

**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 September 30, 2006

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 November 3, 2006 there were 101,297,394 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		Nine months ended	
	September 30,		September 30,	
	2006	2005	2006	2005
Revenue				
Systems	\$ 78,546	\$ 47,083	\$ 198,684	\$ 155,723
Services	42,062	39,280	133,006	116,724
Royalties, primarily from SEN	2,209	1,019	6,688	7,149
	<u>122,817</u>	<u>87,382</u>	<u>338,378</u>	<u>279,596</u>
Cost of revenue	69,551	51,679	198,128	163,156
Gross profit	<u>53,266</u>	<u>35,703</u>	<u>140,250</u>	<u>116,440</u>
Operating expenses				
Research & development	17,597	17,755	54,000	51,165
Selling	11,743	10,691	33,919	34,565
General & administrative	11,986	11,994	34,258	34,996
Amortization of intangible assets	656	612	1,895	1,836
Restructuring charges	53	1,545	147	5,427
	<u>42,035</u>	<u>42,597</u>	<u>124,219</u>	<u>127,989</u>
Income (loss) from operations	11,231	(6,894)	16,031	(11,549)
Other income (expense)				
Equity income of SEN	2,372	1,395	10,734	11,360
Interest income	2,250	1,505	5,816	3,799
Interest expense	(2,570)	(1,661)	(6,657)	(4,971)
Other—net	153	435	837	(2)
	<u>2,205</u>	<u>1,674</u>	<u>10,730</u>	<u>10,186</u>
Income (loss) before income taxes	13,436	(5,220)	26,761	(1,363)
Income taxes (credit)	<u>916</u>	<u>(53)</u>	<u>1,552</u>	<u>1,157</u>

Net income (loss)	<u>\$ 12,520</u>	<u>\$ (5,167)</u>	<u>\$ 25,209</u>	<u>\$ (2,520)</u>
Net income (loss) per share				
Basic	\$ 0.12	\$ (0.05)	\$ 0.25	\$ (0.03)
Diluted	0.12	(0.05)	0.25	(0.03)
Shares used in computing basic and diluted income (loss) per share				
Basic	101,165	100,428	101,003	100,256
Diluted	101,612	100,428	101,205	100,256

See accompanying Notes to Consolidated Financial Statements

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

	<u>September 30, 2006</u>	<u>December 31, 2005</u>
ASSETS		
Current assets		
Cash and cash equivalents	\$ 90,452	\$ 71,417
Marketable securities	91,539	93,797
Restricted cash	9,164	8,037
Accounts receivable, net	98,163	79,379
Inventories, net	146,255	109,972
Prepaid expenses and other current assets	37,644	32,767
Total current assets	<u>473,217</u>	<u>395,369</u>
Property, plant & equipment, net	66,534	71,443
Investment in SEN	119,163	108,815
Goodwill	46,773	46,773
Intangible assets	14,205	16,100
Restricted cash, long-term portion	2,694	3,195
Other assets	23,866	19,748
	<u>\$ 746,452</u>	<u>\$ 661,443</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	\$ 39,627	\$ 25,556
Accrued compensation	21,177	18,437
Warranty	6,569	5,739
Income taxes	2,043	3,021
Deferred revenue	40,420	30,140
Other current liabilities	11,587	11,333
Current portion of long-term debt	74,217	—
Total current liabilities	<u>195,640</u>	<u>94,226</u>
Long-term debt	76,165	125,000
Long-term deferred revenue	9,468	11,177
Other long-term liabilities	4,601	4,999
Stockholders' equity		
Preferred stock	—	—
Common stock	101	101
Additional paid-in capital	468,779	466,454
Deferred compensation	—	(5,385)
Treasury stock	(1,218)	(1,218)
Accumulated deficit	(5,978)	(31,187)
Accumulated other comprehensive loss	(1,106)	(2,724)
	<u>460,578</u>	<u>426,041</u>
	<u>\$ 746,452</u>	<u>\$ 661,443</u>

See accompanying Notes to Consolidated Financial Statements

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Axcelis Technologies, Inc.
Consolidated Statements of Cash Flows
(In thousands)
(Unaudited)

	Nine months ended September 30,	
	2006	2005
Operating activities		
Net income (loss)	\$ 25,209	\$ (2,520)
Adjustments required to reconcile net income to net cash used for operating activities		
Depreciation and amortization	13,138	15,835
Amortization of intangible assets	1,895	1,836
Accretion of premium on long-term debt	1,165	—
Stock compensation expense	4,466	593
Impairment of fixed assets	—	725
Undistributed income of SEN	(10,734)	(11,360)
Changes in operating assets & liabilities		
Accounts receivable	(18,165)	16,719
Inventories	(34,618)	5,981
Other current assets	(4,964)	(24,506)
Accounts payable & other current liabilities	17,817	(11,663)
Deferred revenue	8,571	902
Income taxes	(984)	(1,818)
Other assets and liabilities	(8,700)	3,035
Net cash used for operating activities	(5,904)	(6,241)
Investing activities		
Purchases of marketable securities	(70,329)	(86,297)
Sales and maturities of marketable securities	73,263	77,115
Expenditures for property, plant & equipment	(3,947)	(6,329)
Increase in restricted cash	(627)	(4,372)
Net cash used for investing activities	(1,640)	(19,883)
Financing activities		
Proceeds from issuance of convertible debt	24,217	—
Proceeds from the exercise of stock options	1,362	1,142
Proceeds from employee stock purchase plan	1,578	2,150
Net cash provided by financing activities	27,157	3,292
Effect of exchange rate changes on cash	(578)	343
Net increase (decrease) in cash and cash equivalents	19,035	(22,489)
Cash and cash equivalents at beginning of period	71,417	108,295
Cash and cash equivalents at end of period	\$ 90,452	\$ 85,806

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 worldwide 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. The Company owns 50% of the equity of a joint venture with Sumitomo Heavy Industries, Ltd. in Japan. This joint venture, SEN Corporation, an SHI and Axcelis Company (“SEN”), licenses technology from the Company relating to the manufacture of 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, 2005 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, 2005 and the amendment to the annual report on Form 10-K/A filed on June 29, 2006.

Note 2. Stock-Based Compensation

Adoption of SFAS No. 123R

In December 2004, the Financial Accounting Standards Board (“FASB”) issued Statement of Financial Accounting Standards (“SFAS”) No. 123 (revised 2004) “Share-Based Payment” (“SFAS No. 123R”). SFAS No. 123R replaces SFAS No. 123 “Accounting for Stock-Based Compensation” (“SFAS No. 123”), supersedes Accounting Principles Board Opinion No. 25 “Accounting for Stock Issued to Employees” (“APB No. 25”), and amends SFAS No. 95 “Statement of Cash Flows”. SFAS No. 123R requires entities to recognize compensation expense for all share-based payments to employees and directors, including grants of employee stock options, based on the grant-date fair value of those share-based payments (with limited exceptions), adjusted for expected forfeitures. In April 2005, the Securities and Exchange Commission (“SEC”) issued a final ruling that extended the compliance date for SFAS No. 123R to the first interim or annual reporting period of the registrants’ first fiscal year that begins on or after June 15, 2005.

The Company adopted SFAS No. 123R, effective January 1, 2006 using the modified prospective transition method. Under that transition method, stock-based compensation expense recognized during the three and nine months ended September 30, 2006 includes: (a) stock options, restricted stock and restricted stock units granted prior to, but not yet vested, as of December 31, 2005, based on the grant-date fair value estimated in accordance with the original provisions of SFAS No. 123, and (b) shares issued in offerings under the Employee Stock Purchase Plan with offering periods commencing January 1, 2006 and stock options, restricted stock and restricted stock units granted subsequent to December 31, 2005, based on the grant-date fair value estimated using the Black-Scholes valuation model in accordance with the provisions of SFAS No. 123R. Expense is recognized ratably over the requisite service period. Under the modified prospective transition method, results for prior periods are not restated.

Under SFAS No. 123R the Company recognized stock-based compensation expense of \$1.6 million and \$4.5 million for the three and nine months ended September 30, 2006, respectively. Adoption of SFAS No. 123R reduced income before income taxes and net income by approximately \$0.7 million and \$2.7 million (\$0.01 per basic and diluted share and \$0.03 per basic and diluted share) for the three and nine months ended September 30, 2006, respectively, as the Company would have recognized \$0.9 million and \$1.8 million of stock-based compensation expense for the three and nine months ended September 30, 2006, respectively, related to its outstanding and additional issuances of restricted stock and restricted stock units prior to the adoption of SFAS No. 123R.

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, this change had no impact on the Company’s consolidated statement of cash flows as of and for the three and nine months ended September 30, 2006. For 2006, the Company used restricted stock units in its annual share-based payment program for employees, while continuing to use stock options for new hire grants. As a result, restricted stock units comprised the majority of equity grants in 2006.

Accounting Prior to Adoption of SFAS No. 123R

Prior to January 1, 2006, as permitted under SFAS No. 123, as amended by SFAS No. 148 “Accounting for Stock-Based Compensation Transition and Disclosure,” Axcelis elected to follow the provisions of APB No. 25 to account for stock-based awards to employees. Under APB No. 25, compensation expense with respect to such awards is not recognized if on the date the awards were granted the exercise price was equal to or greater than the market value of the underlying common shares. Historically, all stock options have been granted with an exercise price equal to the fair market value of the common stock on the date of grant. Accordingly, no compensation expense was recognized from option grants to employees and directors. The fair value of restricted stock unit and restricted stock awards was charged to deferred compensation at the time of issuance and amortized to expense over the vesting period on a straight-line basis.

On October 24, 2005, the Compensation Committee of the Board of Directors resolved to accelerate the vesting of certain unvested and “out-of-the-money” stock options with exercise prices equal to or greater than \$10.00 per share. These options were previously awarded to its employees and other eligible participants, including executive officers, under the Company’s 2000 Stock Plan. Of the approximately 1.5 million accelerated options, 309,474 options, or 21.2%, were held by executive officers. The acceleration of vesting was effective for stock options outstanding as of December 15, 2005, at which date the closing price of the Company’s common stock was \$4.70 per share. The weighted average exercise price of the options subject to the acceleration was \$11.52 per share. The acceleration of the vesting of these options did not result in compensation expense based on generally accepted accounting principles. For pro forma disclosure requirements under SFAS No. 123, the Company recognized an incremental \$7.1 million of stock-based compensation expense for all options whose vesting was accelerated. As a result of this action the Company is not recognizing compensation expense of approximately the same amount associated with these options in operating results upon effectiveness of the application of SFAS No. 123R.

The modified prospective transition method of SFAS No. 123R requires the presentation of pro forma information, for periods presented prior to the adoption of SFAS No. 123R, regarding net income (loss) and net income (loss) per share as if the Company had accounted for its stock plans under the fair value method of SFAS No. 123.

For pro forma purposes, the fair value of stock options was estimated using the Black-Scholes option valuation model and amortized on a graded attribution approach using the following assumptions for the three and nine months ended September 30, 2005:

	<u>Three months ended September 30, 2005</u>	<u>Nine months ended September 30, 2005</u>
Risk-free interest rate	3.74 – 4.05%	2.92 – 4.05%
Expected stock price volatility	69.3%	69.3%
Weighted average expected term (in years)	4.0	4.0
Expected dividend yield	0.0%	0.0%

The weighted average grant date fair value (determined using the Black-Scholes option pricing model) for options granted during the three and nine months ended September 30, 2005 was \$3.75 and \$3.71, respectively.

The following table illustrates the effect on net loss and net loss per share for the three and nine months ended September 30, 2005 if the Company had accounted for its stock plans using the fair value method of accounting provided under SFAS No. 123:

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	<u>Three months ended September 30, 2005</u>	<u>Nine months ended September 30, 2005</u>
Net loss, as reported (Under APB No. 25)	\$ (5,167)	\$ (2,520)
Add: Stock-based employee compensation expense included in reported net loss	549	593
Deduct: Total stock-based employee compensation expense determined under fair value based method for all awards	<u>(3,615)</u>	<u>(11,842)</u>
Pro forma net loss	<u>\$ (8,233)</u>	<u>\$ (13,769)</u>
Net loss per share as reported		
Basic	\$ (0.05)	\$ (0.03)
Diluted	\$ (0.05)	\$ (0.03)
Pro forma net loss per share		
Basic	\$ (0.08)	\$ (0.14)
Diluted	\$ (0.08)	\$ (0.14)

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, stock appreciation rights, 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 September 30, 2006 there were 17.4 million shares of common stock available for future grant. At September 30, 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 (or 90 days thereafter). 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 6 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.

Generally, unvested restricted stock and restricted stock unit awards expire upon termination of service to the Company (or 90 days thereafter). 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.

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

Stock Options

The Company estimates the fair value of stock options using the Black-Scholes valuation model, consistent with the provisions of SFAS No. 123R, SEC SAB No. 107 and the Company's prior period pro forma disclosures of net earnings, including stock-based compensation (determined under a fair value method as prescribed by SFAS No. 123).

The fair value of each option grant is estimated on the date of grant using the Black-Scholes option valuation model and a straight line attribution approach using the following assumptions for the three and nine months ended September 30, 2006:

	<u>Three months ended September 30, 2006</u>	<u>Nine months ended September 30, 2006</u>
Risk-free interest rate	4.75 – 5.12%	4.29 – 5.12%
Expected stock price volatility	57.0%	56.9 – 59.0%
Weighted average expected term (in years)	4.2	4.2
Expected dividend yield	0.0%	0.0%

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The risk-free interest rate is based on U.S. Treasury interest rates for a term consistent with the expected life of the stock options.

The expected stock price volatility assumption was derived using a combination of historical and implied volatility. The Company determined that a blended volatility is more reflective of market conditions and a better indicator of expected volatility than historical volatility alone. Prior to the adoption of SFAS No. 123R, the Company used historical volatility as the basis for its expected volatility assumption.

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. Prior to the adoption of SFAS No. 123R, the Company used the estimated option life (typically four years) as the basis for its expected term assumption.

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.

The forfeiture rate used was based upon historical experience. As required by SFAS No. 123R, the Company will adjust the estimated forfeiture rate based upon actual experience.

The weighted average grant date fair value per option (determined using the Black-Scholes option pricing model) for options granted during the three and nine months ended September 30, 2006 was \$2.92 and \$2.47, respectively.

The following table summarizes the stock option activity for the nine months ended September 30, 2006:

	<u>Options</u>	<u>Weighted Average Exercise Price</u>	<u>Weighted Average Remaining Contractual Term (years)</u>	<u>Aggregate Intrinsic Value</u>
Outstanding at December 31, 2005	13,464	\$ 11.81		
Granted	604	4.98		
Exercised	(225)	6.05		
Canceled	(193)	6.51		
Expired	(788)	11.75		
Outstanding at September 30, 2006	<u>12,862</u>	<u>\$ 11.68</u>	<u>5.5</u>	<u>\$ 3,856</u>
Exercisable at September 30, 2006	<u>11,394</u>	<u>\$ 12.36</u>	<u>5.1</u>	<u>\$ 2,504</u>

The total intrinsic value of options exercised during the three and nine months ended September 30, 2006 was nil and \$0.2 million, respectively. The total fair value of stock options vested during the three and nine months ended September 30, 2006 was \$1.0 million and \$3.4 million, respectively. As of September 30, 2006, there was \$3.8 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 2.1 years. Cash received from stock option exercises was \$0.1 and \$1.4 million during the three and nine months ended September 30, 2006, respectively.

The following table summarizes information with respect to stock options outstanding and exercisable at September 30, 2006:

<u>Range of Exercise Prices</u>	<u>Options Outstanding</u>			<u>Options Exercisable</u>	
	<u>Number Outstanding</u>	<u>Weighted- Average Remaining Contractual Life (years)</u>	<u>Weighted- Average Exercise Price</u>	<u>Number Exercisable</u>	<u>Weighted- Average Exercise Price</u>
\$4.36 - \$6.38	2,588	6.9	\$ 5.60	1,884	\$ 5.74
\$6.77 - \$10.00	2,902	4.9	\$ 8.06	2,138	\$ 8.28
\$10.28 - \$15.38	5,064	5.6	\$ 12.20	5,064	\$ 12.20
\$15.63 - \$22.00	2,307	3.6	\$ 21.87	2,307	\$ 21.87
\$24.13	1	3.8	\$ 24.13	1	\$ 24.13
Total	<u>12,862</u>	5.5	\$ 11.68	<u>11,394</u>	\$ 12.36

Restricted Stock And Restricted Stock Units

During 2005, the Compensation Committee of the Board of Directors approved the issuance of 854,000 restricted stock units ("RSUs") to selected employees, including 365,000 to executive officers, and the issuance of 44,000 shares of restricted stock to Directors under the 2000 Plan. 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. These 2005 RSU awards vest over four years for employees and executive officers. The 2005 restricted stock awards to directors vested on January 1, 2006. The fair value of restricted stock unit and restricted stock awards is charged to expense ratably over the requisite service period.

In accordance with an approval by the Compensation Committee of the Board of Directors under the 2000 Plan, in July 2006 the Company issued 862,000 RSUs to selected employees, including 417,000 to executive officers, and 50,000 shares of restricted stock to directors. In September 2006, the Company issued an additional 5,600 RSUs to selected employees under the 2000 Plan, as approved by the Compensation Committee to the Board of Directors. The 2006 awards vest over four years for non-executive officers. The 2006 awards for executive officers vest 50% on July 3, 2009 and 50% on July 3, 2010, subject to acceleration if the Company meets certain market capitalization targets, but not earlier than July 3, 2008. The 2006 restricted stock awards to directors will vest on January 2, 2007. 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 nine months ended September 30, 2006 follow:

Shares/units

Outstanding at December 31, 2005	1,063
Granted	917
Vested	(137)
Forfeited	(8)
Outstanding at September 30, 2006	<u>1,835</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 September 30, 2006, there was \$9.4 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 3.2 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. Historically, employees could purchase Axcelis common stock at 85% of the market value of the Company's common stock on the first trading day of each offering period or on the day the stock is purchased, whichever was lower. Effective January 1, 2006, employees may only 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 was not recognized through December 31, 2005 because the Purchase Plan was a non-compensatory plan under Section 423 of the Internal Revenue Code. Under SFAS No. 123R, the Purchase Plan is now considered compensatory and as such, compensation expense is recognized beginning January 1, 2006. 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 for the three and nine months ended September 30, 2006 was \$0.1 million and \$0.3 million, respectively.

As of September 30, 2006, there were a total of 4.3 million shares reserved for issuance and available for purchase under the Purchase Plan. There were 0.2 million shares purchased under the Purchase Plan during the three months ended September 30, 2006 and 0.5 million shares purchased under the Purchase Plan during the nine months ended September 30, 2006.

Note 3. Net Income (Loss) Per Share

SFAS No. 128, "Earnings Per Share," requires two presentations of earnings per share, "basic" and "diluted." Basic earnings (loss) per share is computed by dividing income (loss) 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 (loss) per

share is similar to basic earnings (loss) 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 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. As such, the Company has excluded from the computation 12.1 million and 12.2 million (for the three and nine months ended September 30, 2006, respectively) and 11.5 million and 10.9 million (for the three and nine months ended September 30, 2005, respectively) outstanding stock options. In addition, 7.5 million shares and 6.9 million shares of common stock for the assumed conversion of the Company's convertible debt for the three and nine months ended September 30, 2006, respectively, and 6.3 million shares of common stock for the assumed conversion of the Company's convertible debt for the three and nine months ended September 30, 2005, 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 and conversions could, however, become dilutive in future periods.

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

	Three months ended September 30,		Nine months ended September 30,	
	2006	2005	2006	2005
	(in thousands, except per share data)			
Income (loss) available to common stockholders	\$ 12,520	\$ (5,167)	\$ 25,209	\$ (2,520)
Weighted average common shares outstanding used in computing basic net income (loss) per share	101,165	100,428	101,003	100,256
Incremental shares	447	—	202	—
Weighted average common shares outstanding used in computing diluted net income (loss) per share	<u>101,612</u>	<u>100,428</u>	<u>101,205</u>	<u>100,256</u>
Net income (loss) per share				
Basic	\$ 0.12	\$ (0.05)	\$ 0.25	\$ (0.03)
Diluted	0.12	(0.05)	0.25	(0.03)

Note 4. Comprehensive Income (Loss)

The components of comprehensive income (loss) follow:

	Three months ended September 30,		Nine months ended September 30,	
	2006	2005	2006	2005
	(in thousands)			
Net income (loss)	\$ 12,520	\$ (5,167)	\$ 25,209	\$ (2,520)
Other comprehensive income (loss):				
Foreign currency translation adjustments	(4,315)	(3,276)	1,582	(13,797)
Unrealized gain (loss) on marketable securities	28	(16)	36	(31)
Comprehensive income (loss)	<u>\$ 8,233</u>	<u>\$ (8,459)</u>	<u>\$ 26,827</u>	<u>\$ (16,348)</u>

Note 5. Inventories

The Company adopted Statement of Financial Accounting Standards No. 151 ("SFAS No. 151") "Inventory Costs, an amendment of ARB 43, Chapter 4" effective January 1, 2006. SFAS No. 151 amends the guidance in ARB No. 43, Chapter 4, "Inventory Pricing" to clarify the accounting for abnormal amounts of idle facility expense, freight, handling costs, and wasted material (spoilage). SFAS No. 151 requires that idle facility expense, excessive spoilage, double freight, and rehandling costs be recognized as current period charges. In addition, SFAS No. 151 requires that allocation of fixed production overheads to the costs of conversion be based on the normal capacity of the production facilities. Adopting SFAS No. 151 did not have a material impact on the Company's consolidated financial statements.

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The components of inventories follow:

	September 30,	December 31,
	2006	2005
	(in thousands)	
Raw materials	\$ 88,839	\$ 78,230
Work-in-process	41,773	22,073
Finished goods (completed systems)	15,643	9,669
	<u>\$ 146,255</u>	<u>\$ 109,972</u>

Note 6. Restructuring

The Company recorded restructuring charges of \$0.1 million for both the three and nine months ended September 30, 2006. The charge recorded during the three months ended September 30, 2006 represents a reevaluation of the assumptions used in determining the fair value of certain lease obligations related to facilities abandoned in a previous restructuring. The revised assumptions, including lower estimates of expected sub-rental income over the remainder of the lease terms and expected lease termination costs associated with exiting a portion of the facilities, are based on management's evaluation of the commercial rental market. For the nine months ended September 30, 2006, the above mentioned charges are net of a credit of \$0.3 million to previously recognized restructuring charges relating primarily to the adjustment for severance and other one-time termination benefits associated with reduction in force actions and the consolidation of the Company's Rockville, Maryland operations into its headquarters and manufacturing facility located in Beverly, Massachusetts. In addition to the amounts reported as restructuring charges, \$0.4 million of relocation and other incremental expenses related to the consolidation of the Rockville, Maryland operations are included in general and administrative expense for the nine months ended September 30, 2006.

In total, the Company expects to incur approximately \$13.1 million in restructuring and general and administrative expenses related to these actions, of which \$12.9 million has been recognized in the statement of income since the fourth quarter of 2004. The Company expects to incur approximately \$0.2 million in additional expense through December 31, 2006. Of the total cost related to these actions, approximately \$12.4 million is expected to result in cash expenditures, of which \$11.3 million has been paid through September 30, 2006. Leases are expected to be paid over the remaining lease periods extending to 2007.

Changes in the Company's restructuring liability are as follows:

	Severance	Retention	Leases	Total
	(in thousands)			
Balance at December 31, 2005	\$ 636	\$ 120	\$ 1,264	\$ 2,020
Restructuring expense (credit)	(287)	(51)	485	147
Cash payments	(349)	(69)	(883)	(1,301)
Balance at September 30, 2006	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 866</u>	<u>\$ 866</u>

Restructuring charges of \$1.5 million and \$5.4 million for the three and nine months ended September 30, 2005, respectively, consisted primarily of severance and other one-time termination benefits that were paid related to reduction in force actions and the consolidation of the Company's Rockville, Maryland operations into its headquarters and manufacturing facility located in Beverly, Massachusetts. In addition to the amounts reported as restructuring charges, \$1.4 million and \$4.2 million for the three and nine months ended September 30, 2005, respectively, of relocation and other incremental expenses related to the consolidation of the Rockville, Maryland operations are included in general and administrative expense.

Note 7. 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.

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

	Nine months ended September 30,	
	2006	2005
	(in thousands)	
Balance at December 31	\$ 7,166	\$ 10,924
Warranties issued during the period	7,284	7,181
Settlements made during the period	(4,637)	(6,944)
Changes in liability for pre-existing warranties during the period	(2,406)	(1,152)
Balance at September 30	<u>\$ 7,407</u>	<u>\$ 10,009</u>
Amount classified as current	\$ 6,569	\$ 8,321
Amount classified as long-term	838	1,688
Balance at September 30	<u>\$ 7,407</u>	<u>\$ 10,009</u>

Note 8. Convertible Subordinated Debt

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 Company's 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 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 is the conversion price of the Old Notes, subject to adjustment in certain circumstances.

In accordance with the Financial Accounting Standards Board's 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 three months ended June 30, 2006. In addition, debt issuance costs of approximately \$0.3 million related to the New Notes are being amortized to interest expense over the term of the New Notes.

Note 9. Deferred Income Taxes

At December 31, 2005, the Company had \$104.2 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 reduce the carrying value of deferred tax assets to zero. The Company will maintain a valuation allowance on future tax benefits for entities in a three-year cumulative loss position until it can sustain an appropriate level of profitability. 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 10. Significant Customers

In the three months ended September 30, 2006, one customer accounted for approximately 12% and three other customers each accounted for approximately 10% of revenue, respectively. In the nine months ended September 30, 2006, one customer accounted for approximately 11% of revenue. In the three months ended September 30, 2005, three customers accounted for approximately

13%, 11% and 10% of revenue, respectively. In the nine months ended September 30, 2005, one customer accounted for approximately 21% of revenue. For the three and nine months ended September 30, 2006 and 2005, no other customer accounted for more than 10% of revenue.

Note 11. 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 September 30, 2006, 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.

Note 12. Recent Accounting Pronouncements

SFAS 158

In September 2006, the FASB issued SFAS No. 158, "Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans", which requires an employer to (a) recognize in its statement of financial position an asset for a plan's overfunded status or a liability for a plan's underfunded status, (b) measure a plan's assets and its obligations that determine its funded status as of the end of the employer's fiscal year, and (c) recognize changes in the funded status of a defined benefit postretirement plan in the year in which the changes occur. The requirement to recognize the funded status of a benefit plan and the disclosure requirements are effective as of the end of the fiscal year ending after December 15, 2006. The requirement to measure plan assets and benefit obligations as of the date of the employer's fiscal year-end statement of financial position becomes effective for fiscal years ending after December 15, 2008. The Company is currently evaluating what impact, if any, this statement will have on its consolidated financial statements.

FIN 48

In June 2006, the FASB issued 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 No. 109, "Accounting for Income Taxes". It also 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, and it provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure and transition. FIN 48 is effective as of the beginning of the first fiscal year beginning after December 15, 2006. The Company does not believe adoption of FIN 48 will have a material impact on the Company's consolidated financial statements.

SFAS 154

In May 2005, the FASB issued SFAS No. 154, "Accounting Changes and Error Corrections", which changes the requirements for the accounting and reporting of a change in accounting principle. SFAS No. 154 applies to all voluntary changes in accounting principle as well as to changes required by an accounting pronouncement that does not include specific transition provisions. SFAS No. 154 requires that changes in accounting principle be retrospectively applied. SFAS No. 154 is effective for accounting changes and corrections of errors made in fiscal years beginning after December 15, 2005. SFAS No. 123R, however, allowed for a modified prospective approach of adoption. The adoption of this statement did not have any impact on the Company's consolidated 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 worldwide producer of ion implantation, dry strip, thermal processing and curing equipment used in the fabrication of semiconductors. 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. For example, our gross margins in 2002, 2003 and 2004 were adversely affected in part as a result of the increased proportion of relatively new systems sold to process 300mm wafers. We expect gross margins overall to decline slightly in 2006 compared to 2005 due to initial 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 substantial 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 are transition years in implant products and technology. While customers continue to buy multi-wafer tools, leading edge customers are shifting to single wafer tools. While the effect on systems revenue is not quantifiable, we have experienced a loss of ion implant market share because these leading edge semiconductor manufacturers have shifted from our multi-wafer high current ion implant systems to single wafer high current ion implant systems. In response to this market trend, we introduced our single wafer Optima platform in 2005. In 2005 we began shipping the Optima MD, our single wafer mid dose tool. We shipped the first Optima HD, our single wafer high dose tool, during the second quarter of 2006. We also have development projects underway to produce and launch our next generation of single wafer products.

Axcelis accesses the important Japanese market for certain ion implant systems through SEN, a joint venture with Sumitomo Heavy Industries, Ltd., that we do not control. The joint venture agreement gives both owners veto rights, so that neither owner alone can effectively control SEN. SEN's business is subject to the same risks as our business. Royalties and equity income from SEN have made a substantial contribution to our earnings, and a substantial decline in SEN's sales and net income could have a material adverse effect on our operating results. As a result of this joint venture structure, we have less control over SEN management than over our own management and may not have timely knowledge of factors affecting SEN's business. In addition, given the equal ownership, it is possible that the SEN Board may be unable to reach consensus on important matters from time to time which could delay important decisions. The license agreement between SEN and Axcelis continues in its existing form on a year-to-year basis, subject to the right of either party to terminate. Under the SEN bylaws, termination of the license agreement by SEN would be an important matter requiring approval of a majority of the SEN directors. Given Axcelis' 50% representation on the SEN Board, the license agreement will be perpetual until such time as Axcelis deems a termination to be in our interest. Axcelis has no present intent to terminate the SEN license agreement.

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 September 30, 2006 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, 2005.

Results of Operations

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

	Three months ended September 30,		Nine months ended September 30,	
	2006	2005	2006	2005
Revenue				
Systems	64.0%	53.9%	58.7%	55.7%
Services	34.2	45.0	39.3	41.7
Royalties, primarily from SEN	1.8	1.1	2.0	2.6
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Cost of revenue	56.6	59.1	58.6	58.4
Gross profit	<u>43.4</u>	<u>40.9</u>	<u>41.4</u>	<u>41.6</u>
Other costs and expenses				
Research & development	14.3	20.3	16.0	18.3
Selling	9.6	12.2	10.0	12.4
General & administrative	9.8	13.7	10.1	12.5
Amortization of intangible assets	0.5	0.7	0.6	0.7
Restructuring	—	1.8	—	1.9
	<u>34.2</u>	<u>48.7</u>	<u>36.7</u>	<u>45.8</u>
Income (loss) from operations	9.2	(7.9)	4.7	(4.1)
Other income (expense)				

Equity income of SEN	1.9	1.6	3.2	4.1
Interest income	1.8	1.7	1.7	1.4
Interest expense	(2.1)	(1.9)	(2.0)	(1.8)
Other-net	0.1	0.5	0.3	—
	<u>1.7</u>	<u>1.9</u>	<u>3.2</u>	<u>3.6</u>
Income (loss) before income taxes	10.9	(6.0)	7.9	(0.5)
Income taxes (credit)	0.7	(0.1)	0.5	0.4
Net income	<u>10.2%</u>	<u>(5.9)%</u>	<u>7.4%</u>	<u>(0.9)%</u>

Three and nine months ended September 30, 2006 in comparison to the three and nine months ended September 30, 2005

Revenue

Revenue from system sales was \$78.5 million, or 64.0% of revenue for the three months ended September 30, 2006, compared with \$47.1 million, or 53.9% of revenue for the three months ended September 30, 2005. Revenue from system sales was \$198.7 million, or 58.7% of revenue for the nine months ended September 30, 2006, compared with \$155.7 million, or 55.7% of revenue for the nine months ended September 30, 2005. The increase in sales of systems compared with 2005 was primarily attributable to capacity additions for both 300mm and 200mm production.

Approximately 42.0% of revenue from system sales for the three months ended September 30, 2006 was from the sale of 200mm products and 58.0% of revenue was from the sale of 300mm products, compared with 60.2% and 39.8%, respectively, for the three months ended September 30, 2005. For the nine months ended September 30, 2006 approximately 46.2% of revenue from system sales was from the sale of 200mm products and 53.8% of revenue was from the sale of 300mm products, compared with 44.2% and 55.8%, respectively, for the nine months ended September 30, 2005. This highlights the continued strong demand for 200mm products in emerging markets such as China that offset the overall market trend towards 300mm products.

Services revenue, which includes spare parts, equipment upgrades and maintenance services, was \$42.1 million, or 34.2% of revenue for the three months ended September 30, 2006, compared with \$39.3 million, or 45.0% of revenue, for the three months ended September 30, 2005. Services revenue was \$133.0 million, or 39.3% of revenue for the nine months ended September 30, 2006, compared with \$116.7 million, or 41.7% of revenue for the nine months ended September 30, 2005. 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 our revenue from system sales is deferred until installation and other services related to future deliverables are performed. The total amount of deferred revenue at September 30, 2006 and 2005 was \$49.9 million and \$42.6 million, respectively.

Royalty revenue was \$2.2 million, or 1.8% of revenue for the three months ended September 30, 2006, compared with \$1.0 million, or 1.2% of revenue for the three months ended September 30, 2005. Royalty revenue for the nine months ended September 30, 2006 was \$6.7 million, or 2.0% of revenue, compared to \$7.1 million, or 2.6% of revenue for the nine months ended September 30, 2005. Royalties are primarily earned under the terms of our license agreement with SEN. Royalty revenue changes are mainly attributable to fluctuations in SEN sales volume based on demand for equipment by Japanese semiconductor manufacturers and the timing of revenue recognition on shipments in Japan.

Revenue from sales of ion implantation products and services accounted for \$89.1 million, or 72.5% of total revenue in the three months ended September 30, 2006, compared with \$69.1 million, or 79.0%, of total revenue in the three months ended September 30, 2005. Revenue from sales of ion implantation products and services accounted for \$256.3 million, or 75.7% of revenue in the nine months ended September 30, 2006, compared with \$222.9 million, or 79.7% of revenue in the nine months ended September 30, 2005. We expect revenue from the sale of ion implantation products and services to average from 75% to 80% of total revenues.

Worldwide revenues, including revenues from SEN of \$45.3 million and \$173.8 million for the three and nine months ended September 30, 2006, respectively, were \$168.1 million and \$512.2 million for the three and nine months ended September 30, 2006, respectively. Worldwide revenues, including revenues from SEN of \$38.9 million and \$192.8 million for the three and nine months ended September 30, 2005, respectively, were \$126.3 million and \$472.4 million for the three and nine months ended September 30, 2005, respectively. The increase in worldwide revenues for the three months ended September 30, 2006 is primarily the result of strong demand for our ion implant products as well as complementary products and services as discussed above. On a year to date basis, this strong demand was partially offset by the transition to single wafer, high dose ion implant systems, as discussed above, as well as the timing of shipments in Japan. Axcelis believes that the information regarding the aggregate annual revenues of SEN, a 50% owned unconsolidated subsidiary of Axcelis, combined with Axcelis' own revenues for the quarter, is useful to investors. SEN's ion implant products are covered by a license from Axcelis and therefore the combined revenue of the two companies indicates the full market penetration of Axcelis' technology. We use the worldwide revenue with SEN to understand our position vis-à-vis competitors in the ion implantation market. The combined revenues drive market share and are relevant to understanding our competitive position.

Gross Profit

Gross profit was 43.4% of revenue in the three months ended September 30, 2006, compared with gross profit of 40.9% of revenue in the three months ended September 30, 2005. The gross profit increase of 2.5 percentage points was the result of favorable systems volume, mix and deferrals (approximately 5.1 percentage points), favorable manufacturing expenses (approximately 2.6 percentage points) and higher SEN royalties (approximately 0.6 percentage points), offset by a lower percentage of total revenue of higher margin parts and service business (approximately 5.8 percentage points).

Gross profit was 41.4% of revenue in the nine months ended September 30, 2006, compared with gross profit of 41.6% of revenue in the nine months ended September 30, 2005. The gross profit decrease of 0.2 percentage points was the result of a lower percentage of total revenue of higher margin parts and service business (approximately 1.2 percentage points) and lower 100%

margin SEN royalties (approximately 0.6 percentage points) offset by favorable systems volume, mix and deferrals (approximately 1.0 percentage points) and favorable manufacturing expenses (approximately 0.6 percentage points).

Research and Development

Research and development expense was \$17.6 million in the three months ended September 30, 2006, a decrease of \$0.2 million, or 0.9%, compared with \$17.8 million in the three months ended September 30, 2005. The decrease was driven primarily by decreased project material, consulting and supplies (\$1.9 million) partially offset by increased payroll and payroll related expenses (\$1.8 million). Research and development expense was \$54.0 million in the nine months ended September 30, 2006, an increase of \$2.8 million, or 5.5%, compared with \$51.2 million in the nine months ended September 30, 2005. The increase was driven primarily by increased payroll and payroll related expenses (\$5.4 million) partially offset by decreased project material, consulting and supplies (\$1.4 million) and decreased amortization related to manufactured products used in research and development (\$1.1 million). Increases in overall research and development expenses in the nine months ended September 30, 2006 compared to the nine months ended September 30, 2005 are attributable principally to development efforts related to our single wafer Optima platform.

Selling

Selling expense was \$11.7 million in the three months ended September 30, 2006, an increase of \$1.0 million, or 9.3%, compared with \$10.7 million in the three months ended September 30, 2005. The increase was driven primarily by increased commission and variable compensation expense driven by higher systems revenue (\$1.0 million) offset by lower consulting services (\$0.3 million). Selling expense was \$33.9 million in the nine months ended September 30, 2006, a decrease of \$0.7 million, or 2.0%, compared with \$34.6 million in the nine months ended September 30, 2005. The decrease was driven primarily by lower payroll and payroll related expenses resulting from a reduction in headcount (\$1.0 million), lower consulting services (\$0.8 million) and decreased amortization expense (\$0.6 million) partially offset by higher commission and variable compensation expense driven by higher systems revenue (\$1.6 million) and increased travel expense (\$0.3 million).

General and Administrative

General and administrative expense was \$12.0 million in both the three months ended September 30, 2006 and 2005. The 2006 expense was driven primarily by lower costs associated with the consolidation of our Rockville, Maryland operations into our headquarters and manufacturing facility located in Beverly, Massachusetts (\$1.4 million) and lower professional fees (\$0.3 million) offset by increased variable compensation (\$1.3 million) and stock based compensation expense associated with the adoption of SFAS No. 123R (\$0.4 million). General and administrative expense was \$34.3 million in the nine months ended September 30, 2006, a decrease of \$0.7 million, or 2.1%, compared with \$35.0 million in the nine months ended September 30, 2005. The decrease was driven primarily by decreased costs associated with the consolidation of our Rockville, Maryland operations into our headquarters and manufacturing facility located in Beverly, Massachusetts (\$3.3 million), decreased payroll and payroll related expense (\$0.6 million), decreased insurance expense related to a workers' compensation premium settlement recorded in the first quarter of 2005 (\$0.4 million), lower professional fees (\$0.2 million) and decreased recruiting expense (\$0.3 million) partially offset by increased variable compensation (\$2.6 million) and stock based compensation expense associated with the adoption of SFAS No. 123R (\$1.5 million).

Restructuring

We recorded restructuring charges of \$0.1 million for both the three and nine months ended September 30, 2006. The charge recorded during the three months ended September 30, 2006 represents a reevaluation of the assumptions used in determining the fair value of certain lease obligations related to facilities abandoned in a previous restructuring. The revised assumptions, including lower estimates of expected sub-rental income over the remainder of the lease terms and expected lease termination costs associated with exiting a portion of the facilities, are based on management's evaluation of the commercial rental market. For the nine months ended September 30, 2006, the above mentioned charges are net of a credit of \$0.3 million to previously recognized restructuring charges relating primarily to the adjustment for severance and other one-time termination benefits associated with reduction in force actions and the consolidation of the Company's Rockville, Maryland operations into our headquarters and manufacturing facility located in Beverly, Massachusetts.

In total, we expect to incur approximately \$13.1 million in restructuring and general and administrative expenses related to these actions, of which \$12.9 million has been recognized in the statement of operations since the fourth quarter of 2004. We expect to incur approximately \$0.2 million in additional expense through December 2006. Of the total cost related to these actions, approximately \$12.4 million is expected to result in cash expenditures, of which \$11.3 million has been paid through September 30, 2006. Leases are expected to be paid over the remaining lease periods extending to 2007.

Changes in our restructuring liability are as follows:

	Severance	Retention	Leases	Total
	(in thousands)			
Balance at December 31, 2005	\$ 636	\$ 120	\$ 1,264	\$ 2,020
Restructuring expenses and adjustments	(287)	(51)	485	147
Cash payments	(349)	(69)	(883)	(1,301)
Balance at September 30, 2006	\$ —	\$ —	\$ 866	\$ 866

Restructuring charges of \$1.5 million and \$5.4 million for the three and nine months ended September 30, 2005, respectively, primarily consisted of severance and other one-time termination benefits that were paid related to reduction in force actions and the consolidation of our Rockville, Maryland operations into our headquarters and manufacturing facility located in Beverly, Massachusetts.

Other Income (Expense)

Equity income attributable to SEN was \$2.4 million and \$10.7 million for the three and nine months ended September 30, 2006, respectively. This is compared to equity income attributable to SEN of \$1.4 million and \$11.4 million for the three and nine months ended September 30, 2005, 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.

Interest income of \$2.3 million and \$5.8 million for the three and nine months ended September 30, 2006, respectively, primarily relates to interest earned on cash, cash equivalents and marketable securities. Interest income increased by \$0.7 million and \$2.0 million from the three and nine months ended September 30, 2005, respectively, due primarily to higher interest rates earned on invested balances.

Interest expense of \$2.6 million and \$6.7 million in the three and nine months ended September 30, 2006, respectively, primarily relates to our convertible subordinated notes. Interest expense increased by \$0.9 million and \$1.7 million from the three and nine months ended September 30, 2005, respectively, primarily as the result of our issuance of an additional \$24.2 million of convertible senior subordinated notes on May 2, 2006 and an effective annual yield to maturity of approximately 8% on the new convertible senior subordinated notes.

Income Taxes

Income tax expense was \$0.9 million and \$1.6 million in the three and nine months ended September 30, 2006, as compared to an income tax credit and income tax expense of \$(0.1) million and \$1.2 million in the three and nine months ended September 30, 2005. Income tax expense relates 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 nor have the ability to obtain tax benefit for such losses as discussed in footnote 9 to the consolidated financial statements. Accordingly, our effective income tax rate is not meaningful.

Adoption of SFAS No. 123R

As discussed in footnote 2 to the consolidated financial statements, we adopted SFAS No. 123 (revised 2004), Share-Based Payment ("SFAS No. 123R"), effective January 1, 2006 using the modified prospective transition method. Under that transition method, stock-based compensation expense recognized during the three and nine months ended September 30, 2006 includes: (a) stock options, restricted stock and restricted stock units granted prior to, but not yet vested, as of December 31, 2005, based on the grant-date fair value estimated in accordance with the original provisions of SFAS No. 123 "Accounting for Stock-Based Compensation" ("SFAS No. 123"), and (b) shares issued in offerings under the Employee Stock Purchase Plan with offering periods commencing and stock options, restricted stock and restricted stock units granted, subsequent to December 31, 2005, based on the grant-date fair value estimated using the Black-Scholes option valuation model in accordance with the provisions of SFAS No. 123R. Under the modified prospective transition method, results for prior periods are not restated.

Under SFAS No. 123R we recognized stock-based compensation expense of \$1.6 million and \$4.5 million for the three and nine months ended September 30, 2006, respectively. Adoption of SFAS No. 123R reduced income before income taxes and net income by approximately \$0.7 million and \$2.7 million (\$0.01 per basic and diluted share and \$0.03 per basic and diluted share) for the three and nine months ended September 30, 2006, respectively, as we would have recognized \$0.9 million and \$1.8 million of stock-based compensation expense for the three and nine months ended September 30, 2006, respectively, related to our outstanding and additional issuances of restricted stock and restricted stock units prior to the adoption of SFAS No. 123R.

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 we do not recognize the benefit of tax deductions in excess of

recognized compensation cost due to our net operating loss position, this change had no impact on our consolidated statement of cash flows for the three and nine months ended September 30, 2006.

Prior to January 1, 2006, as permitted under SFAS No. 123, as amended by SFAS No. 148 "Accounting for Stock-Based Compensation Transition and Disclosure," we elected to follow the provisions of APB No. 25 to account for stock-based awards to employees. Under APB No. 25, compensation expense with respect to stock option awards is not recognized if on the date the awards were granted the exercise price was equal to or greater than the market value of the underlying common shares. Historically, all stock options have been granted with an exercise price equal to the fair market value of the common stock on the date of grant. Accordingly, no compensation expense was recognized from option grants to employees and directors.

On October 24, 2005, the Compensation Committee of the Board of Directors resolved to accelerate the vesting of certain unvested and "out-of-the-money" stock options with exercise prices equal to or greater than \$10.00 per share. These options were previously awarded to our employees and other eligible participants, including executive officers, under our 2000 Stock Plan. Of the approximately 1.5 million accelerated options, 309,474 options, or 21.2%, were held by executive officers. The acceleration of vesting was effective for stock options outstanding as of December 15, 2005, at which date the closing price of our common stock was \$4.70 per share. The weighted average exercise price of the options subject to the acceleration was \$11.52 per share. The acceleration of the vesting of these options did not result in compensation expense based on generally accepted accounting principles. For pro forma disclosure requirements under SFAS No. 123, we recognized an incremental \$7.1 million of stock-based compensation expense for all options whose vesting was accelerated. As a result of this action we are not recognizing compensation expense of approximately the same amount associated with these options in operating results, upon effectiveness of the application of SFAS No. 123R.

For 2006, we have shifted our share-based payment programs from share options to principally restricted stock units.

Liquidity and Capital Resources

Cash, cash equivalents, and marketable securities at September 30, 2006 were \$182.0 million, compared with \$165.2 million at December 31, 2005. The \$16.8 million increase in cash and cash equivalents, and marketable securities was mainly attributable to \$24.2 million of proceeds from the issuance of convertible senior subordinated notes in May 2006 and \$2.9 million in proceeds from the exercise of stock options and stock purchases under the Employee Stock Purchase Plan offset by \$5.9 million in cash used by operations, driven primarily by increased inventories to accommodate volume increases and an increase in accounts receivable caused by the timing of systems shipments. We expect to generate positive cash flow for the year ended December 31, 2006.

Net working capital was \$277.6 million at September 30, 2006 compared with \$301.1 million at December 31, 2005. The \$23.5 million decrease in net working capital is attributable principally to the reclassification of \$74.2 million of our outstanding convertible debentures which mature in January 2007 to current liabilities partially offset by \$24.2 million of proceeds from the May 2006 issuance of additional convertible senior subordinated notes and the above mentioned increased in inventories and accounts receivable.

Capital expenditures were \$3.9 million and \$6.3 million for the nine months ended September 30, 2006 and 2005, respectively. We have no significant capital projects planned for 2006 and total capital expenditures for 2006 are projected to be less than \$8.0 million. Future capital expenditures beyond 2006 will depend on a number of factors, including the timing and rate of expansion of our business.

We have no off-balance sheet arrangements other than foreign exchange contracts used to hedge amounts receivable from SEN (\$1.6 million at September 30, 2006).

We had a \$50.0 million revolving credit facility that expired in October 2006. We did not borrow against the facility during its term. The purpose of the facility was to provide funds for working capital and general corporate purposes as required. To the extent that we had borrowings under the agreement, those borrowings would bear interest at the bank's base rate, as defined in the agreement, or LIBOR plus an applicable percentage. The credit facility was secured by substantially all of our assets (excluding our investment in SEN) and contained certain financial and other restrictive covenants including restrictions on the payment of dividends, minimum levels of tangible net worth, liquidity and profitability as well as maximum levels of indebtedness and capital spending. At September 30, 2006, we were in compliance with all covenants. We incurred an annual commitment fee based on an EBITDA formula outlined in the agreement applied to the full commitment. We are currently evaluating the need for a new credit facility.

As discussed in footnote 8 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. In addition, we issued an additional \$24.2 million of New Notes, resulting in an aggregate of \$75 million of New Notes outstanding. After this exchange, we have \$74.2 million of outstanding convertible debentures that mature in January 2007. We believe that our existing cash balances, expected positive cash flows for 2006 will allow us to repay the remaining debt when it matures without causing a liquidity issue.

We have outstanding standby letters of credit, bank guarantees and surety bonds in the amount of \$18.1 million to support certain operating lease obligations, workers' compensation insurance, and certain value added tax claims in Europe. At September 30, 2006, \$11.9 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 for at least the next twelve months.

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 November 1, 2006, we announced that net revenues (excluding SEN) for the fourth quarter of 2006 are forecast in the range of \$115 million to \$125 million. Gross margins are projected to be in the range of 38% to 40%. We expect results of operations will be in the range of \$0.11 to \$0.15 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 September 30, 2006, 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, 2005.

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 third quarter of 2006 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.

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Item 1A. Risk Factors.

As of September 30, 2006, 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, 2005.

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.

None.

Item 5. Other Information.

None.

Item 6. Exhibits.

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

Exhibit No	Description
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 January 23, 2002. Incorporated by reference to Exhibit 3.2 of the Company's Form 10-K for the year ended December 31, 2001, filed with the Commission on March 12, 2002.
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	Indenture between Axcelis Technologies, Inc. and State Street Bank and Trust Company, as Trustee, including the form of note, dated as of January 15, 2002. Incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed with the Commission on January 15, 2002.
4.2	Revolving Credit Agreement dated as of October 3, 2003 among the Company, ABN Amro Bank N.V. and the other lenders named therein, as amended by the First Amendment to Revolving Credit Agreement, dated as of May 3, 2004. Pursuant to Regulation S-K, Item 601(b)(4) (iii), this exhibit has not been filed, since the total amount of the facility does not exceed 10% of the Company's total assets at this time. The Company will furnish a copy of the Credit Agreement to the Commission on request.
4.3	Indenture between Axcelis Technologies, Inc. and U.S. Bank National Association, as Trustee, dated as of May 2, 2006. Incorporated by reference to Exhibit 4.12 to the Company's Current Report on Form 8-K filed with the Commission on May 4, 2006.
10.1	Modification of Executive Officer Base Compensation and Incentive Targets. Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K filed with the Commission on August 10, 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 November 6, 2006. 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 November 6, 2006. 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 November 6, 2006. 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 November 6, 2006. Filed herewith.

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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

By: Stephen G. Bassett, Executive Vice President and Chief
Financial Officer
Duly authorized officer and Principal Financial Officer

DATED: November 8, 2006

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: November 8, 2006

/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: November 8, 2006

/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 November 8, 2006.

/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 November 8, 2006.

/s/ Stephen G. Bassett

Stephen G. Bassett

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