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 March 31, 2004

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

For the transition period from

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)

Securities registered pursuant to Section 12(b) of the Act:

Title of class Name of each exchange on which registered
None None

Securities registered pursuant to Section 12(g) of the Act:
Common Stock, \$.001 par value
Preferred Share Purchase Rights

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 \boxtimes No o.

Indicate by check mark if whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Act). Yes ⊠ No o.

As of May 4, 2004 there were 99,408,939 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 OPERATIONS (In thousands, except per share amounts) (Unaudited)

	Three n	Three months ended March 31,		
Revenue	2004		2003	
Systems	\$ 91,750	6 \$	52,567	
Services	39,09		29,838	
Royalties	3,37		1,765	
	134,224		84,170	
Cost of revenue	84,04		54,730	
Gross profit	50,170		29,440	
	53,2			
Operating expenses				
Research & development	15,43'	7	16,176	
Selling	11,599		12,098	
General & administrative	11,09	5	10,443	
Amortization of intangible assets	613	2	365	
	38,743	3	39,082	
Income (loss) from operations	11,433	3	(9,642)	
Other income (expense)				
Equity income of Sumitomo Eaton Nova Corporation	5,569		3,195	
Interest income	29		531	
Interest expense	(1,67)		(1,540)	
Other—net	(59		(121)	
	3,602	2	2,065	
Income (loss) before income taxes	15,03		(7,577)	
Income taxes (credit)	1,454		(1,251)	
Net income (loss)	\$ 13,58	1 \$	(6,326)	
Basic net income (loss) per share	\$ 0.14		(0.06)	
Diluted net income (loss) per share	0.13	3	(0.06)	

Shares used in computing

Basic net income (loss) per share	99,208	98,280
Diluted net income (loss) per share	101,479	98,280

See accompanying Notes to Consolidated Financial Statements

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AXCELIS TECHNOLOGIES, INC. CONSOLIDATED BALANCE SHEETS (In thousands, except per share amounts) (Unaudited)

	 March 31, 2004		ecember 31, 2003
ASSETS			
Current assets			
Cash & cash equivalents	\$ 120,784	\$	93,249
Restricted cash	3,380		3,800
Short-term investments	_		14,972
Accounts receivable, net	104,118		73,751
Inventories	124,354		123,985
Other current assets	16,578		20,102
Total current assets	369,214		329,859
Property, plant & equipment, net	79,044		80,927
Investment in Sumitomo Eaton Nova Corporation	81,099		73,327
Goodwill	46,773		46,774
Intangible assets	19,507		20,119
Restricted cash, long-term portion	2,616		2,616
Other assets	30,847		31,973
	\$ 629,100	\$	585,595
LIABILITIES AND STOCKHOLDERS' EQUITY			
Current liabilities			
Accounts payable	\$ 49,125	\$	36,335
Accrued compensation	15,237		15,061
Warranty	16,498		17,000
Income taxes	8,003		7,109
Deferred revenue	26,172		14,441
Other current liabilities	9,060		11,925
Total current liabilities	 124,095		101,871
Long-term debt	125,000		125,000
Other long-term liabilities	7,756		5,474
Stockholders' equity			
Preferred stock	_		_
Common stock	100		99
Additional paid-in capital	453,993		451,389
Deferred compensation	(732)		(811)
Treasury stock	(1,218)		(1,218)
Retained earnings deficit	(87,926)		(101,507)
Accumulated other comprehensive income	8,032		5,298
	372,249		353,250
	\$ 629,100	\$	585,595

See accompanying Notes to Consolidated Financial Statements

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AXCELIS TECHNOLOGIES, INC. CONSOLIDATED STATEMENTS OF CASH FLOWS (In thousands) (Unaudited)

	Three months ended March 31,		ded	
		2004		2003
Operating activities				
Net income (loss)	\$	13,581	\$	(6,326)
Adjustments required to reconcile net income (loss) to net cash provided by (used for) operating activities				

Depreciation and amortization	5,001	6,008
Amortization of intangible assets	612	365
Stock compensation expense	79	51
Undistributed income of Sumitomo Eaton Nova Corporation	(5,569)	(3,195)
Changes in operating assets & liabilities		
Accounts receivable	(30,273)	(17,957)
Inventories	(349)	2,063
Other current assets	(2,779)	(3,013)
Accounts payable & other current liabilities	10,691	503
Deferred revenue	13,937	_
Income taxes	893	(1,156)
Other assets and liabilities	(1,212)	(5,369)
Other—net		(423)
Net cash provided by (used for) operating activities	4,612	(28,449)
Investing activities		
Proceeds from sale of short-term investments, net	14,972	29
Proceeds from sale of building	5,958	_
Expenditures for property, plant & equipment	(726)	(1,035)
Decrease in restricted cash	420	135
Other-net		22
Net cash provided by (used for) investing activities	20,624	(849)
Financing activities		
Proceeds from the exercise of stock options	664	_
Proceeds from employee stock purchase plan	1,152	1,131
Net cash provided by financing activities	1,816	1,131
Effect of exchange rate changes on cash	483	(94)
Net increase (decrease) in cash & cash equivalents	27,535	(28,261)
Cash & cash equivalents at beginning of period	93,249	146,298
Cash & cash equivalents at end of period	\$ 120,784	\$ 118,037

See accompanying Notes to Consolidated Financial Statements

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AXCELIS TECHNOLOGIES, INC. NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited) (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, rapid thermal processing and photostabilization 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, which is known as Sumitomo Eaton Nova Corporation, or SEN, licenses technology from the Company relating to the manufacture of ion implantation products and has exclusive rights to manufacture and sell these products to 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.

Certain prior year amounts have been reclassified to conform with the current year presentation.

The balance sheet at December 31, 2003 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, 2003.

Note 2. Revenue Recognition

The Company's revenue recognition policy involves significant judgment by management. As described in detail below, the Company considers a broad array of facts and circumstances in determining when to recognize revenue, including contractual obligations to the customer, the complexity of the customer's post delivery acceptance provisions, and the installation process. In the future, if the post delivery acceptance provisions and installation process become more complex or result in a materially lower rate of acceptance than we now experience, the Company may have to revise its revenue recognition policy, which could affect the timing of revenue recognition.

For revenue arrangements prior to July 1, 2003 Axcelis generally recognized the full sale price at the time of shipment to the customer. The costs of system installation at the customer's site were accrued at the time of shipment for installation and acceptance testing performance obligations incurred at the time of sale. The Company recognized the full sales price at the time of shipment as management believes that the customer's post delivery acceptance provisions and installation process were established to be routine, commercially inconsequential and perfunctory because the process was a replication of the

pre-shipment procedures. Also, customer payment terms typically provide that the majority of the purchase price is payable upon shipment. Terms do generally contain delayed payment arrangements for a portion of the purchase price, which are typically time-based.

In November 2002, the Financial Accounting Standards Board's Emerging Issues Task Force reached a consensus on Issue No. 00-21, "Accounting for Revenue Arrangements with Multiple Deliverables"

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("EITF 00-21"). This issue addresses determination of whether an arrangement involving more than one deliverable contains more than one unit of accounting and how the arrangement consideration should be measured and allocated to the separate units of accounting. EITF 00-21 became effective for revenue arrangements entered into in periods beginning after June 15, 2003. For revenue arrangements occurring on or after July 1, 2003, the Company has revised its revenue recognition policy to comply with the provisions of EITF 00-21.

In December 2003, the Securities and Exchange Commission ("SEC") issued Staff Accounting Bulletin No. 104 ("SAB 104"), "Revenue Recognition." SAB 104 supersedes Staff Accounting Bulletin No. 101, "Revenue Recognition in Financial Statements ("SAB 101"). SAB 104's primary purpose is to rescind accounting guidance contained in SAB 101 related to multiple element revenue arrangements, superseded as a result of the issuance of EITF 00-21. Additionally, SAB 104 rescinds the SEC's Revenue Recognition in Financial Statements Frequently Asked Questions and Answers ("the FAQ") issued with SAB 101 that had been codified in SEC Topic 13, Revenue Recognition. Selected portions of the FAQ have been incorporated into SAB 104. While the wording of SAB 104 has changed to reflect the issuance of EITF 00-21, the revenue recognition principles of SAB 101 remain largely unchanged by the issuance of SAB 104. As a result, the adoption of this pronouncement did not have any impact on the Company's consolidated financial statements.

Axcelis' revenue transactions include sales of systems under multiple element arrangements. Revenue under these arrangements is allocated to all elements, except systems, based upon their estimated fair market value. The amount of revenue allocated to systems is calculated on a residual method. Under this method, the total value of the arrangement is allocated first to the undelivered elements, with the residual amount being allocated to systems revenue. The value of the undelivered elements include (a) the greater of (i) the fair value of the installation or (ii) the portion of the sales price that will not be received until the installation is completed (the "retention") plus (b) the fair value of all other undelivered elements. The amount allocated to installation is based upon hourly rates and the estimated time to complete the service. The fair value of all other undelivered elements is based upon the price charged when these elements are sold separately. System revenue is generally recognized upon shipment provided title and risk of loss has passed to the customer, evidence of an arrangement exists, fees are contractually fixed or determinable, collectibility is reasonably assured through historical collection results and regular credit evaluations, and there are no uncertainties regarding customer acceptance. Revenue for installation services is recognized at the time of customer acceptance. Revenue for other elements is recognized at the time products are shipped or the related services are performed.

Management continues to believe recognition of systems revenue at the time of shipment is appropriate because the customer's post delivery acceptance provisions and installation process have been established to be routine, commercially inconsequential and perfunctory because the process is a replication of the pre-shipment procedures. The majority of Axcelis' systems are designed and tailored to meet the customer's specifications as outlined in the contract between the customer and Axcelis. To ensure that the customer's specifications are satisfied, per contract terms, many customers request that newer systems are to be tested at Axcelis' facilities prior to shipment, normally with the customer present, under conditions that substantially replicate the customer's production environment and the customer's criteria are confirmed to have been met. Customers for mature products generally do not require preshipment testing. Axcelis has never failed to successfully complete a system installation. Should an installation not be successfully completed, the contractual provisions do not provide for forfeiture, refund or other purchase price concession beyond those prescribed by the provisions of the Uniform Commercial Code applicable generally to such transactions.

In the small number of instances where Axcelis is unsure of meeting the customer's specifications upon shipment of the system, Axcelis will defer the recognition of systems revenue until written customer acceptance of the system. This deferral period is generally within twelve months of shipment.

Service revenue includes revenue from spare parts, equipment upgrades and maintenance services. Revenue related to maintenance and service contracts is recognized ratably over the duration of the contracts. Revenue related to time and material services is recorded when the services are performed. Revenue related

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to spare parts sales is recognized upon the later of shipment or when the title and risk of loss passes to the customer.

Note 3. Net Income (Loss) Per Share

Statement of Financial Accounting Standards ("SFAS") No. 128, "Earnings Per Share," requires two presentations of earnings per share, "basic" and "diluted." Basic earnings per share is computed by dividing income available to common stockholders (the numerator) by the weighted-average number of common shares outstanding (the denominator) for the period. The computation of diluted earnings per share is similar to basic earnings per share, except that the denominator is increased to include the number of additional common shares that would have been outstanding if the potentially dilutive common shares had been issued. Shares used in the calculation of basic earnings per share were 99,208 and 98,280 for the three months ended March 31, 2004 and 2003, respectively. Shares used in the calculation of diluted earnings per share were 101,479 and 98,280 for the three months ended March 31, 2004 and 2003, respectively.

The potentially dilutive common shares included in the diluted earnings per share calculations include all outstanding securities of the Company convertible into common stock, other than those which are anti-dilutive. The Company has excluded 6,250 of common stock equivalents attributable to conversion of the notes, computed using the if converted method, from the computation of diluted earnings per share for the three months ended March 31, 2004, because they are anti-dilutive. The Company has excluded 6,265 of common stock equivalents attributable to outstanding stock options, computed using the treasury stock method, and conversion of the notes, computed using the if converted method, from the computation of diluted earnings per share for the three months ended March 31, 2003, because they are anti-dilutive.

Note 4. Comprehensive Income (Loss)

The components of comprehensive income (loss) follow:

		Three months ended March 31,			
	_	2004 20			
Net income (loss)	\$	13,581	\$	(6,326)	
Foreign currency translation adjustments		2,734		397	
Comprehensive income (loss)	\$	16,315	\$	(5,929)	

Note 5. Inventories

The components of inventories follow:

	March 31, 2004		December 31, 2003	
Raw materials	\$	87,228	\$	84,773
Work-in-process		30,248		32,292
Finished goods		6,878		6,920
	\$	124,354	\$	123,985

Note 6. Restructuring

In 2003 the Company recorded a restructuring charge of \$4.9 million related to severance and other benefits associated with reduction in force actions, which reduced headcount by approximately 200 permanent positions. At March 31, 2004, \$4.4 million had been paid, of which \$0.4 million was paid in the

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first quarter of 2004. The remaining balance of \$0.5 million is expected to be paid by the end of the third quarter of 2004.

Note 7. Product Warranty and Installation

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. Prior to July 1, 2003, the Company estimated the warranty and product installation costs that may be incurred and recorded a liability in the amount of such costs at the time product revenue was recognized. Subsequent to July 1, 2003, in connection with the change in its revenue recognition policy (see Revenue Recognition), the Company no longer accrues the estimated costs of its installation but defers the revenue related to the greater of the fair value of the installation services or the amount of revenue that is contingent upon the completion of the installation services. Factors that affect the Company's determination of warranty and installation 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 warranty and installation liability and adjusts the amount as necessary.

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

	 2004		2003	
Balance at December 31	\$ 17,000	\$	16,625	
Warranties issued during the period	5,497		5,604	
Settlements made during the period	(5,999)		(7,866)	
Balance as of March 31	\$ 16,498	\$	14,363	

Note 8. Stock-Based Compensation

As permitted under Statement of Financial Accounting Standards (SFAS) No. 123, "Accounting for Stock-Based Compensation," as amended by SFAS No. 148, "Accounting for Stock-Based Compensation Transition and Disclosure," Axcelis has elected to follow the provisions of Accounting Principles Board (APB) No. 25, "Accounting for Stock Issued to Employees," 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 not less than the market value of the common shares.

As required by SFAS No. 123 the following pro forma information is presented as if Axcelis had accounted for stock-based awards to its employees granted subsequent to 1995 under the fair value method. The fair values of the options granted and shares purchased under the Employee Stock Purchase Plan have been estimated at the date of grant using the Black-Scholes options pricing model. The Black-Scholes options valuation model was developed for use in estimating the fair value of traded options that have no vesting restrictions and are fully transferable. In addition, option valuation models require the input of highly subjective assumptions, including the expected stock price volatility. Because Axcelis' options have characteristics significantly different from those of traded options, and because changes in the subjective input assumptions can materially affect the fair value estimate, in the opinion of management, the existing models do not necessarily provide a reliable single measure of the fair value of the Company's options.

For purposes of the following pro forma information, the estimated fair values of the options are assumed to be amortized to expense over the options' vesting periods.

Three mont	
2004	2003

Net income (loss)	\$ 13,581	\$	(6,326)
Deduct: Total stock-based employee compensation expense determined under		_	
fair value based method for all awards, net of related tax effects	(4,324)		(5,186)
Pro forma net income (loss)	\$ 9,257	\$	(11,512)
Net income (loss) per share			
Basic – as reported	\$ 0.14	\$	(0.06)
Basic – pro forma	0.09		(0.12)
Diluted – as reported	\$ 0.13	\$	(0.06)
Diluted – pro forma	0.09		(0.12)

Note 9. Deferred Income Taxes

The Company has deferred tax assets resulting from tax credit carryforwards, net operating losses and other deductible temporary differences, which are available to reduce taxable income in future periods. The aggregate amount of deferred tax assets before valuation allowance was \$91.6 million at December 31, 2003. 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.

As of March 31, 2003 and December 31, 2002, the Company's evaluation of the realization of these assets was based upon evidence of cumulative historical profitability and estimates of future taxable income. The Company was profitable in year 2000 but was not profitable in years 2001 and 2002. Projections of future earnings were based on revenue assumptions consistent with industry forecasts for the next three years along with the necessary operating expenses to support the Company's revenue assumptions. Based on these projections, the Company estimated that the loss carryforwards would be fully utilized within three years. During the second quarter of 2003, the Company entered a three year cumulative loss position and revised its projections of the amount and timing of future earnings. Due to these factors as well as the uncertainty of the amount and timing of profitability in future periods, the Company increased its valuation allowance to record a full valuation allowance for all future tax benefits during the second quarter of 2003.

The Company expects to record a full valuation allowance on future tax benefits until it can sustain an appropriate level of profitability and until such time, the Company would not expect to recognize any significant tax benefits in its future results of operations. However, going forward, if there is 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. Recent Accounting Pronouncements

In January 2003, the Financial Accounting Standards Board ("FASB") issued Interpretation No. 46 "Consolidation of Variable Interest Entities, an Interpretation of Accounting Research Bulletin No. 51" (FIN 46). FIN 46 provides a new consolidation model which determines control and consolidation based on potential variability in gains and losses. The provisions of FIN 46 are effective for enterprises with variable interests in variable interest entities created after January 31, 2003. For public companies with variable interest in variable interest entities created before February 1, 2003, the provisions of FIN 46 are to be applied no later than March 31, 2004. The Company has determined that its equity investment in SEN does not constitute a variable interest entity that would require consolidation. Accordingly, FIN 46 did not have any impact on the Company's consolidated financial statements.

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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 "Financial Condition, 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. The Company assumes no obligation to update these forward-looking statements to reflect actual results or changes in factors or assumptions affecting forward-looking statements.

Overview

We are a worldwide producer of ion implantation, dry strip, rapid thermal processing and photostabilization 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, with Sumitomo Heavy Industries, Ltd. in Japan. SEN licenses technology from the Company relating to the manufacture of ion implantation products and has exclusive rights to manufacture and sell these products to the territory of Japan. SEN is the leading producer of ion implantation equipment in Japan.

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, the Company evaluates its estimates, including those related to revenue recognition, income taxes, 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 Company believes the following accounting policies are critical in the portrayal of our financial condition and results of operations and require management's most significant judgments and estimates in the preparation of our consolidated financial statements.

Revenue Recognition

The Company's revenue recognition policy involves significant judgment by management. As described in detail below, the Company considers a broad array of facts and circumstances in determining when to recognize revenue, including contractual obligations to the customer, the complexity of the customer's post delivery acceptance provisions, and the installation process. In the future, if the post delivery acceptance provisions and installation process become more complex or result in a materially lower rate of acceptance than we now experience, the Company may have to revise its revenue recognition policy, which could affect the timing of revenue recognition.

For revenue arrangements prior to July 1, 2003 Axcelis generally recognized the full sale price at the time of shipment to the customer. The costs of system installation at the customer's site were accrued at the

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time of shipment for installation and acceptance testing performance obligations incurred at the time of sale. The Company recognized the full sales price at the time of shipment as management believes that the customer's post delivery acceptance provisions and installation process were established to be routine, commercially inconsequential and perfunctory because the process was a replication of the pre-shipment procedures. Also, customer payment terms typically provide that the majority of the purchase price is payable upon shipment. Terms do generally contain delayed payment arrangements for a portion of the purchase price, which are typically time-based.

In November 2002, the Financial Accounting Standards Board's Emerging Issues Task Force reached a consensus on Issue No. 00-21, "Accounting for Revenue Arrangements with Multiple Deliverables" ("EITF 00-21"). This issue addresses determination of whether an arrangement involving more than one deliverable contains more than one unit of accounting and how the arrangement consideration should be measured and allocated to the separate units of accounting. EITF 00-21 became effective for revenue arrangements entered into in periods beginning after June 15, 2003. For revenue arrangements occurring on or after July 1, 2003, the Company has revised its revenue recognition policy to comply with the provisions of EITF 00-21.

In December 2003, the Securities and Exchange Commission ("SEC") issued Staff Accounting Bulletin No. 104 ("SAB 104"), "Revenue Recognition." SAB 104 supersedes Staff Accounting Bulletin No. 101, "Revenue Recognition in Financial Statements ("SAB 101"). SAB 104's primary purpose is to rescind accounting guidance contained in SAB 101 related to multiple element revenue arrangements, superseded as a result of the issuance of EITF 00-21. Additionally, SAB 104 rescinds the SEC's Revenue Recognition in Financial Statements Frequently Asked Questions and Answers ("the FAQ") issued with SAB 101 that had been codified in SEC Topic 13, Revenue Recognition. Selected portions of the FAQ have been incorporated into SAB 104. While the wording of SAB 104 has changed to reflect the issuance of EITF 00-21, the revenue recognition principles of SAB 101 remain largely unchanged by the issuance of SAB 104. As a result, the adoption of this pronouncement did not have any impact on the Company's consolidated financial statements.

Axcelis' revenue transactions include sales of systems under multiple element arrangements. Revenue under these arrangements is allocated to all elements, except systems, based upon their estimated fair market value. The amount of revenue allocated to systems is calculated on a residual method. Under this method, the total value of the arrangement is allocated first to the undelivered elements, with the residual amount being allocated to systems revenue. The value of the undelivered elements include (a) the greater of (i) the fair value of the installation or (ii) the portion of the sales price that will not be received until the installation is completed (the "retention") plus (b) the fair value of all other undelivered elements. The amount allocated to installation is based upon hourly rates and the estimated time to complete the service. The fair value of all other undelivered elements is based upon the price charged when these elements are sold separately. System revenue is generally recognized upon shipment provided title and risk of loss has passed to the customer, evidence of an arrangement exists, fees are contractually fixed or determinable, collectibility is reasonably assured through historical collection results and regular credit evaluations, and there are no uncertainties regarding customer acceptance. Revenue for installation services is recognized at the time of customer acceptance. Revenue for other elements is recognized at the time products are shipped or the related services are performed.

Management continues to believe recognition of systems revenue at the time of shipment is appropriate because the customer's post delivery acceptance provisions and installation process have been established to be routine, commercially inconsequential and perfunctory because the process is a replication of the pre-shipment procedures. The majority of Axcelis' systems are designed and tailored to meet the customer's specifications as outlined in the contract between the customer and Axcelis. To ensure that the customer's specifications are satisfied, per contract terms, many customers request that newer systems are to be tested at Axcelis' facilities prior to shipment, normally with the customer present, under conditions that substantially replicate the customer's production environment and the customer's criteria are confirmed to have been met. Customers for mature products generally do not require preshipment testing. Axcelis has never failed to successfully complete a system installation. Should an installation not be successfully completed, the contractual provisions do not provide for forfeiture, refund or other purchase price concession

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beyond those prescribed by the provisions of the Uniform Commercial Code applicable generally to such transactions.

In the small number of instances where Axcelis is unsure of meeting the customer's specifications upon shipment of the system, Axcelis will defer the recognition of systems revenue until written customer acceptance of the system. This deferral period is generally within twelve months of shipment.

Service revenue includes revenue from spare parts, equipment upgrades and maintenance services. Revenue related to maintenance and service contracts is recognized ratably over the duration of the contracts. Revenue related to time and material services is recorded when the services are performed. Revenue related to spare parts sales is recognized upon the later of shipment or when the title and risk of loss passes to the customer.

The Company has deferred tax assets resulting from tax credit carryforwards, net operating losses and other deductible temporary differences, which are available to reduce taxable income in future periods. The aggregate amount of deferred tax assets before valuation allowance was \$91.6 million at December 31, 2003. 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.

As of March 31, 2003 and December 31, 2002, the Company's evaluation of the realization of these assets was based upon evidence of cumulative historical profitability and estimates of future taxable income. The Company was profitable in year 2000 but was not profitable in years 2001 and 2002. Projections of future earnings were based on revenue assumptions consistent with industry forecasts for the next three years along with the necessary operating expenses to support the Company's revenue assumptions. Based on these projections, the Company estimated that the loss carryforwards would be fully utilized within three years. During the second quarter of 2003, the Company entered a three year cumulative loss position and revised its projections of the amount and timing of future earnings. Due to these factors as well as the uncertainty of the amount and timing of profitability in future periods, the Company increased its valuation allowance to record a full valuation allowance for all future tax benefits during the second quarter of 2003.

The Company expects to record a full valuation allowance on future tax benefits until it can sustain an appropriate level of profitability and until such time, the Company would not expect to recognize any significant tax benefits in its future results of operations. However, going forward, if there is 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.

Goodwill and Other Intangible Assets

We account for our acquisitions under the purchase method of accounting pursuant to Statement of Financial Accounting Standard (SFAS) No. 141, "Business Combinations." Goodwill represents the excess of cost over net assets, including all identifiable intangible assets of acquired businesses that are consolidated. Pursuant to SFAS No. 142, "Goodwill and Other Intangible Assets," goodwill is not amortized. Other intangible assets that are separable from goodwill and have determinable useful lives are valued separately and amortized over their useful lives. Such other identifiable intangible assets consist mainly of developed

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technology and customer related intangibles and are generally amortized over periods ranging from five to ten years. We have determined that all of our intangible assets have finite lives.

The Company performs an annual impairment review of our goodwill. Impairment reviews may be performed more frequently if there are other indicators of impairment. The annual impairment test consists of determining the fair market value of the business unit through a discounted cash flow analysis. Management's best judgments are employed in determining future market conditions that impact this discounted cash flow analysis. As a result of our annual review conducted as of December 31, 2003, we determined that there was no impairment of our goodwill. If we determine through the impairment review process that goodwill has been impaired, we would record the impairment charge in our statement of operations as a non-cash charge to earnings.

We assess the impairment of intangible assets, other than goodwill, whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors we consider important that could trigger an impairment review include the following:

- a significant underperformance relative to expected operating results;
- a significant change in the manner of our use of the acquired asset or the strategy for our overall business;
- a significant negative industry or economic trend; and
- our market capitalization relative to net book value.

As part of this assessment, we review the expected future undiscounted cash flows to be generated by the assets. When we determine that the carrying value of intangibles may not be recoverable, we measure any impairment based on a projected discounted cash flow method using a discount rate determined by our management to be commensurate with the risk inherent in our current business model.

Accounts Receivable—Allowance for Doubtful Accounts

Axcelis records an allowance for doubtful accounts for estimated losses resulting from the inability of its customers to make required payments. If the financial condition of Axcelis' customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be necessary.

Inventory—Allowance for Excess and Obsolescence

Axcelis records an allowance for estimated excess and obsolete inventory. The allowance is determined using management's assumptions of future materials usage, based on estimates of future demand and market conditions. If actual market conditions become less favorable than those projected by management, additional inventory write-downs may be required.

Product Warranty and Installation Costs

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. Prior to July 1, 2003, the Company estimated the costs that may be incurred under its standard warranty and product installation obligation and recorded a liability in the amount of such costs at the time product revenue was recognized. Subsequent to July 1, 2003, in connection with the change in its revenue recognition policy (see Revenue Recognition), the Company no longer accrues the estimated costs of its installation but defers the revenue related to the

Results of Operations

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

	Three months end March 31,	led
	2004	2003
Revenue		
Systems	68.4%	62.5%
Services	29.1	35.4
Royalties	2.5	2.1
	100.0	100.0
Gross profit	37.4	35.0
Other costs and expenses		
Research & development	11.5	19.2
Selling	8.6	14.4
General & administrative	8.3	12.4
Amortization of intangible assets	0.5	0.4
Income (loss) from operations	8.5	(11.5)
Other income (expense)		
Equity income of Sumitomo Eaton Nova Corporation	4.2	3.8
Interest income	0.2	0.6
Interest expense	(1.3)	(1.8)
Other—net	(0.4)	(0.1)
Income (loss) before income taxes	11.2	(9.0)
Income taxes (credit)	1.1	(1.5)
Net income (loss)	10.1%	(7.5)%

Revenue

Revenue from systems were \$91.8 million, or 68.4% of revenue for the first quarter of 2004, compared with \$52.6 million, or 62.5% of revenue for the first quarter of 2003. The increase in sales of systems was primarily attributable to strong market demand resulting from high levels of chip production by our semiconductor manufacturing customers.

Service revenue, which include spare parts, equipment upgrades and maintenance services, were \$39.1 million, or 29.1% of revenue for the first quarter of 2004, compared with \$29.8 million, or 35.4% of revenue, for the first quarter of 2003. The demand for our services increased primarily as a result of improved capacity utilization by our customers.

Royalties were \$3.4 million, or 2.5% of revenue, in the first quarter of 2004, compared with \$1.8 million, or 2.1% of revenue, in the first quarter of 2003. Royalties increased by \$1.6 million in the first quarter of 2004 compared with the first quarter of 2003 due to higher SEN sales volume reflecting growth in demand generated by increasing capacity utilization of Japanese semiconductor manufacturers.

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Revenue from sales of ion implantation products and services accounted for \$115.2 million, or 85.9%, of total revenue in the first quarter of 2004, compared with \$67.1 million, or 79.8%, of total revenue in the first quarter of 2003. Sales of ion implant products and services increased \$48.1 million, or 71.7%, in the first quarter of 2004 compared with the first quarter of 2003.

Revenue from sales of other products and services, including dry strip products, photostabilization products and rapid thermal processing systems, accounted for \$19 million, or 14.1%, of total revenue in the first quarter of 2004, compared with \$17 million, or 20.2%, of total revenue in the first quarter of 2003. Sales of other products and services increased \$2 million, or 11.8%, in the first quarter of 2004 compared with the first quarter of 2003.

Gross Profit

Gross profit was 37.4% of revenue in the first quarter of 2004 compared with gross profit of 35.0% of revenue in the first quarter of 2003. The increase in gross profit in the first quarter of 2004 is principally due to increased volume and the related increased absorption of fixed manufacturing costs, lower warranty costs associated with the sale of a more mature product base, and lower material costs. The gross margin in the first quarter of 2004 was impacted negatively by approximately 1.5% due to a one-time buy-resale transaction with SEN for product sales outside of Japan.

Research and Development

Research and development expense was \$15.4 million in 2004, a decrease of \$0.8 million, or 4.9%, compared with \$16.2 million in the first quarter of 2003 primarily due to approximately 18% lower headcount in 2004 compared with 2003, offset in part by planned salary increases that went into effect in the beginning of the quarter. The Company expects spending levels for research and development of \$15 million to \$16 million per quarter for 2004. Quarterly fluctuations are attributable principally to the timing of material usage.

Selling

Selling expense was \$11.6 million in the first quarter of 2004, a decrease of \$0.5 million, or 4.1%, compared with \$12.1 million in the first quarter of 2003 primarily due to approximately 13% lower headcount in 2004 compared with 2003, offset in part by planned salary increases that went into effect in the beginning of the quarter.

General and Administrative

General and administrative expense was \$11.1 million in the first quarter of 2004, an increase of \$0.7 million, or 6.7%, compared with \$10.4 million in the first quarter of 2003 primarily due to planned salary increases that went into effect in the beginning of the quarter, offset in part by approximately 9% lower headcount in 2004 compared with 2003.

Amortization of Intangible Assets

Amortization of intangible assets was \$0.6 million in the first quarter of 2004, an increase of \$0.2 million, or 50%, compared with \$0.4 million in the first quarter of 2003. The increase in amortization is due to the incremental amortization of intangible assets arising from the July 2003 acquisition of Matrix Integrated Systems, Inc.

Other Income (Expense)

Total other income was \$3.6 million in the first quarter of 2004, an increase or \$1.5 million compared with \$2.1 million in the first quarter of 2003. Other income consists primarily of equity income from SEN, which increased by \$2.4 million due to higher SEN sales volume and profitability.

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Income Taxes (Credit)

In the first quarter of 2004, the Company recorded income tax expense of \$1.5 million. The Company has significant net operating losses and, as a result, does not pay significant income taxes in the U.S. and certain foreign tax jurisdictions. In other foreign tax jurisdictions the Company is a taxpayer. Income tax expense in the first quarter of 2004 represents the estimated annual effective tax rate based on earnings in certain foreign tax jurisdictions and the estimated alternative minimum tax in the U.S.

In the first quarter of 2003, the Company recorded an income tax credit of \$1.3 million.

Liquidity and Capital Resources

Cash, cash equivalents and short-term investments at March 31, 2004 were \$120.8 million compared with \$108.2 million at December 31, 2003. The \$12.6 million increase in cash, cash equivalents and short-term investments is mainly attributable to \$4.6 million in cash generated by operations, \$6 million in proceeds from the sale of a building located in Beverly, Massachusetts in January 2004, and \$1.8 million in proceeds from the exercise of stock options and the Employee Stock Purchase Plan.

Net working capital was \$245.1 million at March 31, 2004 compared with \$228.0 million at December 31, 2003. The \$17.1 increase in net working capital is attributable principally to the Company's results of operations.

Capital expenditures were \$0.7 million and \$1.0 million for the quarters ended March 31, 2004 and March 31, 2003, respectively. The Company has no significant capital projects planned for 2004 and total capital expenditures are projected to be at or below depreciation expense. Future capital expenditures beyond 2004 will depend on a number of factors, including the timing and rate of the expansion of our business.

The Company has no off-balance sheet arrangements.

In October 2003 the Company renegotiated its \$50 million revolving credit facility to extend the maturity to October 2006. The purpose of the facility is to provide funds for working capital and general corporate purposes as required. To the extent that the Company has 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 Company currently has no plans to borrow against the facility but may use the facility to support letters of credit in the future. The credit facility is secured by substantially all of the Company's assets and contains certain financial and other restrictive covenants including minimum levels of tangible net worth, liquidity, profitability and indebtedness as well as maximum levels of capital spending. At March 31, 2004 the Company did not meet a required liquidity threshold to allow it to borrow against the facility. The Company estimates that it will satisfy this liquidity threshold by the second quarter of 2004 and that borrowings pursuant to the terms of the underlying credit agreement will be available if needed.

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.

The Company has standby letters of credit of approximately \$3.4 million to support certain operating lease obligations, workers' compensation insurance, and certain value added tax claims in Europe. In addition, the Company has guarantees of approximately \$5.2 million related to value added tax refunds in Europe. Of these standby letters of credit and guarantees, \$6 million is cash collateralized at March 31, 2004 that is reflected as restricted cash on the balance sheet.

The Company's performance for the quarter ended March 31, 2004 was directly related to the expanding levels of capital expenditures by semiconductor manufacturers, especially manufacturers opening new or expanding existing fabrication facilities, as well as operational improvements implemented by the Company in recent quarters. 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. Currently, management, along with industry and economic analysts, believe that semiconductor manufacturers are looking to expand capacity and increase capital spending over the next twelve months. Based on bookings received in the first quarter of 2004, the Company believes it will realize benefits in terms of increased revenues and improved operating performance from this anticipated upturn in capital spending during 2004.

On April 27, 2004, the Company announced its expectation that its revenues for the second quarter of 2004 will be in the range of \$147 to \$152 million. Gross margins are projected to be between 42% and 44%. Net income is expected to be \$24 to \$28 million, the equivalent of \$0.23 to \$0.27 per diluted share. The Company also expects to generate \$15 to \$20 million of cash during the second quarter.

It is difficult for us to predict our customers' capital spending plans, which can change very quickly. In addition, at our current sales level, each sale, or failure to make a sale, could have a material effect on us in a particular quarter.

Risk Factors

Some of the matters discussed in this filing contain forward-looking statements regarding future events that are subject to risks and uncertainties. The following important factors, among others, could cause actual results to differ materially from those described by such statements. These factors include, but are not limited to: the cyclical nature of the semiconductor industry, our ability to keep pace with rapid technological changes in semiconductor manufacturing processes, the highly competitive nature of the semiconductor equipment industry, quarterly fluctuations in operating results attributable to the timing and amount of orders for our products and services, dependence on SEN (our Japanese joint venture) for access to the Japanese semiconductor equipment market, and those risk factors contained in the section titled "Outlook" and Exhibit 99.1 of this Form 10-Q, which is incorporated herein by reference. If any of those risk factors actually occurs, our business, financial condition and results of operations could be seriously harmed and the trading price of our common stock could decline.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

A discussion of market risk exposures is included Exhibit 99.1 filed herewith. There has been no material change in the information provided as of the end of 2003.

Item 4. Controls and Procedures

(a) **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 the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) as of the end of the period covered by this quarterly report. Based on this evaluation, our principal executive officer and principal financial officer concluded that these disclosure controls and procedures are effective and designed to ensure that the information required to be disclosed in our reports filed or submitted under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the requisite time periods.

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(b) **Changes in Internal Controls.** Except as set forth below, there was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended) identified in connection with the evaluation of our internal control performed during our first quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

In response to the reportable conditions related to certain inventory and revenue recognition transactions disclosed in the Company's Annual Report on Form 10-K for the year ended December 31, 2003, the Company has implemented certain enhancements to internal controls and procedures over revenue recognition and certain inventory accounting processes. The Company plans to further enhance controls and procedures in these areas and expects that these actions will be completed by the end of the second quarter of 2004.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

None

ITEM 2. CHANGES IN SECURITIES, USE OF PROCEEDS AND ISSUER PURCHASES OF EQUITY SECURITIES

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

DATED: May 7, 2004

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ITEM 6. EXHIBITS AND REPORTS ON FORM 8-K

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 from 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 from 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 from 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 the Company and State Street Bank and Trust Company, as Trustee, including the form of note, dated as of January 15, 2002. Incorporated by reference from Exhibit 4.1 to the Company's Report on Form 8-K filed with the Commission on January 15, 2002.
31.1	Certification of the Chief Executive Officer under Exchange Act Rule 13a-14(a)/15d-14(a) (Section 302 of the Sarbanes-Oxley Act), dated May 6, 2004. Filed herewith.
31.2	Certification of the Chief Financial Officer under Exchange Act Rule 13a-14(a)/15d-14(a) (Section 302 of the Sarbanes-Oxley Act), dated May 6, 2004. Filed herewith.
32.1	Certification of the Chief 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 May 6, 2004. Filed herewith.
32.2	Certification of the Chief 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 May 6, 2004. Filed herewith.
99.1	Factors Affecting Future Operating Results for the Form 10-Q for the period ended March 31, 2004. Filed herewith.
b) Reports or	n Form 8-K
` '	nt Report on Form 8-K was filed with the Securities and Exchange Commission on January 28, 2004 relating to the Company's

announcement of earnings for its year ended December 31, 2003.

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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

Stephen G. Bassett, Chief Financial Officer Duly authorized officer and Principal financial Officer

CERTIFICATION

of the Principle Executive Officer of Axelis Technologies, Inc. under Section 302 of the Sarbanes-Oxley Act of 2002

I, Mary G. Puma, certify that:

- 1. I have reviewed this 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 registrant as of, and for, the periods presented in this report;
- 4. The registrant'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)) for the registrant 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 registrant, 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) Evaluated the effectiveness of the registrant'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
- c) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant'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 registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant'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

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which are reasonably likely to adversely affect the registrant'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: May 6, 2004

By: /s/ Mary G. Puma

Mary G. Puma President and Chief Executive Officer

CERTIFICATION

of the Principle Financial Officer of Axelis Technologies, Inc. under Section 302 of the Sarbanes-Oxley Act of 2002

I, Stephen G. Bassett, certify that:

- 1. I have reviewed this 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 registrant as of, and for, the periods presented in this report;
- 4. The registrant'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)) for the registrant 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 registrant, 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) Evaluated the effectiveness of the registrant'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
- c) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant'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 registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant'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

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which are reasonably likely to adversely affect the registrant'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: May 6, 2004

By: /s/ Stephen G. Bassett

Stephen G. Bassett Chief Financial Officer

AXCELIS TECHNOLOGIES, INC.

Certification of the Chief 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 certify, 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 have executed this Certification as of May 6, 2004.

/s/ Mary G. Puma

Mary G. Puma Chief Executive Officer of Axcelis Technologies, Inc.

AXCELIS TECHNOLOGIES, INC.

Certification of the Chief 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 certify, 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 have executed this Certification as of May 6, 2004.

/s/ Stephen G. Bassett

Stephen G. Bassett Chief Financial Officer of Axcelis Technologies, Inc.

AXCELIS TECHNOLOGIES, INC.

Form 10-Q for the quarter ended March 31, 2004

FACTORS AFFECTING FUTURE OPERATING RESULTS

From time to time, we may make forward-looking public statements, such as statements concerning our then expected future revenues or earnings or concerning the prospects for our markets or our product development, projected plans, performance, order procurement as well as other estimates relating to future operations. Forward-looking statements may be in reports filed under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), in registration statements filed under the Securities Act of 1933, as amended (the "Securities Act"), in press releases or informal statements made with the approval of an authorized executive officer. The words or phrases "will likely result," "are expected to," "will continue," "is anticipated," "estimate," "project," or similar expressions are intended to identify "forward-looking statements" within the meaning of Section 21E of the Exchange Act and Section 27A of the Securities Act, as enacted by the Private Securities Litigation Reform Act of 1995.

We wish to caution you not to place undue reliance on these forward-looking statements which speak only as of the date on which they are made. In addition, we wish to advise you that the factors listed below, as well as other factors that we may or may not have not currently identified, could affect our financial or other performance and could cause our actual results for future periods to differ materially from any opinions or statements expressed with respect to future periods or events in any current statement.

We will not undertake and specifically decline any obligation to publicly release revisions to these forward-looking statements to reflect either circumstances after the date of the statements or the occurrence of events which may cause us to re-evaluate our forward-looking statements.

In connection with the "safe harbor" provisions of the Private Securities Litigation Reform Act, we are hereby filing cautionary statements identifying important factors that could cause our actual results to differ materially from those projected in forward-looking statements made by us or on our behalf

If semiconductor manufacturers do not make sufficient capital expenditures, our sales and profitability will be harmed.

We anticipate that a significant portion of our new orders will depend upon demand from semiconductor manufacturers who build or expand fabrication facilities. If the rate of construction or expansion of fabrication facilities declines, demand for our systems will decline, reducing our revenues. This would also hurt our profitability, because our continued investments in engineering, research and development and marketing necessary to develop new products and to maintain extensive customer service and support capabilities limit our ability to reduce expenses in proportion to declining sales.

A number of factors may cause semiconductor manufacturers to make reduced capital expenditures, including the following.

Our quarterly financial results may fluctuate significantly and may fall short of anticipated levels; forecasting quarterly revenues and profitability is complex and may be inaccurate.

We derive most of our revenues from the sale of a relatively small number of expensive products to a small number of customers. The list prices on these products range from \$200,000 to over \$4.0 million. At our current sales level, each sale, or failure to make a sale, could have a material effect on us in a particular quarter. Our lengthy sales cycle, coupled with customers' competing capital budget considerations, make the timing of customer orders uneven and difficult to predict. In a given quarter, a number of factors can adversely affect our revenues and results, including changes in our product mix, increased fixed expenses per unit due to reductions in the number of products manufactured, and higher fixed costs due to increased levels of research and development and expansion of our worldwide sales and marketing organization. Our gross margins also may be affected by the introduction of new products. We typically become more efficient in producing our products as they mature. For example, our gross margins in 2001, 2002 and 2003 were adversely affected in part as a result of the increased proportion of systems sold to process 300 mm wafers.

In addition, our backlog at the beginning of a quarter typically does not include all orders required to achieve our sales objectives for that quarter and is not a reliable indicator of our future sales. As a result, our net sales and operating results for a quarter depend on our shipping orders as scheduled during that quarter as well as obtaining new orders for products to be shipped in that same quarter. Any delay in, or cancellation of, scheduled shipments or in shipments from new orders could materially and adversely affect our financial results. Due to the foregoing factors, we believe that period-to-period comparisons of our operating results should not be relied upon as an indicator of our future performance.

The SEC's Staff Accounting Bulletin 101 and the Financial Accounting Standard Board's Emerging Issues Tax Force 00-21, as incorporated in the SEC's Staff Accounting Bulletin 104, addressing revenue recognition have added additional complexity in forecasting quarterly revenues and profitability. Orders for our products may contain multiple delivery elements that result in revenue deferral under generally accepted accounting principles. Management typically provides financial forecasts for the subsequent quarter in the earnings release for each quarter. These forecasts are based on reasonable assumptions of shipment timing and contract terms, but in some cases, at the time the forecast is made the final customer terms may not have been agreed and documented, so the level of revenues recognizable in a particular quarter may vary from the forecast.

Downturns in the semiconductor industry may further reduce demand for our products, harming our sales and profitability.

The semiconductor business is highly cyclical and the industry was in a severe down cycle from early 2001 through the third quarter of 2003. It is anticipated that such a downturn will return after several more robust quarters. Such downturns reduce demand for new or expanded fabrication facilities. Any continuing weakness or future downturns or slowdowns in the industry may adversely affect our financial condition.

From time to time, inventory buildups in the semiconductor industry, resulting in part from the down cycle, produce an oversupply of semiconductors. This will cause semiconductor manufacturers to revise capital spending plans, resulting in reduced demand for capital equipment such as our products. If an oversupply is not reduced by increasing demand from the various electronics industries that use semiconductors, which we cannot accurately predict, our sales and profitability will be harmed.

Industry consolidation and outsourcing of semiconductor manufacturing may reduce the number of our potential customers, harming our revenues.

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, which will reduce the number of our potential customers. This increased concentration of our customers potentially makes our revenues more volatile as a higher percentages of our total revenues are tied to a particular customer's buying decisions.

If we fail to develop and introduce reliable new or enhanced products and services that meet the needs of semiconductor manufacturers, our results will suffer.

Rapid technological changes in semiconductor manufacturing processes require us to respond quickly to changing customer requirements. Our future success will depend in part upon our ability to develop, manufacture and successfully introduce new systems and product lines with improved capabilities and to continue to enhance existing products, including products that process 300 millimeter wafers. This will depend upon a variety of factors, including new product selection, timely and efficient completion of product design and development and of manufacturing and assembly processes, product performance in the field and effective sales and marketing. In particular:

- We must develop the technical specifications of competitive new systems, or enhancements to our existing systems, and manufacture and ship these systems or enhancements in volume in a timely manner.
- We will need to accurately predict the schedule on which our customers will be ready to transition to new products, in order to accurately
 forecast demand for new products while managing the transition from older products.
- We will need to effectively manage product reliability or quality problems that often exist with new systems, in order to avoid reduced orders, higher manufacturing costs, delays in acceptance and payment and additional service and warranty expenses.
- Our new products must be accepted in the marketplace.

Our failure to meet any of these requirements will have a material adverse effect on our operating results and profitability.

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If we fail to compete successfully in the highly competitive semiconductor equipment industry, our sales and profitability will decline.

The market for semiconductor manufacturing equipment is highly competitive and includes companies with substantially greater financial, engineering, manufacturing, marketing and customer service and support resources than we have that may be better positioned to compete successfully in the industry. In addition, there are smaller, emerging semiconductor equipment companies that provide innovative systems with technology that may have performance advantages over our systems. Competitors are expected to continue to improve the design and performance of their existing products and processes and to introduce new products and processes with improved price and performance characteristics. If we are unable to improve or introduce competing products when demanded by the markets, our business will be harmed. In addition, if competitors enter into strategic relationships with leading semiconductor manufacturers covering products similar to those sold or being developed by us, our ability to sell products to those manufacturers may be adversely affected.

We have been dependent on sales to a limited number of large customers; the loss of any of these customers or any reduction in orders from them could materially affect our sales.

Historically, we have sold a significant proportion of our products and services to a limited number of fabricators of semiconductor products. For example, in 2003, our customer, Samsung accounted for 12% of our net sales and Micron represented 10.4% of net sales. Also, in 2003, our top ten customers accounted for 65% of our net sales. None of our customers has entered into a long-term agreement requiring it to purchase our products. Although the composition of the group comprising our largest customers has varied from year to year, the loss of a significant customer or any reduction or delays in orders from any significant customer, including reductions or delays due to customer departures from recent buying patterns, or market, economic or competitive conditions in the semiconductor industry, could adversely affect us. The ongoing consolidation of semiconductor manufacturers may also increase the harmful effect of losing a significant customer.

We access the important Japanese market for ion implant through a joint venture which we do not control.

We own 50% of the equity of a Japanese corporation called Sumitomo Eaton Nova or SEN, to which we have granted an exclusive license to manufacture and sell ion implanters in Japan. Sumitomo Heavy Industries, Ltd., a Japanese manufacturer of industrial machinery and ships, owns the remaining 50% of the equity. Neither Axcelis nor Sumitomo has the right to buy out the other's interest in SEN and the SEN joint venture is perpetual. Our joint venture agreement with Sumitomo gives both owners veto rights, so that neither of us alone can effectively control SEN. SEN's business is subject to the same risks as our business. Royalties and income from SEN have been a substantial contribution to our earnings, and a substantial decline in SEN's sales and income from operations could have a material adverse effect on our net income. 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 balance of ownership, it is possible that the SEN Board may be unable to reach consensus from time to time.

In December 2003, each of SEN and Axcelis elected to trigger a provision requiring a one year negotiation in good faith on modifications to the license agreement. If modifications are not agreed to, the license agreement will continue 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 its interest. Axcelis does not expect to terminate the SEN license agreement.

From time to time, we have allowed SEN to sell implanters outside of Japan. We allow these sales when the customer requests SEN products. Such requests tend to occur when SEN customers participate, as joint venturers or technical advisors, in fabrication facilities outside of Japan. In those cases, the financial benefit to Axcelis from the sale of a SEN implanter is less than the financial benefit of a sale of an Axcelis implanter, but our primary goal to satisfy our customer with the product of their choice. When these sales are allowed, we act as exclusive agent for SEN to manage the terms of the sales and to ensure that they are consistent with our global product and customer strategies. We receive commissions from SEN on these extra-territorial sales and assume most of the post-installation warranty responsibility.

A decline in sales of our products and services to customers outside the United States would hurt our business and profits.

We are substantially dependent on sales of our products and services to customers outside the United States. We anticipate that international sales will continue to account for a significant portion of our net sales. Because of our dependence upon international sales, our results and prospects may be adversely affected by a number of factors, including:

- unexpected changes in laws or regulations resulting in more burdensome governmental controls, tariffs, restrictions, embargoes or export license requirements;
- difficulties in obtaining required export licenses;
- volatility in currency exchange rates;
- political and economic instability, particularly in Asia;
- difficulties in accounts receivable collections;
- extended payment terms beyond those customarily offered in the United States;
- difficulties in managing distributors or representatives outside the United States;
- difficulties in staffing and managing foreign subsidiary and branch operations; and
- potentially adverse tax consequences.

Making more sales denominated in foreign currencies to counteract the strong dollar may expose us to additional risks that could hurt our results.

Substantially all of our sales to date have been denominated in U.S. dollars. Our products become less price competitive in countries with currencies that are declining in value in comparison to the dollar. This could cause us to lose sales or force us to lower our prices, which would reduce our gross margins. Our equity income and royalty income from SEN are denominated in Japanese yen, which exposes us to some risk of currency fluctuations. If it becomes necessary for us to make more sales denominated in foreign currencies to counteract the strong dollar, we will become more exposed to these risks.

We may not be able to maintain and expand our business if we are not able to retain, hire and integrate additional qualified personnel.

Our business depends on our ability to attract and retain qualified, experienced employees. There is substantial competition for experienced engineering, technical, financial, sales and marketing personnel

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in our industry. In particular, we must attract and retain highly skilled design and process engineers. Competition for such personnel is intense, particularly in the areas where we are based, including the Boston metropolitan area and the Rockville, Maryland area, as well as in other locations around the world. If we are unable to retain our existing key personnel, or attract and retain additional qualified personnel, we may from time to time experience levels of staffing inadequate to develop, manufacture and market our products and perform services for our customers. As a result, our growth could be limited or we could fail to meet our delivery commitments or experience deterioration in service levels or decreased customer satisfaction, all of which could adversely affect our financial results and cause the value of our notes and stock to decline.

Our dependence upon a limited number of suppliers for many components and sub-assemblies could result in increased costs or delays in manufacture and sales of our products.

We rely to a substantial extent on outside vendors to manufacture many of the components and subassemblies of our products. We obtain many of these components and sub-assemblies from either a sole source or a limited group of suppliers. Because of our reliance on outside vendors generally, and on a limited group of suppliers in particular, we may be unable to obtain an adequate supply of required components on a timely basis, on price and other terms acceptable to us, or at all.

In addition, we often quote prices to our customers and accept customer orders for our products before purchasing components and subassemblies from our suppliers. If our suppliers increase the cost of components or subassemblies, we may not have alternative sources of supply and may not be able to raise the price of our products to cover all or part of the increased cost of components.

The manufacture of some of these components and subassemblies is an extremely complex process and requires long lead times. As a result, we have in the past and may in the future experience delays or shortages. If we are unable to obtain adequate and timely deliveries of our required components or subassemblies, we may have to seek alternative sources of supply or manufacture these components internally. This could delay our ability to manufacture or to ship our systems on a timely basis, causing us to lose sales, incur additional costs, delay new product introductions and suffer harm to our reputation.

In certain circumstances, we may need additional capital.

Our capital requirements may vary widely from quarter to quarter, depending on, among other things, capital expenditures, fluctuations in our operating results, financing activities, acquisitions and investments and inventory and receivables management. We believe that our available cash, our credit line and our future cash flow from operations will be sufficient to satisfy our working capital, capital expenditure and research and development requirements for the foreseeable future. This, of course, depends on the accuracy of our assumptions about levels of sales and expenses, and a number of factors, including those described in these "Risk Factors," could cause us to require additional capital from external sources. In addition, in the future, we may require or choose

to obtain additional debt or equity financing in order to finance acquisitions or other investments in our business. Depending on market conditions, future equity financings may not be possible on attractive terms and would be dilutive to the existing holders of our common stock and convertible notes. Our existing credit agreement contains restrictive covenants and future debt financings could involve additional restrictive covenants, all of which may limit the manner in which we conduct our business.

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We seek to protect our proprietary technology through patents and trade secrets which may be vulnerable to efforts by competitors to challenge or design around, potentially reducing our market share.

We rely on a combination of patents, copyrights, trademark and trade secret laws, non-disclosure agreements and other intellectual property protection methods to protect our proprietary technology. Despite our efforts to protect our intellectual property, our competitors may be able to legitimately ascertain the non-patented proprietary technology embedded in our systems. If this occurs, we may not be able to prevent their use of this technology. Our means of protecting our proprietary rights may not be adequate and our patents may not be sufficiently broad to prevent others from using technology that is similar to or the same as our technology. In addition, patents issued to us have been, or might be challenged, and might be invalidated or circumvented and any rights granted under our patents may not provide adequate protection to us. Our competitors may independently develop similar technology, duplicate features of our products or design around patents that may be issued to us. As a result of these threats to our proprietary technology, we may have to resort to costly litigation to enforce or defend our intellectual property rights. Finally, all patents expire after a period of time (in the U.S., patents expire 20 years from the date of filing of the patent application). Our market share could be negatively impacted by the expiration of a patent which had created a barrier for our competitors, but the impact will be offset by both the challenges of late market entry by a competitor and by other continuing patent protection which may apply to an affected product.

We might face intellectual property infringement claims or patent disputes that may be costly to resolve and, if resolved against us, could be very costly to us and prevent us from making and selling our systems.

From time to time, claims and proceedings have been or may be asserted against us relative to patent validity or infringement matters. Our involvement in any patent dispute or other intellectual property dispute or action to protect trade secrets, even if the claims are without merit, could be very expensive to defend and could divert the attention of our management. Adverse determinations in any litigation could subject us to significant liabilities to third parties, require us to seek costly licenses from third parties and prevent us from manufacturing and selling our systems. Any of these situations could have a material adverse effect on us and cause the value of our common stock to decline.