and to act, vote (or execute proxies to vote) and exercise in person or by proxy all other rights, powers and privileges incident to the ownership of such stock. Such officers acting on behalf of the Corporation shall have full power and authority to execute any instrument expressing consent to or dissent from any action of any such corporation without a meeting. The Board of Directors may by resolution from time to time confer such power and authority upon any other person or persons.

SECTION 6.6. Evidence of Authority. A certificate by the Secretary, an Assistant Secretary or a temporary secretary as to any action taken by the stockholders, directors, a committee or any officer or representative of the corporation shall, as to all persons who rely on the certificate in good faith, be conclusive evidence of that action.

SECTION 6.7. Transactions with Interested Parties. No contract or transaction between the corporation and one or more of the directors or officers, or between the corporation and any other corporation, partnership, association or other organization in which one or more of the directors or officers are directors or officers or have a financial interest, shall be void or voidable solely for that reason or solely because the director or officer is present at or participates in the meeting of the Board of Directors or a committee of the Board of Directors that authorizes the contract or transaction or solely because the vote of any such director is counted for such purpose, if:

(1) The material facts as to the relationship or interest and as to the contract or transaction are disclosed or are known to the Board of Directors or such committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum; or

(2) The material facts as to the relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or

(3) The contract or transaction is fair to the corporation as of the time it is authorized, approved or ratified by the Board of Directors, a committee of the Board of Directors or the stockholders.

Common or interested directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee that authorizes the contract or transaction.

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SECTION 6.8. Books and Records. The books and records of the corporation shall be kept at such places within or without the State of Delaware as the Board of Directors may from time to time determine.

ARTICLE VII AMENDMENTS

SECTION 7.1. By the Board of Directors. These by-laws may be altered, amended or repealed or new by-laws may be adopted by the affirmative vote of a majority of the directors present at any regular or special meeting of the Board of Directors at which a quorum is present.

SECTION 7.2. By the Stockholders. These by-laws may be altered, amended or repealed or new by-laws may be adopted by the affirmative vote of the holders of a majority of votes properly cast at any regular meeting of stockholders, or at any special meeting of stockholders, provided notice of such alteration, amendment, repeal or adoption of new by-laws shall have been stated in the notice of such special meeting.

[Approved by the Board of Directors on August 8, 2007]

CERTIFICATION**of the Principal Executive Officer****Pursuant to Rule 13a-14(a)/15d-14(a) (implementing Section 302 of the Sarbanes-Oxley Act)**

I, Mary G. Puma, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Axcelis Technologies, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the company's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 9, 2007

/s/ Mary G. Puma

Mary G. Puma

Chairman, Chief Executive Officer and President

CERTIFICATION**of the Principal Financial Officer****Pursuant to Rule 13a-14(a)/15d-14(a) (implementing Section 302 of the Sarbanes-Oxley Act)**

I, Stephen G. Bassett, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Axcelis Technologies, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the company's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 9, 2007

/s/ Stephen G. Bassett

Stephen G. Bassett

Executive Vice President and Chief Financial Officer

AXCELIS TECHNOLOGIES, INC.

Certification of the Principal Executive Officer

Pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code

The undersigned Chief Executive Officer of Axcelis Technologies, Inc., a Delaware corporation, hereby certifies, for the purposes of Section 1350 of Chapter 63 of title 18 of the United States Code (as implemented by Section 906 of the Sarbanes-Oxley Act of 2002) as follows:

This Form 10-Q quarterly report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) and the information contained herein fairly presents, in all material respects, the financial condition and results of operations of the Company.

IN WITNESS WHEREOF, the undersigned has executed this Certification as of August 9, 2007.

/s/ Mary G. Puma

Mary G. Puma

Chairman, Chief Executive Officer and President of
Axcelis Technologies, Inc.

AXCELIS TECHNOLOGIES, INC.

Certification of the Principal Financial Officer**Pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code**

The undersigned Chief Financial Officer of Axcelis Technologies, Inc., a Delaware corporation, hereby certifies, for the purposes of Section 1350 of Chapter 63 of title 18 of the United States Code (as implemented by Section 906 of the Sarbanes-Oxley Act of 2002) as follows:

This Form 10-Q quarterly report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) and the information contained herein fairly presents, in all material respects, the financial condition and results of operations of the Company.

IN WITNESS WHEREOF, the undersigned has executed this Certification as of August 9, 2007.

/s/ Stephen G. Bassett

Stephen G. Bassett

Executive Vice President and Chief Financial Officer of
Axcelis Technologies, Inc.
