RUDOLPH TECHNOLOGIES INC
Form 10-Q
August 09, 2006

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-Q

(MARK ONE)

[X] QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended: June 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 No. 000-27965

RUDOLPH TECHNOLOGIES, INC.

(Exact name of registrant as specified in its charter)

DELAWARE22-3531208 **(State or Other Jurisdiction of(I.R.S. Employer Incorporation or Organization)Identification Number)**

One Rudolph Road, PO Box 1000

Flanders, New Jersey 07836

(Address of principal executive offices, including zip code)

(973) 691-1300

(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 [X] 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 Securities Exchange Act of 1934). Large accelerated filer [ ] Accelerated filer [X] 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 [X]

The number of outstanding shares of the Registrant's Common Stock on July 28, 2006 was 28,818,043.

PART I FINANCIAL INFORMATION

PART II OTHER INFORMATION

PART I FINANCIAL INFORMATION

Item 1. Financial Statements

RUDOLPH TECHNOLOGIES, INC.

CONDENSED CONSOLIDATED BALANCE SHEETS

(In Thousands)

(Unaudited)

	June 30, 2006	December 31, 2005
ASSETS		
Current assets:		
Cash and cash equivalents	$ 29,932	$ 37,986
Marketable securities	44,435	42,821
Accounts receivable, net	72,658	26,046
Inventories	57,174	30,073
Prepaid expenses and other current assets	6,324	3,093
Total current assets	210,523	140,019
Property, plant and equipment, net	16,715	8,599
Goodwill	146,256	13,245
Identifiable intangible assets, net	39,639	8,628
Other assets	3,149	9,510
Total assets	$ 416,282	$ 180,001
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and accrued liabilities	$ 22,917	$ 9,952

Other current liabilities	16,697	4,773
Total current liabilities	39,614	14,725
Non-current liabilities	4,226	742
Total liabilities	43,840	15,467
Commitments and contingencies		
Stockholders' equity:		
Common stock	29	17
Additional paid-in capital	357,626	147,278
Accumulated other comprehensive loss	(1,649)	(928)
Retained earnings	16,436	20,191
Unearned compensation	-	(2,024)
Total stockholders' equity	372,442	164,534
Total liabilities and stockholders' equity	$ 416,282	$ 180,001

The accompanying notes are an integral part of these financial statements.

RUDOLPH TECHNOLOGIES, INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(In Thousands, Except Share and Per Share Data)

(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2006	2005	2006	2005
Revenues	$ 56,692	$ 21,385	$ 88,540	$ 44,442
Cost of revenues	27,001	11,266	49,600	23,561
Gross profit	29,691	10,119	38,940	20,881
Operating expenses:				
Research and development	7,325	3,005	12,635	6,376
In-process research and development	-	-	9,900	-
Selling, general and administrative	9,046	4,836	16,032	10,158
Amortization	1,125	219	1,797	438
Total operating expenses	17,496	8,060	40,364	16,972
Operating income (loss)	12,195	2,059	(1,424)	3,909
Interest income and other, net	801	417	1,513	841
Income before income taxes	12,996	2,476	89	4,750
Provision for income taxes	5,005	615	3,844	1,140
Net income (loss)	$ 7,991	$ 1,861	$ (3,755)	$ 3,610
Earnings (loss) per share:				
Basic	$ 0.28	$ 0.11	$ (0.15)	$ 0.21
Diluted	$ 0.28	$ 0.11	$ (0.15)	$ 0.21
Weighted average shares outstanding:				
Basic	28,637,507	16,896,480	25,620,417	16,868,991
Diluted	28,943,447	16,928,358	25,620,417	16,925,316

The accompanying notes are an integral part of these financial statements.

RUDOLPH TECHNOLOGIES, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(In Thousands)

(Unaudited)

	Six Months Ended June 30, 2006	Six Months Ended June 30, 2005
Cash flows from operating activities:		
Net income (loss)	$ (3,755)	$ 3,610
Adjustments to reconcile net income (loss) to net cash and cash equivalents provided by (used in) operating activities:		
Amortization	1,797	438
Depreciation	1,940	845
In-process research and development	9,900	-
Foreign currency exchange loss	95	580
Net loss on sale of marketable securities	128	151
Share-based compensation	586	218
Tax benefit for sale of shares through employee stock plans	-	113
Provision for doubtful accounts and inventory valuation	3,325	190
Deferred income taxes	263	(64)
Decrease (increase) in assets excluding effects of business combinations:		
Accounts receivable	(32,022)	(8,215)
Inventories	(4,903)	2,819
Prepaid expenses and other assets	(672)	296
Increase (decrease) in liabilities excluding effects of business combinations:		
Accounts payable and accrued liabilities	4,513	(808)
Income tax payable	1,609	(583)
Deferred revenue	5,529	918
Other current liabilities	782	1,525
Non-current liabilities	(43)	-
Net cash and cash equivalents provided by (used in) operating activities	(10,928)	2,033
Cash flows from investing activities:		
Purchases of marketable securities	(39,827)	(22,788)
Proceeds from sales of marketable securities	51,405	34,721
Purchases of property, plant and equipment	(3,860)	(505)
Capitalized software	(831)	(479)
Purchase of business, net of cash acquired	(11,955)	(300)
Net cash provided by (used in) investing activities	(5,068)	10,649
Cash flows from financing activities:		
Proceeds from sales of shares through employee stock plans	6,986	1,210
Tax benefit for sale of shares through employee stock plans	856	-
Net cash provided by financing activities	7,842	1,210
Effect of exchange rate changes on cash	100	(123)
Net increase (decrease) in cash and cash equivalents	(8,054)	13,769
Cash and cash equivalents at beginning of period	37,986	12,627
Cash and cash equivalents at end of period	$ 29,932	$ 26,396

The accompanying notes are an integral part of these financial statements.

RUDOLPH TECHNOLOGIES, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(In Thousands, Except Share and Per Share Data)

(Unaudited)

NOTE 1. Basis of Presentation

The accompanying interim unaudited condensed consolidated financial statements have been prepared by Rudolph Technologies, Inc. (the "Company" or "Rudolph") and in the opinion of management reflect all adjustments, consisting only of normal recurring accruals, necessary for their fair presentation in accordance with accounting principles generally accepted in the United States of America. Preparing financial statements requires management to make estimates and assumptions that affect amounts reported in the financial statements and accompanying notes. Actual amounts could differ materially from those amounts. The interim results for the three and six month periods ended June 30, 2006 are not necessarily indicative of results to be expected for the entire year. This interim financial information should be read in conjunction with the financial statements and the notes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2005.

NOTE 2. Business Combinations

On February 15, 2006, the Company completed its merger with August Technology Corporation. August Technology is a world-class provider of automated defect detection and product characterization systems for microelectronic device manufacturers. Their systems provide manufacturers with information that enables process-enhancing decisions, ultimately lowering manufacturing costs and decreasing time-to-market. They have traditionally provided systems to address the automated inspection needs of the early stages of the final manufacturing or back-end of the microelectronic device manufacturing process. In addition, they have introduced new products for edge and backside inspection systems for advanced macro defect detection primarily in the front-end of the wafer manufacturing process. When used in conjunction with one another these systems allow a manufacturer to inspect the top, edge and back of a wafer's surface.

The merger was approved by August Technology's shareholders, and the issuance of shares of Rudolph common stock was approved by Rudolph's stockholders, at their respective special meetings held that day. The combined company will continue to be known as Rudolph Technologies, Inc. The aggregate purchase price was $247,154, consisting of $37,200 in cash 11,298,265 shares of common stock valued at $197,833, the fair value of assumed August Technology options of $6,608 and transaction costs of $5,512. The measurement date was determined to be the date that the merger was consummated since the aggregate amount of cash and the number of shares to be distributed in the merger was not determinable until that date. The market price used to value the Rudolph shares issued as consideration for August Technology was $17.51, which represents the average of the closing market price of Rudolph's common stock for the three day period ended February 15, 2006.

As of the acquisition date, the Company's revenue recognition policy incorporates acquired activities. Revenue is recognized when there is persuasive evidence of an arrangement, delivery has occurred, the sales price is fixed or determinable, and collection of the related receivable is reasonably assured. Certain sales of the Company's products are sold and accounted for as multiple element arrangements, consisting primarily of the sale of the product, software, installation, and training services. The Company generally recognizes product revenue upon shipment. When customer acceptance is subjective and not obtained prior to shipment, the Company defers product revenue until such time as positive affirmation of acceptance has been obtained from the customer. Customer acceptance is generally based on the Company's products meeting published performance specifications. The amount of revenue allocated to the shipment of products is done on a residual method basis. Under this method, the total arrangement value is allocated first to undelivered contract elements, based on their fair values, with the remainder being allocated to product revenue. The fair value of installation and training services is based upon billable hourly rates and the estimated time to complete the service. Revenue related to undelivered installation services is deferred until such time as installation is completed at the customer's site. Revenue related to training services is recognized ratably over the training period. Revenue from software license fees is recognized upon shipment if collection of the resulting receivable is probable, the fee is fixed or determinable, and vendor-specific objective evidence exists to allocate a portion of the total fee to any undelivered elements of the arrangement. Such undelivered elements in these arrangements typically consist of follow-on support. If vendor-specific objective evidence does not exist for the undelivered elements of the arrangement, all revenue is deferred and recognized ratably over the support period.

The transaction was accounted for using the purchase method of accounting for business combinations and, accordingly, the results of operations of August Technology have been included in the Company's consolidated financial statements since the date of acquisition. The following table summarizes the unaudited estimated fair value of the assets acquired and liabilities assumed at the date of acquisition:

Cash	$	29,893
Marketable securities		13,418
Accounts receivable		14,432
Inventories		25,581
Property, plant and equipment		6,075
Goodwill		133,011
Identifiable intangible assets		42,700
Other assets		1,585
Accounts payable and accrued liabilities		(12,661)
Deferred taxes		(5,619)
Other liabilities		(1,261)
	$	247,154

The above purchase price has been preliminarily allocated based on estimates of the fair values of assets acquired and liabilities assumed. The final valuation of net assets is expected to be completed during 2006, but no later than one year from the acquisition date. The fair value of inventories includes a step-up of $4,614, of which, $2,963 was recognized in cost of revenues for the six months ended June 30, 2006. In connection with the merger, at the merger date, the Company began formulating a plan to exit or restructure certain activities. The Company has not completed this analysis, but has recorded initial liabilities of $224 in connection with the preliminary plan. As the Company finalizes its plans to exit or restructure activities, it may record additional liabilities for, among other things, severance and severance related costs, which would also increase the goodwill recorded.

Of the $42,700 of acquired identifiable intangible assets, the following table reflects the allocation of the acquired identifiable intangible assets and related preliminary estimates of useful lives:

Developed technology	$	25,000	9 years estimated useful life
Customer relationships		4,400	9 years estimated useful life
Trade names		3,400	13.6 years weighted average estimated useful life
In-process research and development		9,900	
	$	42,700	

The developed technology is separated into front-end and back-end automated macro defect inspection, and analysis software and is utilized in the manufacturing of semiconductor chips. This technology is designed to automate inspection processes that are performed by the human eye through the use of imaging technology and high-speed computers. The process of forming transistors directly on silicon wafers is commonly referred to as the "front-end" process. The front-end products provide high-speed automated inspection of chips, cracks and other defects that occur during the chip manufacturing process. The acquired company's product offering in this area is the AXi series, which is an automated defect inspection system.

Once the various semiconductor devices have been created they must be interconnected to form the desired electrical circuits. This "back-end" process involves creating metal interconnecting wires that are separated by insulating materials. The back-end products provide inspection of the chips to detect defects created during the back-end manufacturing process. The back-end products include the NSX series, which are flexible automated wafer and die defect inspection systems for high-speed, consistent, reliable defect detection.

The software technology is used to analyze and process the data provided during front-end and back-end inspection. The software provides rapid classification of defects as well as providing possible correlation among them by creating a database of prior issues and defects. This aids the Company's customers in making adjustments to the manufacturing processes to help reduce the number of defects and enable consistent performance among separate machines. The software products include fabrication-wide data management software, and tool specific defect review and process analysis software.

Paragraph 39 of Statement of Financial Accounting Standards (SFAS) No. 141 provides guidance concerning the recognition of value associated with intangible assets and refers to an illustrative list in Appendix A of SFAS No. 141 of commonly identifiable intangible assets that meet the criteria for recognition as assets apart from goodwill. This list includes technology-based intangible assets, such as patented technology and computer software. The developed technology acquired represents proprietary know-how that was technologically feasible as of the acquisition date and is supported by patents.

A useful life of nine years was assigned for each of the front-end, back-end and software developed technologies. The basis for assigning these lives was derived from a number of factors including the valuation of the developed technology, the expected life cycle of the technology, and the remaining lives of the underlying patents. The valuation, which was performed by an independent third party valuation firm, was based on projected cash flows for each of the developed technologies. After the ninth year, the cash flows generated from the developed technologies decline to a nominal amount. The life cycle of the technology is in its early stages of development due to advancements in computers and camera technology, and has only recently begun to achieve semiconductor industry acceptance. As such, risk of technology obsolescence is minimized until the later stages of the life cycle. In evaluating the patents underlying the acquired technology, the remaining lives of the patents range from 12 to 15 years. The Company determined that the decline in cash flows to a nominal amount was a principle factor in determining the life of the technology. As such, the Company believes that a life of nine years assigned to the developed technology is appropriate.

Approximately $9.9 million of the acquired identifiable intangible assets represents the estimated fair value of in-process research and development (IPRD) projects that had not yet reached technological feasibility and had no alternative future use. Accordingly, this amount was immediately expensed in the Consolidated Statement of Operations at the acquisition date. The purchased in-process technology projects are comprised of next generation automated macro defect inspection systems with enhanced defect capture capabilities and software projects which improves the tools' capabilities. The defect inspection and software projects had a value assigned to them of $6.9 million and $3.0 million, respectively. The estimated cost to complete the projects at the date of acquisition was $260 thousand and $880 thousand, for the defect inspection and software projects, respectively.

The estimated fair value of these projects was determined using an income approach, then discounting the forecasted cash flows directly related to the IPRD. The discount rate was derived after giving consideration to the additional risks associated with an unproved technology.

Identifiable intangible assets include developed technology, customer relationships, trade names and IPRD. The Company is amortizing the intangible assets of $32,800 on a straight-line basis over their estimated remaining useful lives. The amount allocated to IPRD of $9,900 is related to defect inspection technology. Such amount was charged to expense at the acquisition date as the IPRD had not reached technological feasibility and had no alternative future use.

The excess of the purchase price over the fair value of the net assets acquired and liabilities assumed was allocated to goodwill, none of which is deductible for tax purposes. All remaining and future acquired goodwill is subject to an impairment test each year using a fair-value-based approach pursuant to SFAS No. 142.

Factors that contribute to a purchase price that results in recognition of goodwill include:

* the combination of August Technology's defect inspection technology with Rudolph's MetaPULSE <R> metrology products is expected to improve copper metrology process controls and should allow the combined company to offer a more comprehensive and better integrated set of tools to its customers and enhance its ability to compete more effectively;

* the combination of August Technology's defect inspection experience and technology with Rudolph's complementary defect inspection experience and technology should allow the combined company to offer its customers a more comprehensive suite of tools more quickly, thus enhancing the company's ability to compete more effectively;

* consolidation of territorial sales activities and common marketing programs;

* redeployment or elimination of duplicative functional and facilities costs;

* reduction of customer service costs as a result of the consolidation of the companies' global customer service and regional support networks;

* creation of a larger sales and service organization worldwide, the expansion of the companies' dedicated sales teams and a higher profile with customers, which is expected to present greater opportunities for potential revenue enhancements by marketing and cross-selling the products of the combined company;

* avoidance of incurring certain costs that the companies would expect to incur on a stand-alone basis in furtherance of their growth strategies.

* the combined company is expected to have greater prominence within the financial community, providing improved access to capital;

* the direct sales and service presence of the combined company in the important Japanese semiconductor manufacturing market (where Rudolph has three offices with over 20 employees) may increase opportunities for product orders;

* the combined experience, financial resources, development expertise, size and breadth of product offerings of the combined company may allow it to respond more quickly and effectively to technological change, increased consolidation and industry demands; and

* the ability of the assembled workforce to continue to deliver value-added solutions and develop new products and industry leading production technologies that solve customer problems.

The following unaudited pro forma consolidated financial information presents the combined results of operations of the Company and August Technology as if the acquisition occurred at the beginning of the periods presented, after giving effect to certain adjustments, including amortization expense, merger costs and inventory step-up. Due to the non-recurring nature of the $9,900 IPRD charge and inventory step-up, these amounts have not been included in the unaudited pro forma consolidated financial information. The unaudited pro forma consolidated financial information does not necessarily reflect the results of operations that would have occurred had the acquisition been completed as of the dates indicated or of the results that may be obtained in the future.

	Three Months Ended June 30,		**Six Months Ended June 30,**	
	2006	**2005**	**2006**	**2005**
Revenues	$ 56,692	$ 38,134	$ 101,064	$ 76,227
Net income	$ 8,296	$ (1,512)	$ 8,602	$ (2,025)
Earnings per share:				
Basic	$ 0.29	$ (0.05)	$ 0.30	$ (0.07)
Diluted	$ 0.29	$ (0.05)	$ 0.30	$ (0.07)

NOTE 3. Share-Based Compensation

Prior to January 1, 2006, the Company's share-based compensation plans were accounted for in accordance with Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees" ("APB 25") and related interpretations. Under this method, no compensation expense for stock options was recognized as long as the exercise price equaled or exceeded the market price of the underlying stock on the date of the grant. Compensation cost for restricted stock units issued to employees and directors was based upon the market value on the date grant. Such compensation costs were charged to unearned compensation in stockholders' equity and amortized to expense over the requisite service period. The Company elected the disclosure-only alternative permitted under SFAS No. 123, "Accounting for Stock-Based Compensation" ("SFAS 123"), as amended by SFAS No. 148, "Accounting for Stock-Based Compensation - Transition and Disclosure" ("SFAS 148"), for fixed stock-based awards to employees.

On January 1, 2006, the Company adopted SFAS No. 123 (revised 2004), "Share-Based Payment" ("SFAS 123R") using the modified prospective method, which requires measurement of compensation cost for all stock awards at fair value on date of grant and recognition of compensation cost over the service period for awards expected to vest. The fair value of stock options is determined using the Black-Scholes valuation model, which is consistent with the Company's valuation techniques previously utilized for options in footnote disclosures required under SFAS 123, as amended by SFAS 148. Such value is recognized as expense over the service period, net of estimated forfeitures. The estimation of stock awards that will ultimately vest requires significant judgment. The Company considers many factors when estimating expected forfeitures, including types of awards, employee class, and historical experience. Actual results, and future changes in estimates, may differ substantially from the Company's current estimates. Prior to the adoption of SFAS 123R, the Company recorded forfeitures as incurred. Upon adoption of SFAS 123R, compensation expense for all share-based payments includes an estimate for forfeitures and is recognized over the expected term of the share-based awards using the straight-line method. The impact of this change on prior period compensation cost was immaterial. Additionally, the unearned compensation of $2,024 at the SFAS 123R adoption date relating to previous restricted stock unit grants was offset against additional paid-in capital. Results for prior periods have not been restated.

The following table reflects share-based compensation expense by type of award recorded during the three and six month periods ended June 30, 2006 in accordance with SFAS 123R:

	Three Months Ended June 30, 2006	**Six Months Ended June 30, 2006**
Share-based compensation expense:		
Stock options	$ 195	$ 283
Restricted stock units	86	303
Total share-based compensation	281	586
Tax effect on share-based compensation	109	226
Net effect on net income (loss)	$ 172	$ 360
Tax effect on:		
Cash flows from financing activities	$ 631	$ 856
Effect on earnings (loss) per share - basic	$ (0.01)	$ (0.01)
Effect on earnings (loss) per share - diluted	$ (0.01)	$ (0.01)

Valuation Assumptions for Stock Options

For the three month period ended June 30, 2006, there were 2,000 stock options granted. For the six month period ended June 30, 2006, there were 5,000 stock options granted and 368,711 unvested options and 1,049,156 vested options assumed from the August Technology merger. There were no stock options granted in the three month period ended June 30, 2005 and there were 1,000 stock options granted in the six month period ended June 30, 2005. The fair value of each option was estimated on the date of grant for the granted options and the acquisition date for the unvested options assumed from the August Technology acquisition, using the Black-Scholes option-pricing model with the following assumptions:

	Three Months Ended **June 30,**		Six Months Ended **June 30,**	
	2006	**2005**	**2006**	**2005**
Expected life (years)	3.7	-	3.4	5.0
Expected volatility	55.1%	-	55.1%	50.9%
Expected dividend yield	0.0%	-	0.0%	0.0%
Risk-free interest rate	5.0%	-	4.6%	3.9%
Weighted average fair value per option	$ 7.70	-	$ 8.99	$ 7.55

Share-Based Compensation Plans

The Company's share-based compensation plans are intended to attract and retain employees and to provide an incentive for them to assist the Company to achieve long-range performance goals and to enable them to participate in long-term growth of the Company. The Company settles stock option exercises with newly issued common shares.

In 1996, the Company adopted the 1996 Stock Option Plan (the "Option Plan"). Under the Option Plan, the Company was authorized to grant options to purchase up to 1,069,902 shares of common stock. All of the outstanding options became 100% vested upon the initial public offering of the Company on November 12, 1999. As of June 30, 2006, there were no shares of common stock reserved for future grants under the Option Plan.

The Company established the 1999 Stock Plan (the "1999 Plan") effective August 31, 1999. The 1999 Plan provides for the grant of 2,000,000 stock options and stock purchase rights, subject to annual increases, to employees, directors and consultants at an exercise price equal to or greater than the fair market value of the common stock on the date of grant. Options granted under the 1999 Plan typically vest over a five-year period and expire ten years from the date of grant. Restricted stock units granted under the plan typically vest over a five-year period for employees and one year for directors. As of June 30, 2006, there were 889,838 shares of common stock reserved for future grants under the

1999 Plan.

The Company assumed the August Technology Corporation 1997 Stock Plan (the "1997 Plan") at the merger date. Stock options granted under the 1997 Plan vest over periods that range from immediate to five-years and expire in either seven or ten years from the date of grant. As of June 30, 2006, there were 644,015 shares of common stock reserved for future grants under the 1997 Plan.

Stock Option Activity

The following table summarized stock option activity for the six month period ended June 30, 2006:

	Shares	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value
Outstanding at January 1, 2006	2,513,954	$ 22.67		
Granted	5,000	$ 16.72		
Assumed from August Technology	1,417,867	$ 14.02		
Exercised	(537,213)	$ 12.73		
Expired	(75,790)	$ 22.83		
Forfeited	(29,612)	$ 13.49		
Outstanding at June 30, 2006	3,294,206	$ 20.64	5.6	$ 2,121
Vested or expected to vest at June 30, 2006	3,225,105	$ 20.78	5.6	$ 2,045
Exercisable at June 30, 2006	3,010,528	$ 21.29	5.3	$ 1,787

The total intrinsic value of the stock options exercised during the six months ended June 30, 2006 was $2,706.

The options outstanding and exercisable at June 30, 2006 were in the following exercise price ranges:

	Options Outstanding			Options Exercisable	
Range of Exercise Prices	Shares	Weighted Average Remaining Contractual Life (years)	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
$0.56 - $14.62	698,151	5.9	$ 11.49	554,699	$ 11.31
$14.69 - $16.00	757,873	5.0	$ 15.70	649,081	$ 15.80
$16.11 - $21.13	695,526	6.3	$ 17.65	664,092	$ 17.70
$21.56 - $36.75	661,070	6.1	$ 24.92	661,070	$ 24.92
$37.31 - $50.75	481,586	4.5	$ 40.11	481,586	$ 40.11
$0.56 - $50.75	3,294,206	5.6	$ 20.64	3,010,528	$ 21.29

As of June 30, 2006, there was $1,865 of total unrecognized compensation cost related to stock options granted under the plans. That cost is expected to be recognized over a weighted average period of 3.2 years.

The Company recognized a tax benefit of $487 for stock options exercised during the six month period ended June 30, 2006, which were assumed in the purchase price of the August Technology merger. This benefit reduced goodwill.

Restricted Stock Unit Activity

A summary of the Company's nonvested restricted stock unit activity with respect to the six month period ended June 30, 2006 follows:

	Number of Shares	Weighted Average Grant Date Fair Value
Nonvested at December 31, 2005	161,000	$ 16.60

Granted	199,450	$ 16.88
Vested	(26,800)	$ 16.83
Forfeited	(3,000)	$ 16.51
Nonvested at June 30, 2006	330,650	$ 16.90

As of June 30, 2006, there was $3,136 of total unrecognized compensation cost related to restricted stock units granted under the plans. That cost is expected to be recognized over a weighted average period of 4.0 years.

As discussed above, results for prior periods have not been restated to reflect the effects of implementing SFAS 123R. The following table illustrates the effect on net income and earnings per share if the Company had applied the fair value recognition provisions of SFAS 123, as amended, to stock options granted under the Company's stock-based employee compensation plans for the three and six month periods ended June 30, 2005. For purposes of this pro forma disclosure, the value of the stock options was estimated using a Black-Scholes option-pricing formula and amortized to expense over the options' vesting periods, with option forfeitures accounted for as they occurred:

	Three Months Ended June 30, 2005	Six Months Ended June 30, 2005
Net income, as reported	$ 1,861	$ 3,610
Add: Share-based employee compensation expense included in reported net income, net of related income tax benefits	88	136
Deduct: Total share-based employee compensation expense determined under fair value based method, net of related income tax benefits	7,429	8,661
Pro forma net loss	$ (5,480)	$ (4,915)
Net income (loss) per share:		
Basic-as reported	$ 0.11	$ 0.21
Basic-pro forma	$ (0.32)	$ (0.29)
Diluted-as reported	$ 0.11	$ 0.21
Diluted-pro forma	$ (0.32)	$ (0.29)

Employee Stock Purchase Plan

The Company established an Employee Stock Purchase Plan (the "ESPP") effective August 31, 1999 and amended on May 1, 2005. Under the terms of the ESPP, eligible employees may have up to 15% of eligible compensation deducted from their pay and applied to the purchase of shares of Rudolph common stock. The price the employee must pay for each share of stock will be 95% of the fair market value of the Rudolph common stock at the end of the applicable six month purchase period. The ESPP is intended to qualify under Section 423 of the Internal Revenue Code and is a non-compensatory plan as defined by SFAS 123R. No stock-based compensation expense for the ESPP was recorded for the three and six month periods ended June 30, 2006. As of June 30, 2006 and December 31, 2005, there were 1,737,066 and 1,446,600 shares available for issuance under the ESPP, respectively.

NOTE 4. Marketable Securities

The Company has evaluated its investment policies consistent with SFAS No. 115, "Accounting for Certain Investments in Debt and Equity Securities," and determined that all of its investment securities are to be classified as available-for-sale. Available-for-sale securities are carried at fair value, with the unrealized gains and losses reported in Stockholders' Equity under the caption "Accumulated other comprehensive loss." Realized gains and losses, interest and dividends on available-for-sale securities are included in "Interest income and other, net." Net realized losses on available-for-sale securities were $11 and $128 for the three and six months ended June 30, 2006. Net realized losses on available-for-sale securities were $98 and $151 for the three and six months ended June 30, 2005. Gross unrealized gains on available-for-sale securities were $1 and $14 as of June 30, 2006 and December 31, 2005, respectively. Gross unrealized losses on available-for-sale securities were $640 and $533 as of June 30, 2006 and December 31, 2005, respectively. Because the Company has the ability and intent to hold these investments until a recovery of fair value, which may be at maturity, the Company does not consider these investments to be other-than-temporarily impaired at June 30, 2006.

NOTE 5. Derivative Instruments and Hedging Activities

The Company reports derivatives and hedging activities in accordance with SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities." This statement requires that all derivative instruments be recorded on the balance sheet at fair value. Changes in the fair value of derivatives are recorded each period in current earnings or accumulated other comprehensive loss, depending on whether the derivative is designated as part of a hedge transaction, and if it is, depending on the type of hedge transaction.

The Company, when it considers it to be appropriate, enters into forward contracts to hedge the economic exposures arising from foreign currency denominated transactions. At June 30, 2006, these contracts included the sale of Japanese Yen to purchase U.S. dollars. The foreign currency forward contracts were entered into by our Japanese subsidiary to economically hedge a portion of certain intercompany obligations. The forward contracts are not designated as hedges for accounting purposes and therefore, the change in fair value is recorded in selling, general and administrative expenses in the Consolidated Statements of Operations.

The dollar equivalent of the US dollar forward contracts and related fair values as of June 30, 2006 were as follows:

	Foreign Currency Sales Contracts
Notional amount	$ 6,973
Fair value of liability	$ 113

The dollar equivalent of the US dollar forward contracts and related fair values as of December 31, 2005 were as follows:

	Foreign Currency Sales Contracts
Notional amount	$ 4,055
Fair value of liability	$ 83

NOTE 6. Identifiable Intangible Assets

Identifiable intangible assets as of June 30, 2006 are as follows:

	Gross Carrying Amount	**Accumulated Amortization**	**Net**
Developed technology	$ 37,991	$ 5,843	$ 32,148
Customer relationships	4,400	184	4,216
Tradenames	3,400	125	3,275
Total identifiable intangible assets	$ 45,791	$ 6,152	$ 39,639

Identifiable intangible assets as of December 31, 2005 are as follows:

	Gross Carrying Amount	**Accumulated Amortization**	**Net**
Developed technology	$ 12,991	$ 4,363	$ 8,628
Total identifiable intangible assets	$ 12,991	$ 4,363	$ 8,628

Intangible asset amortization expense for the three and six months ended June 30, 2006 was $1,119 and $1,789, respectively. For the three and six months ended June 30, 2005, intangible asset amortization expense was $219 and $438, respectively. Estimated amortization expense in each of the next five years amounts to $4,026 for 2006, $4,476 for 2007, $4,442 for 2008, $4,101 for 2009 and $4,085 for 2010.

NOTE 7. Accounts Receivable

Accounts receivable are net of the allowance for doubtful accounts of $242 and $230 as of June 30, 2006 and December 31, 2005, respectively.

NOTE 8. Inventories

	June 30, 2006	**December 31, 2005**

Materials	$ 30,696	$ 15,422
Work-in-process	14,897	7,250
Finished goods	11,581	7,401
Total inventories	$ 57,174	$ 30,073

NOTE 9. Property, Plant and Equipment

	June 30, 2006	December 31, 2005
Land and building	$ 5,181	$ 5,175
Machinery and equipment	7,879	3,422
Furniture and fixtures	2,166	1,375
Computer equipment	4,854	3,289
Leasehold improvements	6,389	3,081
	26,469	16,342
Accumulated depreciation	(9,754)	(7,743)
Net property, plant and equipment	$ 16,715	$ 8,599

NOTE 10. Commitments and Contingencies

Intellectual property indemnification obligations

The Company has entered into agreements with customers that include limited intellectual property indemnification obligations that are customary in the industry. These guarantees generally require the Company to compensate the other party for certain damages and costs incurred as a result of third party intellectual property claims arising from these transactions. The nature of the intellectual property indemnification obligations prevents the Company from making a reasonable estimate of the maximum potential amount it could be required to pay to its customers. Historically, the Company has not made any indemnification payments under such agreements and no amount has been recorded in the accompanying consolidated financial statements with respect to these indemnification guarantees.

Warranty Reserves

The Company generally provides a warranty on its products for a period of twelve to fifteen months against defects in material and workmanship. The Company estimates the costs that may be incurred during the warranty period and records a liability in the amount of such costs at the time revenue is recognized. The Company's estimate is based primarily on historical experience. The Company periodically assesses the adequacy of its recorded warranty liabilities and adjusts the amounts as necessary.

Changes in the Company's warranty reserves are as follows:

	Six Months Ended June 30,	
	2006	2005
Balance, beginning of the period	$ 1,234	$ 1,209
Accruals	2,435	1,023

Settlements	(1,094)	(969)
Balance, end of the period	$ 2,575	$ 1,263

The accrual of $2,435 for the six months ended June 30, 2006 includes the acquired warranty liability from August Technology at the acquisition date totaling $1,244.

New Lease Agreement

On June 9, 2005, the Company entered into a ten year and six month lease agreement with Mount Olive Industrial Realty Company LLC to lease approximately 83,500 square feet of manufacturing and office space. This location replaces leased space in Mt. Arlington and Ledgewood, New Jersey and serves as the Company's manufacturing, engineering, customer support and training facility. The Company began occupying the space in the fourth quarter of 2005 and completed its relocation in the second quarter of 2006. The Company received landlord incentives of $820 in 2005 to offset the costs of constructing structural components for the leased space. These incentives are recorded as deferred rent in current and non-current liabilities to be amortized over the lease term as a decrease to rent expense. Total future minimum rent payments will be approximately $223 for 2006, $696 for 2007, $768 for 2008, $809 for 2009, $834 for 2010 and $4,724 for all periods thereafter. The Company recognizes expense on a straight-line basis.

NOTE 11. Interest Income and Other, Net

	Three Months Ended June 30,		Six Months Ended June 30,	
	2006	**2005**	**2006**	**2005**
Interest income	$ 809	$ 510	$ 1,633	$ 982
Realized losses on sales of marketable securities, net	(11)	(98)	(128)	(151)
Rental income	3	5	8	10
Total interest income and other, net	$ 801	$ 417	$ 1,513	$ 841

NOTE 12. Comprehensive Income (Loss)

The difference between net income (loss) and comprehensive income (loss) for the Company is due to currency translation adjustments and unrealized gains (losses) on investments.

The components of comprehensive income (loss) are as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2006	**2005**	**2006**	**2005**
Net income (loss)	$ 7,991	$ 1,861	$ (3,755)	$ 3,610
Change in net unrealized losses on investments, net of tax	(47)	103	(98)	(162)
Change in currency translation adjustments	(713)	338	(623)	295
Total comprehensive income (loss)	$ 7,231	$ 2,302	$ (4,476)	$ 3,743

NOTE 13. Earnings (Loss) Per Share

Basic earnings (loss) per share is calculated using the weighted average number of shares of common stock outstanding during the period. Diluted earnings (loss) per share is computed in the same manner and also gives effect to all dilutive common equivalent shares outstanding during the period. Potentially dilutive common equivalent shares consist of stock options and restricted stock units for the 2006 and 2005 periods. For the six month period ended June 30, 2006, all outstanding stock options and restricted stock units totaling 3,624,856, were excluded from the computation of diluted loss per share because the effect in the period would be anti-dilutive. During the three months ended June 30, 2006 and 2005 and during the six months ended June 30, 2005, there were stock options with exercise prices above the average fair market value of the Company's common stock which were excluded from the computation of diluted earnings per share due to the anti-dilutive nature of these options. For the three months ended June 30, 2006, the weighted average number of stock options excluded from the computation of diluted earnings per share was 1,815,364. For the three and six months ended June 30, 2005, the weighted average number of stock options excluded from the computation of diluted earnings per share were 2,558,628 and 2,006,233, respectively.

The Company's basic and diluted earnings (loss) per share amounts are as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2006	2005	2006	2005
Numerator:				
Net income (loss)	$ 7,991	$ 1,861	$ (3,755)	$ 3,610
Denominator:				
Basic earnings (loss) per share - weighted average shares outstanding	28,637,507	16,896,480	25,620,417	16,868,991
Effect of potential dilutive securities:				
Employee stock options and restricted stock units - dilutive shares	305,940	31,878	-	56,325
Diluted earnings (loss) per share - weighted average shares outstanding	28,943,447	16,928,358	25,620,417	16,925,316
Earnings (loss) per share:				
Basic	$ 0.28	$ 0.11	$ (0.15)	$ 0.21
Diluted	$ 0.28	$ 0.11	$ (0.15)	$ 0.21

NOTE 14. Segment Reporting and Geographic Information

Operating segments are business units that have separate financial information and are separately reviewed by the Company's chief decision maker. The Company's chief decision maker is the Chief Executive Officer. The Company and its subsidiaries currently operate in a single reportable segment: the design, development, manufacture, sale and service of process control metrology systems used in semiconductor device manufacturing. The chief operating decision maker allocates resources and assesses performance of the business and other activities at the operating segment level.

The following table lists the different sources of revenue:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2006	2005	2006	2005
Revenue Type				
Systems:				
Metrology	36%	59%	39%	68%
Inspection	51%	20%	45%	10%
Parts	5%	8%	8%	9%
Services	5%	12%	6%	11%
Other	3%	1%	2%	2%
Total	100%	100%	100%	100%

For geographical reporting, revenues are attributed to the geographic location in which the customer is located. Revenue by geographic region is as follows:

Three Months Ended June 30,		Six Months Ended June 30,	
2006	2005	2006	2005

United States	$ 16,052	$ 3,819	$ 25,404	$ 11,365
Asia	36,605	11,549	53,863	24,675
Europe	4,035	6,017	9,273	8,402
Total	$ 56,692	$ 21,385	$ 88,540	$ 44,442

Customers comprising 10% or more of revenue:

	Six Months Ended June 30,	
	2006	**2005**
Customer A	14.3%	21.1%
Customer B	5.8%	10.5%

NOTE 15. Recent Accounting Pronouncements

In July 2006, the Financial Accounting Standards Board (FASB) issued FASB No. 48 (FIN 48), Accounting for Uncertainty in Income Taxes. FIN 48 clarifies the accounting for uncertainty in income taxes taken or expected to be taken in tax returns that effect amounts reported in a company s financial statements in accordance with SFAS No. 109, Accounting for Income Taxes. FIN 48 establishes a threshold condition that a tax position must meet for any part of the benefit of that position to be recognized in the financial statements. FIN 48 also provides guidance concerning derecognition, measurement, classification, interest and penalties and disclosure of tax positions. FIN 48 is effective for fiscal years beginning after December 15, 2006. The Company is currently analyzing the effects of FIN 48.

In November 2005, the FASB issued FASB Staff Position 123(R)-3 ("FSP 123R-3"), "Transition Election Related to Accounting for the Tax Effects of Share-based Payment Awards," that provides an elective alternative transition method of calculating the pool of excess tax benefits available to absorb tax deficiencies recognized subsequent to the adoption of SFAS 123R (the "APIC Pool") to the method otherwise required by paragraph 81 of SFAS 123R. The Company may take up to one year from the effective date of this FSP to evaluate its available alternatives and make its one-time election. The Company is currently evaluating the alternative methods. Until and unless the Company elects the transition method described in this FSP, the Company will follow the transition method described in paragraph 81 of SFAS 123R.

In November 2005, the FASB issued FASB Staff Position No. FAS 115-1 and FAS 124-1, "The Meaning of Other-Than-Temporary Impairment and Its Application to Certain Investments" (the "FSP"). The FSP addresses the determination as to when an investment is considered impaired, whether the impairment is other than temporary, and the measurement of an impairment loss. This FSP also includes accounting considerations subsequent to the recognition of an other-than-temporary impairment and requires certain annual disclosures about unrealized losses that have not been recognized as other-than temporary impairments. The guidance in this FSP amends SFAS No. 115, "Accounting for Certain Investments in Debt and Equity Securities," SFAS No. 124, "Accounting for Certain Investments Held by Not-for-Profit Organizations," and APB Opinion No. 18, "The Equity Method of Accounting for Investments in Common Stock." The FSP is effective for reporting periods beginning after December 15, 2005. The adoption of this position did not have a material impact on the Company's consolidated financial position and results of operations.

In November 2004, the FASB issued SFAS No. 151, "Inventory Costs, an amendment of ARB No. 43, Chapter 4", which is the result of its efforts to converge U.S. accounting standards for inventories with International Financial Reporting Standards. SFAS No. 151 requires idle facility expenses, freight, handling costs, and wasted material (spoilage) costs to be recognized as current-period charges. It also requires that the allocation of fixed production overheads to the costs of conversion be based on the normal capacity of the production facilities. The adoption of this statement on January 1, 2006 did not have a material impact on the Company's consolidated financial position and results of operations.

NOTE 16. Reclassifications

Certain prior period amounts have been reclassified to conform to current financial statement presentation.

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

Certain statements in this quarterly report on Form 10-Q are forward looking statements within the meaning of

Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. In addition, we may, from time to time, make oral forward looking statements. Forward looking statements may be identified by the words "anticipate", "believe", "expect", "intend", "will" and similar expressions, as they relate to us or our management. These statements include, without limitation, the statement that we believe that our existing cash and cash equivalents will be sufficient to meet our anticipated cash requirements for working capital and capital expenditures for the foreseeable future.

The forward looking statements contained herein reflect our current views with respect to future events and are subject to certain risks, uncertainties and assumptions. Actual results may differ materially from those projected in such forward looking statements due to a number of factors, risks and uncertainties, including the factors that may affect future results set forth in this Current Report on Form 10-Q and in our Annual Report on Form 10-K for the year ended December 31, 2005. We disclaim any obligation to update any forward looking statements as a result of developments occurring after the date of this quarterly report.

Critical Accounting Policies

Management's discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. We review the accounting policies we use in reporting our financial results on a regular basis. The preparation of these financial statements requires us 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 ongoing basis, we evaluate our estimates, including those related to revenue recognition, accounts receivable, inventories, business acquisitions, intangible assets, share-based payments, income taxes and warranty obligations. We base our 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 value of assets and liabilities that are not readily apparent from other sources. Results may differ from these estimates due to actual outcomes being different from those on which we based our assumptions. These estimates and judgments are reviewed by management on an ongoing basis, and by the Audit Committee at the end of each quarter prior to the public release of our financial results. We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our consolidated financial statements.

Revenue Recognition. Revenue is recognized when there is persuasive evidence of an arrangement, delivery has occurred, the sales price is fixed or determinable, and collection of the related receivable is reasonably assured. Certain sales of our products are sold and accounted for as multiple element arrangements, consisting primarily of the sale of the product, software, installation and training services. We generally recognize product revenue upon shipment. When customer acceptance is subjective and not obtained prior to shipment, we defer product revenue until such time as positive affirmation of acceptance has been obtained from the customer. Customer acceptance is generally based on our products meeting published performance specifications. The amount of revenue allocated to the shipment of products is done on a residual method basis. Under this method, the total arrangement value is allocated first to undelivered contract elements, based on their fair values, with the remainder being allocated to product revenue. The fair value of installation and training services is based upon billable hourly rates and the estimated time to complete the service. Revenue related to undelivered installation services is deferred until such time as installation is completed at the customer's site. Revenue related to training services is recognized ratably over the training period. Revenue from software license fees is recognized upon shipment if collection of the resulting receivable is probable, the fee is fixed or determinable, and vendor-specific objective evidence exists to allocate a portion of the total fee to any undelivered elements of the arrangement. Such undelivered elements in these arrangements typically consist of follow-on support. If vendor-specific objective evidence does not exist for the undelivered elements of the arrangement, all revenue is deferred and recognized ratably over the support period.

Allowance for Doubtful Accounts. We maintain allowances for doubtful accounts for estimated losses resulting from the inability of our customers to make required payments. We specifically analyze accounts receivable and analyze historical bad debts, customer concentrations, customer credit-worthiness, current economic trends and changes in our customer payment terms when evaluating the adequacy of the allowance for doubtful accounts. If the financial condition of our customers were to deteriorate, resulting in an impairment of their ability to make payments or our assumptions are otherwise incorrect, additional allowances may be required.

Excess and Obsolete Inventory. We write down our excess and obsolete inventory equal to the difference between the cost of inventory and the estimated market value based upon assumptions about future product life-cycles, product demand and market conditions. If actual product life-cycles, product demand and market conditions are less favorable than those projected by management, additional inventory write-downs may be required.

Business Acquisitions We account for acquired businesses using the purchase method of accounting which requires that the assets acquired and liabilities assumed be recorded at the date of acquisition at their respective fair values. The judgments made in determining the estimated fair value assigned to each class of assets acquired and liabilities assumed, as well as asset lives, can materially impact net income and balance sheet presentation. Accordingly, for significant items, we typically obtains assistance from independent valuation specialists.

There are several methods that can be used to determine the fair value of assets acquired and liabilities assumed. For intangible assets, we normally utilize the "income method." This method starts with a forecast of all of the expected future net cash flows. These cash flows are then adjusted to present value by applying an appropriate discount rate that reflects the risk factors associated with the cash flow streams. Some of the more significant estimates and assumptions inherent in the income method or other methods include the projected future cash flows (including timing) and the discount rate reflecting the risks inherent in the future cash flows. Determining the useful life of an intangible asset also requires judgment. For example, different types of intangible assets will have different useful lives and certain assets may even be considered to have indefinite useful lives. All of these judgments and estimates can significantly impact net income and balance sheet presentation.

The purchase price is preliminarily allocated based on estimates of the fair values of assets acquired and liabilities assumed. The final valuation of net assets is expected to be completed within one year from the acquisition date. At the merger date, we formulate a plan to exit or restructure certain activities, if applicable. As we finalize our plans to exit or restructure activities, we may record additional liabilities for, among other things, severance and severance related costs, which would also increase the goodwill recorded.

The developed technology is separated into front-end and back-end automated macro defect inspection, and analysis software and is utilized in the manufacturing of semiconductor chips. This technology is designed to automate inspection processes that are performed by the human eye through the use of imaging technology and high-speed computers. The process of forming transistors directly on silicon wafers is commonly referred to as the "front-end" process. The front-end products provide high-speed automated inspection of chips, cracks and other defects that occur during the chip manufacturing process. The acquired company's product offering in this area is the AXi series, which is an automated defect inspection system.

Once the various semiconductor devices have been created they must be interconnected to form the desired electrical circuits. This "back-end" process involves creating metal interconnecting wires that are separated by insulating materials. The back-end products provide inspection of the chips to detect defects created during the back-end manufacturing process. The back-end products include the NSX series, which are flexible automated wafer and die defect inspection systems for high-speed, consistent, reliable defect detection.

The software technology is used to analyze and process the data provided during front-end and back-end inspection. The software provides rapid classification of defects as well as providing possible correlation among them by creating a database of prior issues and defects. This aids our customers in making adjustments to the manufacturing processes to help reduce the number of defects and enable consistent performance among separate machines. The software products include fabrication-wide data management software, and tool specific defect review and process analysis software.

Paragraph 39 of Statement of Financial Accounting Standards (SFAS) No. 141 provides guidance concerning the recognition of value associated with intangible assets and refers to an illustrative list in Appendix A of SFAS No. 141 of commonly identifiable intangible assets that meet the criteria for recognition as assets apart from goodwill. This list includes technology-based intangible assets, such as patented technology and computer software. The developed technology acquired represents proprietary know-how that was technologically feasible as of the acquisition date and is supported by patents.

A useful life of nine years was assigned for each of the front-end, back-end and software developed technologies. The basis for assigning these lives was derived from a number of factors including the valuation of the developed technology, the expected life cycle of the technology, and the remaining lives of the underlying patents. The valuation, which was performed by an independent third party valuation firm, was based on projected cash flows for each of the developed technologies. After the ninth year, the cash flows generated from the developed technologies decline to a nominal amount. The life cycle of the technology is in its early stages of development due to advancements in computers and camera technology, and has only recently begun to achieve semiconductor industry acceptance. As such, risk of technology obsolescence is minimized until the later stages of the life cycle. In evaluating the patents underlying the acquired technology, the remaining lives of the patents range from 12 to 15 years. We determined that the decline in cash flows to a nominal amount was a principle factor in determining the life of the technology. As such, we believe that a life of nine years assigned to the developed technology is appropriate.

Long-Lived Assets and Acquired Intangible Assets. We periodically review long-lived assets, other than goodwill, for impairment whenever changes in events or circumstances indicate that the carrying amount of an asset may not be recoverable. Goodwill, in accordance with SFAS No. 142, is tested for possible impairment at least annually during the fourth quarter for each year. A goodwill impairment test may be initiated prior to conducting the annual analysis if events or changes in circumstances indicate that the carrying value of goodwill may be impaired. Assumptions and estimates used in the determination of impairment losses, such as future cash flows and disposition costs, may affect the carrying value of long-lived assets and the impairment of such long-lived assets, if any, could have a material effect on our consolidated financial statements.

Share-Based Compensation. Prior to fiscal 2006, we accounted for share-based compensation plans under the recognition and measurement provisions of Accounting Principles Board (APB) Opinion No. 25. Effective January 1, 2006, we adopted the provisions of SFAS No. 123 (revised 2004) "Share-Based Payment" ("SFAS 123R") using the modified-prospective-transition method. SFAS 123R requires companies to recognize the fair-value of share-based compensation transactions in the statement of income. The fair value of our stock options is estimated at the date of grant using the Black-Scholes option pricing model. The Black-Scholes valuation calculation requires us to estimate key assumptions such as future stock price volatility, expected terms, risk-free rates and dividend yield. Expected stock price volatility is based on historical volatility of our stock. We use historical data to estimate option exercises and employee terminations within the valuation model. The expected term of options granted is derived from an analysis of historical exercises and remaining contractual life of stock options, and represents the period of time that options granted are expected to be outstanding. The risk-free rate is based on the U.S. Treasury yield curve in effect at the time of grant. We have never paid cash dividends, and do not currently intend to pay cash dividends, and thus have assumed a 0% dividend yield. If our actual experience differs significantly from the assumptions used to compute our share-based compensation cost, or if different assumptions had been used, we may have recorded too much or too little share-based compensation cost. In addition, we are required to estimate the expected forfeiture rate of our share grants and only recognize the expense for those shares expected to vest. If the actual forfeiture rate is materially different from our estimate, our share-based compensation expense could be materially different.

Warranties. We provide for the estimated cost of product warranties at the time revenue is recognized. While we engage in product quality programs and processes, our warranty obligation is affected by product failure rates, material usage and service delivery costs incurred in correcting a product failure. Should actual product failure rates, material usage or service delivery costs differ from our estimates, revisions to the estimated warranty liability would be required.

Accounting for Income Taxes. As part of the process of preparing our consolidated financial statements, we are required to estimate our actual current tax exposure together with our temporary differences resulting from differing treatment of items for tax and accounting purposes. These temporary differences result in deferred tax assets and liabilities, which are included within our consolidated balance sheet. We must then assess the likelihood that our deferred tax assets will be recovered from future taxable income and to the extent we believe that recovery is not likely, we must establish a valuation allowance. Significant management judgment is required in determining our provision for income taxes and any valuation allowance recorded against our deferred tax assets. At June 30, 2006, we had a valuation allowance of $0.5 million for a portion of the deferred tax assets attributable to foreign net operating loss carryforwards due to the uncertainty of future earnings of our subsidiaries in Europe and Japan. The need for a valuation allowance is based on our estimates of taxable income by jurisdiction in which we operate and the period over which our deferred taxes will be recoverable. In the event that actual results differ from these estimates or we adjust these estimates in future periods, we may need to adjust the valuation allowance, which could materially impact our financial position and results of operations.

Impact of Recent Accounting Pronouncements

In July 2006, the Financial Accounting Standards Board (FASB) issued FASB No. 48 (FIN 48), Accounting for Uncertainty in Income Taxes. FIN 48 clarifies the accounting for uncertainty in income taxes taken or expected to be taken in tax returns that effect amounts reported in a company s financial statements in accordance with SFAS No. 109, Accounting for Income Taxes. FIN 48 establishes a threshold condition that a tax position must meet for any part of the benefit of that position to be recognized in the financial statements. FIN 48 also provides guidance concerning derecognition, measurement, classification, interest and penalties and disclosure of tax positions. FIN 48 is effective for fiscal years beginning after December 15, 2006. We are currently analyzing the effects of FIN 48.

In November 2005, the FASB issued FASB Staff Position 123(R)-3 ("FSP 123R-3"), "Transition Election Related to Accounting for the Tax Effects of Share-based Payment Awards," that provides an elective alternative transition method of calculating the pool of excess tax benefits available to absorb tax deficiencies recognized subsequent to the adoption of SFAS 123R (the "APIC Pool") to the method otherwise required by paragraph 81 of SFAS 123R. We may take up to one year from the effective date of this FSP to evaluate our available alternatives and make our one-time election. We are currently evaluating the alternative methods. Until and unless we elect the transition method described in this FSP, we will follow the transition method described in paragraph 81 of SFAS 123R.

In November 2005, the FASB issued FASB Staff Position No. FAS 115-1 and FAS 124-1, "The Meaning of Other-Than-Temporary Impairment and Its Application to Certain Investments" (the "FSP"). The FSP addresses the determination as to when an investment is considered impaired, whether the impairment is other than temporary, and the measurement of an impairment loss. This FSP also includes accounting considerations subsequent to the recognition of an other-than-temporary impairment and requires certain annual disclosures about unrealized losses that have not been recognized as other-than temporary impairments. The guidance in this FSP amends SFAS No. 115, "Accounting for Certain Investments in Debt and Equity Securities," SFAS No. 124, "Accounting for Certain Investments Held by Not-for-Profit Organizations," and APB Opinion No. 18, "The Equity Method of Accounting for Investments in Common Stock." The FSP is effective for reporting periods beginning after December 15, 2005. The adoption of this position did not have a material impact on our consolidated financial position and results of operations.

In November 2004, the FASB issued SFAS No. 151, "Inventory Costs, an amendment of ARB No. 43, Chapter 4", which is the result of its efforts to converge U.S. accounting standards for inventories with International Financial Reporting Standards. SFAS No. 151 requires idle facility expenses, freight, handling costs, and wasted material (spoilage) costs to be recognized as current-period charges. It also requires that the allocation of fixed production overheads to the costs of conversion be based on the normal capacity of the production facilities. The adoption of this statement on January 1, 2006 did not have a material impact on our consolidated financial position and results of operations.

Results of Operations for the Three and Six Month Periods Ended June 30, 2006 and 2005

We are a worldwide leader in the design, development, manufacture and support of process control metrology and inspection systems used in semiconductor device manufacturing. Our thin film measurement proprietary systems measure the thickness and other properties of thin films applied during various steps in the manufacture of integrated circuits, enabling semiconductor device manufacturers to improve yields and reduce overall production costs. Our macro-defect inspection proprietary systems detect and classify defects in semiconductor wafers. We provide our customers with a flexible full-fab metrology solution by offering families of systems that meet their transparent and opaque thin film measurement and macro-defect inspection needs in various applications across the fabrication process.

On February 15, 2006, we announced that our merger with August Technology Corporation had been completed. The merger was approved by August Technology's shareholders, and the issuance of shares of our common stock was approved by our stockholders, at the respective special meetings held that day. The combined company will continue to be known as Rudolph Technologies, Inc. Under the terms of the agreement, we paid an aggregate of $37.2 million in cash and issued an aggregate of 11,298,265 shares of our common stock to former August Technology shareholders. The results of operations of August Technology have been included in our consolidated financial statements since the date of acquisition. Due to the size of August Technology and the effects of purchase accounting, our financial position and results of operations and cash flows may not be comparable to prior periods. The effects of purchase accounting are preliminary and allocation is expected to be completed during 2006, but no later than one year from the acquisition date.

August Technology is a world-class provider of automated defect detection and product characterization systems for microelectronic device manufacturers. Their systems provide manufacturers with information that enables process-enhancing decisions, ultimately lowering manufacturing costs and decreasing time-to-market. They have traditionally provided systems to address the automated inspection needs of the early stages of the final manufacturing or back-end of the microelectronic device manufacturing process. In addition, they have introduced new products for edge and backside inspection systems for advanced macro defect detection primarily in the front-end of the wafer manufacturing process. When used in conjunction with one another these systems allow a manufacturer to inspect the top, edge and back of a wafer's surface.

Our business is affected by the annual spending patterns of our customers on semiconductor capital equipment. The amount that our customers devote to capital equipment spending depends on a number of factors, including general worldwide economic conditions as well as other economic drivers such as personal computer and cell phone sales. Current forecasts by industry analysts for the semiconductor device manufacturing industry project a year-over-year increase in capital spending of 8-12% for 2006. We monitor capital equipment spending through announced capital spending plans by our customers and monthly-published industry data such as the book to bill ratio. The book to bill ratio is a 3-month running statistic that compares bookings or orders placed with capital equipment suppliers to billings or shipments. A book to bill above one shows that semiconductor device equipment manufacturers are ordering equipment at a pace that exceeds the equipment suppliers' shipments for the period. The three month rolling average North American semiconductor equipment book to bill ratio was 1.14 for the month of June 2006.

Historically, a significant portion of our revenues in each quarter and year has been derived from sales to relatively few end user customers, and we expect this trend to continue. In the six month period ended June 30, 2006 and for the years ended December 31, 2005, 2004 and 2003, sales to end user customers that individually represented at least five percent of our revenues accounted for 43.4%, 62.6%, 53.4% and 59.4% of our revenues, respectively. For the six month period ended June 30, 2006 and for the years ended December 31, 2005, 2004 and 2003, sales to Intel accounted for 14.3%, 20.3%, 23.2% and 35.3% of our revenues, respectively.

We do not have purchase contracts with any of our customers that obligates them to continue to purchase our products, and they could cease purchasing products from us at any time. A delay in purchase or cancellation by any of our large customers could cause quarterly revenues to vary significantly. In addition, during a given quarter, a significant portion of our revenues may be derived from the sale of a relatively small number of systems. Our transparent film measurement systems range in average selling price from approximately $30,000 to $1.0 million per system, our opaque film measurement systems range in average selling price from approximately $900,000 to $2.0 million per system and our macro-defect inspection systems range in average selling price from approximately $250,000 to $1.4 million per system. Accordingly, a small change in the number of systems we sell may also cause significant changes in our operating results. Because fluctuations in the timing of orders from our major customers or in the number of our individual systems we sell could cause our revenues to fluctuate significantly in any given quarter or year, we do not believe that period-to-period comparisons of our financial results are necessarily meaningful, and they should not be relied upon exclusively as an indication of our future performance.

A significant portion of our revenues has been derived from customers outside of the United States. In the six month period ended June 30, 2006, approximately 71.3% of our revenues were derived from customers outside of the United States, of which 60.8% were derived from customers in Asia and 10.5% were derived from customers in Europe. In 2005, approximately 77.5% of our revenues were derived from customers outside of the United States, of which 56.3% were derived from customers in Asia and 21.2% were derived from customers in Europe. In 2004, approximately 69.1% of our revenues were derived from customers outside of the United States, of which 59.6% were derived from customers in Asia and 9.5% were derived from customers in Europe. In 2003, approximately 65.4% of our revenues were derived from customers outside of the United States, of which 39.9% were derived from customers in Asia and 25.5% were derived from customers in Europe. We expect that revenues generated from customers outside of the United States will continue to account for a significant percentage of our revenues.

Revenues. Our revenues are primarily derived from the sale of our systems, services and spare parts. Our revenues were $56.7 million and $88.5 million for the three and six month periods ended June 30, 2006, compared to $21.4 million and $44.4 million for the three and six month periods ended June 30, 2005, representing increases of 165.1% and 99.2% for the respective periods.

The following table lists the different sources of our revenue:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2006	**2005**	**2006**	**2005**
Revenue Type				
Systems:				
Metrology	36%	59%	39%	68%
Inspection	51%	20%	45%	10%
Parts	5%	8%	8%	9%
Services	5%	12%	6%	11%
Other	3%	1%	2%	2%
Total	100%	100%	100%	100%

Our systems revenue was $49.2 million or 87% of revenues for the three month period ended June 30, 2006 compared to $16.8 million or 79% of revenues for the three month period ended June 30, 2005. For the six month period ended June 30, 2006, systems revenue was $74.0 million or 84% of revenues compared to $34.6 million or 78% of revenues for the six month period ended June 30, 2005. The increase reflects additional revenues of $40.5 million related to the August Technology acquisition and an increase in metrology systems revenues of $4.2 million. Systems revenue generated by our latest product releases and major enhancements in each of our product families amounted to 43% and 42% of total revenues for the three and six month periods ended June 30, 2006 compared to 55% and 35% of total revenues for the three and six month periods ended June 30, 2005. Parts and services revenues were $6.1 million or 11% of revenues for the three month period ended June 30, 2006 compared to $4.3 million or 20% of revenues for the three month period ended June 30, 2005. For the six month period ended June 30, 2006, parts and services revenues were $12.5 million or 14% of revenues compared to $9.1 million or 20% of revenues for the six month period ended June 30, 2005. The increase reflects additional parts revenues of $1.4 million related to the August Technology acquisition as well as customers continuing to spend more on repair and maintenance of their existing equipment. Parts and services revenues are generated from part sales, maintenance service contracts, system upgrades, as well as time and material billable service calls. In periods of prolonged recovery, we expect systems revenues as a percentage of total revenue to increase and parts and service revenues as a percentage of total revenue to decrease as customers buy new equipment.

Deferred revenues of $9.7 million are recorded in other current liabilities at June 30, 2006 and primarily consisted of $3.4 million for deferred maintenance agreements and $6.3 million for systems awaiting acceptance and outstanding deliverables.

Gross Profit. Our gross profit has been and will continue to be affected by a variety of factors, including inventory step-up from purchase accounting, manufacturing efficiencies, excess and obsolete inventory write-offs, pricing by competitors or suppliers, new product introductions, product sales mix, production volume, customization and reconfiguration of systems, international and domestic sales mix, and parts and service margins. Our gross profit was $29.7 million and $38.9 million for the three and six month periods ended June 30, 2006, compared to $10.1 million and $20.9 million for the three and six month periods ended June 30, 2005. Our gross profit represented 52.4% and 44.0% of our revenues for the three and six month periods ended June 30, 2006 and 47.3% and 47.0% of our revenues for the same periods in the prior year. The decrease in gross profit as a percentage of revenue for the six month period ended June 30, 2006, compared to the six month period ended June 30, 2005 is primarily due to a $3.0 million charge for the sale of inventory written-up to fair value upon acquisition, $2.4 million in charges related to duplicative inventory and $0.9 million for charges related to slow moving inventory.

Research and Development. The thin film transparent, opaque process control and macro-defect inspection market is characterized by continuous technological development and product innovations. We believe that the rapid and ongoing development of new products and enhancements to existing products, including the transition to copper and low-k dielectrics, the progression to 300 mm wafers, the continuous shrinkage in critical dimensions, and the evolution of ultra-thin gate process control, is critical to our success. Accordingly, we devote a significant portion of our technical, management and financial resources to research and development programs. Research and development expenditures consist primarily of salaries and related expenses of employees engaged in research, design and development activities. They also include consulting fees and the cost of related supplies. Our research and development expense was $7.3 million and $12.6 million for the three and six month period ended June 30, 2006, compared to $3.0 million and $6.4 million for the same periods in the prior year. Research and development expense represented 12.9% and 14.3% of our revenues for the three and six month periods ended June 30, 2006, compared to 14.1% and 14.3% of revenues for the same periods in the prior year. The year-over-year dollar increase in research and development expenses primarily reflects additional research and development cost of $5.3 million related to the merged activities of August Technology and increased compensation costs. We anticipate research and development expense will be approximately 13% of revenues for the three month period ending September 30, 2006.

In-Process Research and Development. The acquisition of August Technology resulted in our recording of a one-time expense of $9.9 million for the write-off of in-process research and development, or IPRD. At the time of the acquisition, we determined that the IPRD had not reached technological feasibility and that it did not have an alternative future use. The purchased in-process technology projects, which are comprised of macro defect inspection and software projects, had a value assigned to them of $6.9 million and $3.0 million, respectively. The defect inspection projects, relate to the next generation of our AXi defect detection systems with enhanced defect capture capabilities, and were approximately 90% complete as of the date of acquisition. The estimated costs to complete these projects consist primarily of internal engineering labor costs and are estimated to be completed by the third quarter of 2006. The software projects, relate to new enhancement features to our next generation inspection products, and were approximately 50% complete as of the date of acquisition, with the remaining cost to complete consisting primarily of internal software development labor cost. We estimate that the software projects will be completed in the fourth quarter 2006. We currently anticipate revenue to be generated from the inspection and software projects to begin in the third quarter of 2006 and the first half 2007, respectively. If we are not successful in completing these projects on a timely basis, the future sales of our inspection products may be adversely affected resulting in erosion of our market share.

Selling, General and Administrative. Selling, general and administrative expense is primarily comprised of salaries and related costs for sales, marketing, and general administrative personnel, as well as commissions and other non-personnel related expenses. Our selling, general and administrative expense was $9.0 million and $16.0 million the three and six month periods ended June 30, 2006, compared to $4.8 million and $10.2 million for the same periods in the prior year. Selling, general and administrative expense represented 16.0% and 18.1% of our revenues for the three and six month periods ended June 30, 2006 compared to 22.6% and 22.9% of our revenues for the same periods in the prior year. The year-over-year dollar increase in selling, general and administrative expense was primarily due to additional selling, general and administrative cost of $4.9 million related to the merged activities of August Technology and increased compensation costs. We currently anticipate that selling, general and administrative expenses will represent approximately 16% of revenue for the three month period ending September 30, 2006.

Interest income and other, net. Interest income and other, net was $0.8 million and $1.5 million for the three and six month periods ended June 30, 2006, compared to $0.4 million and $0.8 million for the same periods in the prior year. Interest income and other, net consisted primarily of interest income, realized gains and losses on sales of marketable securities and rental income. The year-over-year increases in interest income and other, net in both the three and six month period ended June 30, 2006 were primarily attributable to higher interest rates.

Income Taxes. We use the asset and liability method of accounting for income taxes prescribed by SFAS No. 109, "Accounting for Income Taxes." Income tax expense was $5.0 million and $3.8 million for the three and six month periods ended June 30, 2006 compared to income tax expense of $0.6 million and $1.1 million for the same periods in the prior year. Our effective tax rates for the six month period ended June 30, 2006 is 4,319.1%, compared to 24.0% in the prior year period. Our effective tax rate is different than the expected combined federal and state tax rate of 41% primarily as a result of the nondeductibility of the IPRD charge for tax purposes and the expiration of the research and development tax credit.

Liquidity and Capital Resources

At June 30, 2006, we had $74.4 million of cash, cash equivalents and marketable securities and $170.9 million in working capital. At December 31, 2005, we had $80.8 million of cash, cash equivalents and marketable securities and $125.3 million in working capital.

Typically during periods of revenue growth, changes in accounts receivable and inventories represent a use of cash as we incur costs and expend cash in advance of receiving cash from our customers. Similarly, during periods of declining revenue, changes in accounts receivable and inventories represent a source of cash as inventory purchases decline and revenue from prior periods is collected.

Operating activities used $10.9 million and provided $2.0 million in cash for the six month periods ended June 30, 2006 and 2005, respectively. The net cash used by operating activities during the six month period ended June 30, 2006 was primarily a result of an increase in accounts receivable of $32.0 million and an increase in inventories of $4.9 million, partially offset by profit before depreciation, amortization, IPRD and provision for doubtful accounts and inventory valuation of $13.2 million, an increase in deferred revenue of $5.5 million, an increase in accounts payable and accrued liabilities of $4.5 million, an increase in income tax payable of $1.6 million and an increase in other current liabilities of $0.8 million. The increase in receivables is primarily due to the timing of shipments towards the end of the quarter and a higher percentage of accounts receivable from customers in Japan which have longer collection times. The net cash provided by operating activities during the six month period ended June 30, 2005 was primarily a result of a decrease in inventories of $2.8 million, an increase in other current liabilities of $1.5 million, profit before depreciation and amortization of $4.9 million and an increase in deferred revenue of $0.9 million, partially offset by an increase in accounts receivable of $8.2 million.

Net cash used in investing activities during the six month period ended June 30, 2006 of $5.1 million was due to purchases of marketable securities of $39.8 million, the merger with August Technology, net of cash acquired, of $12.0 million, capital expenditures of $3.9 million and capitalized software of $0.8 million, partially offset by proceeds from sales of marketable securities of $51.4 million. Net cash provided by investing activities during the six month period ended June 30, 2005 of $10.6 million was primarily due to proceeds from sales of marketable securities of $34.7 million, offset by purchases of marketable securities of $22.8 million, capitalized software of $0.5 million, capital expenditures of $0.5 million and acquisition costs for business combinations of $0.3 million.

Net cash provided by financing activities for the six month period ended June 30, 2006 of $7.8 million was due to proceeds received and tax benefit for sales of shares through share-based compensation plans. Net cash provided by financing activities for the six month period ended June 30, 2005 of $1.2 million was a result of proceeds received from sales of shares through share-based compensation plans.

From time to time we evaluate whether to acquire new or complementary businesses, products and/or technologies. We may fund all or a portion of the purchase price for these acquisitions in cash. On February 15, 2006, we announced that our merger with August Technology Corporation had been completed. Under the terms of the agreement, we paid an aggregate of $37.2 million in cash and issued an aggregate of 11,298,265 shares of our common stock to former August Technology shareholders.

Our future capital requirements will depend on many factors, including the timing and amount of our revenues and our investment decisions, which will affect our ability to generate additional cash. We believe that our existing cash, cash equivalents and marketable securities will be sufficient to meet our anticipated cash requirements for working capital and capital expenditures for the foreseeable future. Thereafter, if cash generated from operations and financing activities is insufficient to satisfy our working capital requirements, we may seek additional funding through bank borrowings, sales of securities or other means. There can be no assurance that we will be able to raise any such capital on terms acceptable to us or at all.

Factors that May Affect Future Results

Cyclicality in the semiconductor device industry has led to substantial decreases in demand for our systems and may from time to time continue to do so

Our operating results are subject to significant variation due to the cyclical nature of the semiconductor device industry. Our business depends upon the capital expenditures of semiconductor device manufacturers, which, in turn, depend upon the current and anticipated market demand for semiconductors and products using semiconductors. The timing, length and severity of the up-and-down cycles in the semiconductor equipment industry are difficult to predict. This cyclical nature of the industry in which we operate affects our ability to accurately predict future revenue and, thus, future expense levels. When cyclical fluctuations result in lower than expected revenue levels, operating results may be adversely affected and cost reduction measures may be necessary in order for us to remain competitive and financially sound. During a down cycle, we must be in a position to adjust our cost and expense structure to prevailing market conditions and to continue to motivate and retain our key employees. In addition, during periods of rapid growth, we must be able to increase manufacturing capacity and personnel to meet customer demand. We can provide no assurance that these objectives can be met in a timely manner in response to industry cycles. If we fail to respond to industry cycles, our business could be seriously harmed.

We obtain some of the components and subassemblies included in our systems from a limited group of suppliers, and the partial or complete loss of one of these suppliers could cause production delays and a substantial loss of revenues

We obtain some of the components and subassemblies included in our systems from a limited group of suppliers and do not have long-term contracts with many of our suppliers. Our dependence on limited source suppliers of components and our lack of long-term contracts with many of our suppliers exposes us to several risks, including a potential inability to obtain an adequate supply of components, price increases, late deliveries and poor component quality. Disruption or termination of the supply of these components could delay shipments of our systems, damage our customer relationships and reduce our sales. From time to time in the past, we have experienced temporary difficulties in receiving shipments from our suppliers. The lead-time required for shipments of some of our components can be as long as four months. In addition, the lead time required to qualify new suppliers for lasers could be as long as a year, and the lead time required to qualify new suppliers of other components could be as long as nine months. If we are unable to accurately predict our component needs, or if our component supply is disrupted, we may miss market opportunities by not being able to meet the demand for our systems. Further, a significant increase in the price of one or more of these components or subassemblies could seriously harm our results of operations and cash flows.

Our largest customers account for a significant portion of our revenues, and our revenues and cash flows would significantly decline if one or more of these customers were to purchase significantly fewer of our systems or they delayed or cancelled a large order

In 2003, 2004, 2005 and the six months ended June 30, 2006, sales to end user customers that individually represented at least five percent of our revenues accounted for, in the aggregate, 59.4%, 53.4%, 62.6% and 43.4% of our revenues. In 2003, 2004, 2005 and the six months ended June 30, 2006, sales to Intel Corporation, a key customer, accounted for 35.3%, 23.2%, 20.3% and 14.3% of our revenues, respectively. We operate in the highly concentrated, capital-intensive semiconductor device manufacturing industry. Historically, a significant portion of our revenues in each quarter and year has been derived from sales to relatively few customers, and this trend is expected to continue. If any of our key customers were to purchase significantly fewer of our systems in the future, or if a large order were delayed or cancelled, our revenues and cash flows would significantly decline. We expect that we will continue to depend on a small number of large customers for a significant portion of our revenues for at least the next several years. In addition, as large semiconductor device manufacturers seek to establish closer relationships with their suppliers, we expect that our customer base will become even more concentrated.

Our operating results have varied and will likely continue to vary significantly from quarter to quarter in the future, causing volatility in our stock price

Our quarterly operating results have varied in the past and will likely continue to vary significantly from quarter to quarter in the future, causing volatility in our stock price. Some of the factors that may influence our operating results and subject our stock to extreme price and volume fluctuations include:

* changes in customer demand for our systems, which is influenced by economic conditions in the semiconductor device industry, demand for products that use semiconductors, market acceptance of our systems and products of our customers and changes in our product offerings;

* seasonal variations in customer demand, including the tendency of European sales to slow significantly in the third quarter of each year;

* the timing, cancellation or delay of customer orders, shipments and acceptance;

* product development costs, including increased research, development, engineering and marketing expenses associated with our introduction of new products and product enhancements; and

* the levels of our fixed expenses, including research and development costs associated with product development, relative to our revenue levels.

In light of these factors and the cyclical nature of the semiconductor industry, we expect to continue to experience significant fluctuations in quarterly and annual operating results. Moreover, many of our expenses are fixed in the short-term which, together with the need for continued investment in research and development, marketing and customer support, limits our ability to reduce expenses quickly. As a result, declines in net sales could harm our business and the price of our common stock could substantially decline.

Our revenue may vary significantly each quarter due to relatively small fluctuations in our unit sales

During any quarter, a significant portion of our revenue may be derived from the sale of a relatively small number of systems. Our transparent film measurement systems range in selling price from approximately $30,000 to $1.0 million per system, our opaque film measurement systems range in selling price from approximately $900,000 to $2.0 million per system and our macro-defect detection systems range in selling price from approximately $250,000 to $1.4 million per system. Accordingly, a small change in the number of systems we sell may also cause significant changes in our operating results. This, in turn, could cause fluctuations in the market price of our common stock.

Variations in the amount of time it takes for us to sell our systems may cause fluctuations in our operating results, which could cause our stock price to decline

Variations in the length of our sales cycles could cause our revenues and cash flows, and consequently, our business, financial condition, operating results and cash flows, to fluctuate widely from period to period. This variation could cause our stock price to decline. Our customers generally take a long time to evaluate our film metrology systems and many people are involved in the evaluation process. We expend significant resources educating and providing information to our prospective customers regarding the uses and benefits of our systems in the semiconductor fabrication process. The length of time it takes for us to make a sale depends upon many factors including, but not limited to:

* the efforts of our sales force;

* the complexity of the customer's fabrication processes;

* the internal technical capabilities and sophistication of the customer;

* the customer's budgetary constraints; and

* the quality and sophistication of the customer's current metrology equipment.

Because of the number of factors influencing the sales process, the period between our initial contact with a customer and the time when we recognize revenue from that customer, if ever, and receive payment varies widely in length. Our sales cycles, including the time it takes for us to build a product to customer specifications after receiving an order to the time we recognize revenue, typically range from six to 15 months. Sometimes our sales cycles can be much longer, particularly with customers in Japan. During these cycles, we commit substantial resources to our sales efforts in advance of receiving any revenue, and we may never receive any revenue from a customer despite our sales efforts. If we do make a sale, our customers often purchase only one of our systems, and then evaluate its performance for a lengthy period before purchasing any more of our systems. The number of additional products a customer purchases, if any, depends on many factors, including a customer's capacity requirements. The period between a customer's initial purchase and any subsequent purchases can vary from six months to a year or longer, and variations in the length of this period could cause further fluctuations in our operating results and possibly in our stock price.

If we are not successful in developing new and enhanced products for the semiconductor device manufacturing industry we will lose market share to our competitors

We operate in an industry that is subject to evolving industry standards, rapid technological changes, rapid changes in consumer demands and the rapid introduction of new, higher performance systems with shorter product life cycles. To be competitive in our demanding market, we must continually design, develop and introduce in a timely manner new film metrology systems that meet the performance and price demands of semiconductor device manufacturers. We must also continue to refine our current systems so that they remain competitive. We expect to continue to make significant investments in our research and development activities. We may experience difficulties or delays in our development efforts with respect to new systems, and we may not ultimately be successful in developing them, as not all research and development activities result in viable commercial products. Any significant delay in releasing new systems could adversely affect our reputation, give a competitor a first-to-market advantage or cause a competitor to achieve greater market share.

If new products developed by us do not gain general market acceptance, we will be unable to generate revenues and recover our research and development costs

Metrology and inspection product development is inherently risky because it is difficult to foresee developments in semiconductor device manufacturing technology, coordinate technical personnel, and identify and eliminate system design flaws. Any new systems we introduce may not achieve or sustain a significant degree of market acceptance and sales.

We expect to spend a significant amount of time and resources developing new systems and refining our existing systems. In light of the long product development cycles inherent in our industry, these expenditures will be made well in advance of the prospect of deriving revenue from the sale of those systems. Our ability to commercially introduce and successfully market new systems is subject to a wide variety of challenges during the development cycle, including start-up bugs, design defects, and other matters that could delay introduction of these systems. In addition, since our customers are not obligated by long-term contracts to purchase our systems, our anticipated product orders may not materialize, or orders that are placed may be cancelled. As a result, if we do not achieve market acceptance of new products, we may be unable to generate sufficient revenues and cash flows to recover our research and development costs.

Even if we are able to develop new products that gain market acceptance, sales of these new products could impair our ability to sell existing products

Competition from our new systems could have a negative effect on sales of our existing systems and the prices that we could charge for these systems. We may also divert sales and marketing resources from our current systems in order to successfully launch and promote our new or next generation systems. This diversion of resources could have a further negative effect on sales of our current systems and the value of inventory.

If our relationships with our large customers deteriorate, our product development activities could be adversely affected

The success of our product development efforts depends on our ability to anticipate market trends and the price, performance and functionality requirements of semiconductor device manufacturers. In order to anticipate these trends and ensure that critical development projects proceed in a coordinated manner, we must continue to collaborate closely with our largest customers. Our relationships with these and other customers provide us with access to valuable information regarding trends in the semiconductor device industry, which enables us to better plan our product development activities. If our current relationships with our large customers are impaired, or if we are unable to develop similar collaborative relationships with important customers in the future, our product development activities could be adversely affected.

Our ability to reduce costs is limited by our ongoing need to invest in research and development and to provide customer support activities

Our industry is characterized by the need for continual investment in research and development as well as customer service and support. As a result, our operating results could be materially affected if operating costs associated with our research and development as well as customer support activities increase in the future or we are unable to reduce those activities.

We may fail to adequately protect our intellectual property and, therefore, lose our competitive advantage

Our future success and competitive position depend in part upon our ability to obtain and maintain proprietary technology for our principal product families, and we rely, in part, on patent, trade secret and trademark law to protect that technology. If we fail to adequately protect our intellectual property, it will give our competitors a significant advantage. We own or have licensed a number of patents relating to our transparent and opaque thin film metrology and macro-defect inspection systems, and have filed applications for additional patents. Any of our pending patent applications may be rejected, and we may be unable to develop additional proprietary technology that is patentable in the future.

In addition, the patents that we do own or that have been issued or licensed to us may not provide us with competitive advantages and may be challenged by third parties. Further, third parties may also design around these patents. In addition to patent protection, we rely upon trade secret protection for our confidential and proprietary information and technology. We routinely enter into confidentiality agreements with our employees and other third parties. However, in the event that a confidentiality agreement is breached, we may not have adequate remedies. Our confidential and proprietary information and technology might also be independently developed by, or become otherwise known to, third parties.

Successful infringement claims by third parties could result in substantial damages, lost product sales and the loss of important intellectual property rights

Our commercial success depends in part on our ability to avoid infringing or misappropriating patents or other proprietary rights owned by third parties. From time to time we may receive communications from third parties asserting that our products or systems infringe, or may infringe, the proprietary rights of these third parties. These claims of infringement may lead to protracted and costly litigation, which could require us to pay substantial damages or have the sale of our products or systems stopped by an injunction. Infringement claims could also cause product or system delays or require us to redesign our products or systems, and these delays could result in the loss of substantial revenues. We may also be required to obtain a license from the third party or cease activities utilizing the third party's proprietary rights. We may not be able to enter into such a license or such a license may not be available on commercially reasonable terms. Accordingly, the loss of important intellectual property rights could hinder our ability to sell our systems, or make the sale of these systems more expensive.

Protection of our intellectual property rights, or the efforts of third parties to enforce their own intellectual property rights against us, has in the past resulted and may in the future result in costly and time-consuming litigation

We may be required to initiate litigation in order to enforce any patents issued to or licensed by us, or to determine the scope or validity of a third party's patent or other proprietary rights. In addition, we may be subject to lawsuits by third parties seeking to enforce their own intellectual property rights. Any litigation, regardless of outcome, could be expensive and time consuming, and could subject us to significant liabilities or require us to re-engineer our products or obtain expensive licenses from third parties.

Our efforts to protect our intellectual property may be less effective in certain foreign countries, where intellectual property rights are not as well protected as in the United States

In 2003, 2004, 2005 and the six months ended June 30, 2006, 65.4%, 69.1%, 77.5% and 71.3%, respectively, of our revenue was derived from sales in foreign countries, including certain countries in Asia, such as Taiwan, China, Korea, Singapore and Japan and certain Western European countries. The laws of some foreign countries do not protect our proprietary rights to as great an extent as do the laws of the United States, and many U.S. companies have encountered substantial problems in protecting their proprietary rights against infringement abroad. For example, Taiwan is not a signatory of the Patent Cooperation Treaty, which is designed to specify rules and methods for defending intellectual property internationally. The publication of a patent in Taiwan prior to the filing of a patent in Taiwan would invalidate the ability of a company to obtain a patent in Taiwan. Similarly, in contrast to the United States where the contents of patents remain confidential during the patent application process, in Taiwan the contents of a patent are published upon filing which provides competitors an advance view of the contents of a patent application prior to the establishment of patent rights. Consequently, there is a risk that Rudolph may be unable to adequately protect its proprietary rights in certain foreign countries. If this occurs, it would be easier for our competitors to develop and sell competing products in these countries.

Our current and potential competitors have significantly greater resources than we do, and increased competition could impair sales of our products or cause us to reduce our prices

The market for semiconductor capital equipment is highly competitive. We face substantial competition from established companies in each of the markets we serve. We principally compete with KLA-Tencor, Therma-Wave and Camtek. We compete to a lesser extent with companies such as Dai Nippon Screen, Nanometrics, Sopra and Vistec. Each of our products also competes with products that use different metrology techniques. Some of our competitors have greater financial, engineering, manufacturing and marketing resources, broader product offerings and service capabilities and larger installed customer bases than we do. As a result, these competitors may be able to respond more quickly to new or emerging technologies or market developments by devoting greater resources to the development, promotion and sale of products, which, in turn, could impair sales of our products. Further, there may be significant merger and acquisition activity among our competitors and potential competitors, which, in turn, may provide them with a competitive advantage over us by enabling them to rapidly expand their product offerings and service capabilities to meet a broader range of customer needs.

Many of our customers and potential customers in the semiconductor device manufacturing industry are large companies that require global support and service for their semiconductor capital equipment. We believe that our global support and service infrastructure is sufficient to meet the needs of our customers and potential customers. However, some of our competitors have more extensive infrastructures than we do, which could place us at a disadvantage when competing for the business of global semiconductor device manufacturers. Many of our competitors are investing heavily in the development of new systems that will compete directly with our systems. We have from time to time selectively reduced prices on our systems in order to protect our market share, and competitive pressures may necessitate further price reductions. We expect our competitors in each product area to continue to improve the design and performance of their products and to introduce new products with competitive prices and performance characteristics. These product introductions would likely require us to decrease the prices of our systems and increase the level of discounts that we grant our customers.

Because of the high cost of switching equipment vendors in our markets, it is sometimes difficult for us to win customers from our competitors even if our systems are superior to theirs

We believe that once a semiconductor device manufacturer has selected one vendor's capital equipment for a production-line application, the manufacturer generally relies upon that capital equipment and, to the extent possible, subsequent generations of the same vendor's equipment, for the life of the application. Once a vendor's equipment has been installed in a production line application, a semiconductor device manufacturer must often make substantial technical modifications and may experience production-line downtime in order to switch to another vendor's equipment. Accordingly, unless our systems offer performance or cost advantages that outweigh a customer's expense of switching to our systems, it will be difficult for us to achieve significant sales to that customer once it has selected another vendor's capital equipment for an application.

We must attract and retain key personnel with knowledge of semiconductor device manufacturing and metrology equipment to help support our future growth, and competition for such personnel in our industry is high

Our success depends to a significant degree upon the continued contributions of our key management, engineering, sales and marketing, customer support, finance and manufacturing personnel. The loss of any of these key personnel, each of whom would be extremely difficult to replace, could harm our business and operating results. During downturns in our industry, we have often experienced significant employee attrition, and we may experience further attrition in the event of future downturns. Although we have employment and noncompetition agreements with key members of our senior management team, including Messrs. McLaughlin, Loiterman and Roth, these individuals or other key employees may still leave us. We do not have key person life insurance on any of our executives. In addition, to support our future growth, we will need to attract and retain additional qualified employees. Competition for such personnel in our industry is intense, and we may not be successful in attracting and retaining qualified employees.

Any prolonged disruption in the operations of our manufacturing facilities could have a material adverse effect on our revenues

Our manufacturing processes are highly complex and require sophisticated and costly equipment and a specially designed facility. As a result, any prolonged disruption in the operations of our manufacturing facilities, whether due to technical or labor difficulties, start-up of our new location, destruction of or damage as a result of a fire or any other reason, could seriously harm our ability to satisfy our customer order deadlines. If we cannot timely deliver our systems, our results from operations and cash flows could be materially and adversely affected.

Because we derive a significant portion of our revenues from sales in Asia, our sales and results of operations could be adversely affected by the instability of Asian economies

Our sales to customers in Asian markets represented approximately 39.9%, 59.6%, 56.3% and 60.8% of our revenues in 2003, 2004, 2005 and the six months ended June 30, 2006, respectively. Countries in the Asia Pacific region, including Japan, Korea, China, Singapore and Taiwan, each of which accounted for a significant portion of our business in that region, have experienced currency, banking and equity market weaknesses in the past. We expect that political or economic instability in the Asian markets we service could adversely affect our results of operations and cash flows in future periods.

Our significant level of international sales subjects us to operational, financial and political risks, such as unexpected changes in regulatory requirements, tariffs, political and economic instability, outbreaks of hostilities, and difficulties in managing foreign sales representatives and foreign branch operations

International sales accounted for approximately 65.4%, 69.1% , 77.5% and 71.3%, respectively, of our revenues in 2003, 2004, 2005 and the six months ended June 30, 2006. We anticipate that international sales will account for a significant portion of our revenue during at least the next five years. Due to the significant level of our international sales, we are subject to a number of material risks, including:

Unexpected changes in regulatory requirements including tariffs and other market barriers. The semiconductor device industry is a high-visibility industry in many of the European and Asian countries in which we sell our products. Because the governments of these countries have provided extensive financial support to our semiconductor device manufacturing customers in these countries, we believe that our customers could be disproportionately affected by any trade embargoes, excise taxes or other restrictions imposed by their governments on trade with United States companies such as ourselves. Any restrictions of these types could result in a reduction in our sales to customers in these countries.

Political and economic instability. We are subject to various global risks related to political and economic instabilities in countries in which we derive sales. If terrorist activities, armed conflict, civil or military unrest or political instability occurs outside of the U.S., these events may result in reduced demand for our products. There is considerable political instability in Taiwan related to its disputes with China and in South Korea related to its disputes with North Korea. In addition, several Asian countries, particularly Japan, have experienced significant economic instability. An outbreak of hostilities or other political upheaval in China, Taiwan or South Korea, or an economic downturn in Japan or other countries, would likely harm the operations of our customers in these countries. The effect of these types of events on our revenues and cash flows could be material because we derive substantial revenues from sales to semiconductor device foundries in Taiwan such as TSMC and UMC, from memory chip manufacturers in South Korea such as Hynix and Samsung, and from semiconductor device manufacturers in Japan such as NEC and Toshiba.

Difficulties in staffing and managing foreign branch operations. During periods of tension between the governments of the United States and certain other countries, it is often difficult for United States companies such as ourselves to staff and manage operations in such countries.

Since a substantial portion of our revenues and cash flows are derived from sales in other countries but denominated in U.S. dollars, we could experience a significant decline in sales or experience collection problems in the event the dollar becomes more expensive relative to local currencies

A substantial portion of our international sales are denominated in U.S. dollars. As a result, if the dollar rises in value in relation to foreign currencies, our systems will become more expensive to customers outside the United States and less competitive with systems produced by competitors outside the United States. These conditions could negatively impact our international sales. Foreign sales also expose us to collection risk in the event it becomes more expensive for our foreign customers to convert their local currencies into U.S. dollars.

Terrorist attacks and terrorist threats may disrupt our operations and negatively impact our revenues, costs and stock price

The terrorist attacks in September 2001 in the United States, the U.S. response to these attacks and the resulting decline in consumer confidence has had a substantial adverse impact on the economy. Any similar future events may disrupt our operations or those of our customers and suppliers. In addition, these events have had, and may continue to have, an adverse impact on the U.S. and world economy in general and consumer confidence and spending in particular, which could harm our sales. In addition, any of these events could increase volatility in the U.S. and world financial markets, which, in turn, could adversely affect our stock price, limit the capital resources available to us and our customers or suppliers and/or have a significant impact on our operating results and cash flows.

We may choose to acquire new and complementary businesses, products or technologies instead of developing them ourselves, and may be unable to complete these acquisitions or may not be able to successfully integrate an acquired business in a cost-effective and non-disruptive manner

Our success depends on our ability to continually enhance and broaden our product offerings in response to changing technologies, customer demands and competitive pressures. To this end, we may, from time to time, engage in the process of identifying, analyzing and negotiating possible acquisition transactions and we expect to continue to do so in the future. We may choose to acquire new and complementary businesses, products, or technologies instead of developing them ourselves. We may, however, face competition for acquisition targets from larger and more established companies with greater financial resources, making it more difficult for us to complete acquisitions. We cannot provide any assurance that we will be successful in consummating future acquisitions on favorable terms or that we will realize the benefits that we anticipate from one or more acquisitions that we consummate. Integrating any business, product or technology we acquire could be expensive and time-consuming, disrupt our ongoing business and/or distract our management. Our inability to consummate one or more acquisitions on such favorable terms or our failure to realize the intended benefits from one or more acquisitions, could have a material adverse effect on our business, liquidity, financial position and/or results of operations, including as a result of our incurrence of indebtedness and related interest expense and our assumption of unforeseen contingent liabilities. In addition, in order to finance any acquisitions, we might need to raise additional funds through public or private equity or debt financings. In that event, we could be forced to obtain financing on terms that are not favorable to us and, in the case of equity financing, that result in dilution to our stockholders. In addition, any amortization of intangible assets, write-down of impaired assets or other assets or charges resulting from the costs of acquisitions and purchase accounting could harm our business and operating results.

Although Rudolph expects that the merger with August Technology will result in benefits to the combined company, Rudolph may not realize those benefits because of integration and other challenges

On February 15, 2006, we completed the merger with August Technology Corporation. Rudolph's failure to meet the challenges involved in integrating the global operations of Rudolph and August Technology successfully or otherwise to realize any of the anticipated benefits of the merger, could seriously harm Rudolph's financial positions, results of operations and cash flows. Realizing the benefits of the merger will depend in part on the successful integration of technology, operations and personnel. The integration of the companies is a complex, time-consuming and expensive process that, without proper planning and implementation, could significantly disrupt the respective business of Rudolph. The challenges involved in this integration include, but are not limited to, the following:

* communicating a strategic vision to the market regarding Rudolph following the merger and executing on that strategic vision;

* consolidating operations, including rationalizing corporate information technology and administrative infrastructures;

* combining diverse product and service offerings;

* coordinating sales and marketing efforts to effectively communicate the capabilities of Rudolph following the merger;

* overcoming any perceived adverse changes in business focus, including demonstrating to existing customers of both Rudolph and the former August Technology that the merger will not result in adverse changes in customer service standards or business focus and helping customers conduct business easily with Rudolph following the merger;

* coordinating and harmonizing research and development activities to accelerate introduction of new products and technologies with reduced cost;

* preserving customer, distribution, reseller, manufacturing, supplier, marketing and other important relationships of both Rudolph and the former August Technology and resolving any potential conflicts that may arise;

* minimizing the diversion of management attention from ongoing business concerns;

* retaining key employees and maintaining employee morale;

* addressing differences in the business cultures of Rudolph and the former August Technology;

* addressing the effects of August Technology's employment contracts and the differences between Rudolph's and August Technology's employee bonus plans;

* overcoming challenges involved with managing two large groups of employees in geographically disparate areas;

* coordinating and combining international operations, relationships and facilities, which may be subject to additional constraints imposed by geographic distance, local laws and regulations;

* addressing any challenges involved with Rudolph's ability to earn profits with the expensing of in-process research and development and the amortization of the fair value of property, plants, equipment and intangible assets; and

* overcoming the challenges involved with integrating August Technology's and Rudolph's diverse enterprise resource planning systems worldwide and minimizing any disruptions that may be caused by such integration.

Rudolph may not successfully integrate the operations of Rudolph and August Technology in a timely manner and Rudolph may not realize the anticipated benefits and synergies of the merger to the extent, or in the timeframe, anticipated. The anticipated benefits of the merger are based on projections and assumptions, including successful integration, not actual experience. The failure to integrate the businesses of Rudolph and August Technology or to realize any of the anticipated benefits of the merger could seriously hinder Rudolph's plans for product development as well as business and market expansion following the merger.

If we deliver systems with defects, our credibility will be harmed and the sales and market acceptance of our systems will decrease

Our systems are complex and have occasionally contained errors, defects and bugs when introduced. When this occurs, our credibility and the market acceptance and sales of our systems could be harmed. Further, if our systems contain errors, defects or bugs, we may be required to expend significant capital and resources to alleviate these problems. Defects could also lead to product liability as a result of product liability lawsuits against us or against our customers. We have agreed to indemnify our customers under certain circumstances against liability arising from defects in our systems. Our product liability policy currently provides $2.0 million of coverage per claim, with an overall umbrella limit of $5.0 million. In the event of a successful product liability claim, we could be obligated to pay damages significantly in excess of our product liability insurance limits.

Provisions of our charter documents and Delaware law, as well as our stockholder rights plan, could discourage potential acquisition proposals and/or delay, deter or prevent a change in control of our company

Provisions of our certificate of incorporation and bylaws, as well as our recently adopted stockholders rights plan, may inhibit changes in control of our company not approved by our board of directors. These provisions also limit the circumstances in which a premium can be paid for the common stock, and in which a proxy contest for control of our board may be initiated. These provisions provide for:

* a prohibition on stockholder actions through written consent;

* a requirement that special meetings of stockholders be called only by our chief executive officer or board of directors;

* advance notice requirements for stockholder proposals and director nominations by stockholders;

* limitations on the ability of stockholders to amend, alter or repeal our by-laws;

* the authority of our board to issue, without stockholder approval, preferred stock with such terms as the board may determine; and

* the authority of our board, without stockholder approval, to adopt a Stockholders Rights Plan. Such a Shareholders Rights Plan was adopted by the board of directors on June 27, 2005.

We are also entitled to avail ourselves of the protections of Section 203 of the Delaware General Corporation Law, which could inhibit changes in control of us.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

Interest Rate Risk

We are exposed to changes in interest rates primarily from our investments in certain available-for-sale securities. Our available-for-sale securities consist primarily of fixed income investments (U.S. Treasury and Agency securities and corporate bonds). We continually monitor our exposure to changes in interest rates and credit ratings of issuers from our available-for-sale securities. It is possible that we are at risk if interest rates or credit ratings of issuers change in an unfavorable direction. The magnitude of any gain or loss will be a function of the difference between the fixed rate of the financial instrument and the market rate and our financial condition and results of operations could be materially affected. Based on sensitivity analysis performed on our financial investments held as of June 30, 2006, an immediate adverse change of 10% in interest rates (e.g. 3.00% to 3.30%) would result in a $0.2 million decrease in the fair value of our available for sale securities.

Foreign Currency Risk

We have branch operations in Taiwan, Singapore, China and Korea and wholly-owned subsidiaries in Europe and Japan, which are subject to currency fluctuations. We have determined that the functional currency of our foreign operations is the local currency in our international operations, which incur most of their expenses in the local currency. These foreign branches and subsidiaries are limited in their operations and level of investment so that the risk of currency fluctuations is not material. A substantial portion of our international sales are denominated in U.S. dollars and, as a result, we have relatively little exposure to foreign currency exchange risk with respect to these sales. Substantially all our sales in Japan are denominated in Japanese yen. From time to time, we may enter into forward exchange contracts to economically hedge a portion of, but not all, existing and anticipated foreign currency denominated transactions expected to occur within 12 months. The change in fair value of the forward contracts is recognized in the Consolidated Statements of Operations each reporting period. As of June 30, 2006, we had sixteen forward contracts outstanding with a total notional contract value of $7.0 million. We do not use derivative financial instruments for trading or speculative purposes.

Item 4. Controls and Procedures

The Company maintains a set of disclosure controls and procedures designed to ensure that information required to be disclosed by the Company in reports that it files or submits under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms and that such information is accumulated and communicated to the Company's management, including its Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), as appropriate, to allow for timely decisions regarding required disclosure. The disclosure controls and procedures are designed to provide reasonable assurance of achieving the desired control objectives. As of June 30, 2006, an evaluation was carried out under the supervision and with the participation of the Company's management, including the CEO and CFO. Based on this evaluation, the CEO and CFO have concluded that the Company's disclosure controls and procedures were effective at the reasonable assurance level.

There have been no significant changes in the Company's internal controls over financial reporting during the Company's most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, the Company's internal controls over financial reporting.

PART II OTHER INFORMATION

Item 1. Legal Proceedings

A discussion regarding pending legal proceedings is included in Part 1, Item 3, "Legal Proceedings," included in our Annual Report on Form 10-K for the year ended December 31, 2005.

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

We held our Annual Meeting of Stockholders on May 23, 2006. Out of 28,386,747 shares of Common Stock entitled to vote at such meeting, there were present in person or by proxy 26,294,173 shares. At the Annual Meeting the stockholders of Rudolph Technologies, Inc. approved the following matters.

An election of directors was held with the following individuals being elected to the Board of Directors:

Paul Craig, 23,396,688 votes cast for and 2,897,485 votes withheld;
Paul F. McLaughlin, 23,062,254 votes cast for and 3,231,919 votes withheld; and
Carl E. Ring, Jr., 23,396,688 votes cast for and 2,897,485 votes withheld.

The following is a list of our directors who did not stand for election at such Annual Meeting: David Belluck, Daniel H. Berry, Thomas G. Greig, Richard F. Spanier and Aubrey Tobey.

Proposal II submitted to a vote of stockholders at the meeting was to ratify the appointment of KPMG LLP as independent registered public accountants of the Company for the year ending December 31, 2006. Votes cast were as follows:

26,047,842 votes cast for, 242,157 votes cast against and 4,174 votes abstained.

Item 6. Exhibits

Exhibit No.	Description
2.1	Agreement and Plan of Merger, dated as of June 27, 2005, by and among the Registrant, NS Merger Sub, Inc. and August Technology Corporation (incorporated by reference to Exhibit 99.2 to the Company's Schedule 13D filed with the SEC on July 7, 2005).
2.2	Amendment No. 1, dated as of December 8, 2005, by and among the Registrant, NS Merger Sub, Inc. and August Technology Corporation, to the Agreement and Plan of Merger, dated as of June 27, 2005, by and among the Registrant, NS Merger Sub, Inc. and August Technology Corporation (incorporated by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K filed with the SEC on December 9, 2005).
3.1	Restated Certificate of Incorporation of Registrant (incorporated herein by reference to Exhibit (3.1(b)) to the Registrant's Registration Statement on Form S-1, as amended (SEC File No. 333-86871 filed on September 9, 1999).
3.2	Amended and Restated Bylaws of Registrant (incorporated herein by reference to Exhibit (3.2(b) to the Registrant's Registration Statement on Form S-1, as amended (SEC File No. 333-86871), filed on September 9, 1999.
3.3	Amendment to Restated Bylaws of Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed with the Commission on February 15, 2006, No. 000-27965).
10.14	Form of Restricted Stock Unit Purchase Agreements pursuant to the Rudolph Technologies, Inc. 1999 Stock Plan
31.1	Certification of Paul F. McLaughlin, Chief Executive Officer, pursuant to Securities Exchange Act Rule 13a-14(a).
31.2	Certification of Steven R. Roth, Chief Financial Officer, pursuant to Securities Exchange Act Rule 13a-14(a).
32.1	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, signed by Paul F. McLaughlin, Chief Executive Officer of Rudolph Technologies, Inc.
32.2	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, signed by Steven R. Roth, Chief Financial Officer of Rudolph Technologies, Inc.

SIGNATURES

Pursuant to the requirements 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.

Rudolph Technologies, Inc.

Date: August 9, 2006 By: /s/ Paul F. McLaughlin
Paul F. McLaughlin
Chairman and Chief Executive Officer

Date: August 9, 2006 By: /s/ Steven R. Roth
Steven R. Roth
Senior Vice President, Chief Financial Officer
and Principal Accounting Officer

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EXHIBIT 10.14

Rudolph Technologies, Inc.
Restricted Stock Unit Purchase Agreement
(Director Initial Grant Agreement)

THIS AGREEMENT, dated ____________, 200__ (the "Award Date"), is made between Rudolph Technologies, Inc., a Delaware corporation hereinafter referred to as the "Company," and ________________________ (the "Participant"). Participant [ ] is [ ] is not a Section 16 Insider of the Company.

1. Definitions. All capitalized terms used in this Agreement without definition shall have the meanings ascribed in the Company's 1999 Stock Plan, as amended from time to time (the "Plan").

2. Award of Restricted Stock Units.

(a) Award. In consideration of the Participant's agreement to remain in the service or employ of the Company or one of its Subsidiaries, and for other good and valuable consideration which the Committee has determined exceeds the aggregate par value of the shares of the common stock of the Company (the "Common Stock") subject to the Award (as defined below), as of the Award Date, the Company issues to the Participant the Award described in this Agreement (the "Award"). The number of Restricted Stock Units (the "RSUs") subject to the Award (which shall be subject to adjustment in accordance with Section 13 of the Plan) is set forth on the signature page hereof. Upon Award, all RSUs shall be issued to the Participant's employee stock plan account established at E*Trade Financial Corp ("E*Trade") or other stock plan administrator as determined by Company.

(b) Purchase Price; Book Entry Form. The purchase price of the shares underlying the RSUs (the "Shares") is zero dollars ($0.00) per share. The Shares will be issued in uncertificated form. The Shares will be recorded in the name of the Participant in the books and records of the Company's transfer agent with appropriate notations regarding the restrictions on transfer imposed pursuant to this Agreement. Upon vesting and the satisfaction of all conditions set forth in Section 3(d), the Company shall cause certificates representing the Shares to be issued to the Participant.

(c) Plan. The Award granted hereunder is subject to the terms and provisions of the Plan, including without limitation, Article 13 thereof. The Award shall constitute a Stock Purchase Right as described in Section 11 of the Plan.

3. Restrictions.

(a) Forfeiture. Any Award which is not vested as of the date the Participant ceases to be an employee of the Company or one of its Subsidiaries or other Service Provider shall thereupon be forfeited immediately and without any further action by the Company. For purposes of this Agreement, "Restrictions" shall mean the restrictions on sale or other transfer set forth in Section 5 and the exposure to forfeiture set forth in this Section 3(a) and Section 3(d)(iii).

(b) Vesting and Lapse of Restrictions. Subject to Sections 3(a) and 3(c), the Award shall vest and Restrictions shall lapse with respect to fifty percent (50%) of the Shares subject to the Award on each of the first two (2) anniversaries of the Award Date, provided that the Participant remains continuously as a Director or in the service of the Company or a Subsidiary or otherwise as a Service Provider from the Award Date through such date.

(c) Acceleration of Vesting. Notwithstanding Sections 3(a) and 3(b), the Award shall become fully vested and all Restrictions applicable to such Award shall lapse in the event of a merger of the Company with or into another corporation, or the sale of substantially all of the assets of the Company, and the successor corporation refuses to assume or substitute its stock for the Award. Should the successor corporation assume the Award, then no acceleration shall apply.

(d) Tax Withholding; Conditions to Issuance of Certificates. Notwithstanding any other provision of this Agreement (including without limitation Section 2(b)):

(i) No new certificate shall be delivered to the Participant or his legal representative unless and until the Participant or his legal representative shall have paid to the Company the full amount of all federal and state withholding or other taxes applicable to the taxable income of Participant resulting from the grant of the RSUs or the lapse or removal of the Restrictions (the "Taxes").

(ii) Prior to the initial vesting anniversary date, Participant must notify E*Trade of his/her election as to which of the following three (3) methods Participant elects to be utilized to satisfy the tax obligations related to the vested Shares. In the event that Participant does not so notify E*Trade prior to the vesting anniversary date, the method set forth in Section 3(d)(ii)(C) below shall be applied. In the event Participant desires to change his/her election after the initial vesting anniversary date, Participant must notify E*Trade of such change prior to the next vesting anniversary date, provided, however, that if no such notification is given the tax treatment in place as of the initial vesting anniversary date shall apply. The three (3) methods by which Participant may pay the required amount of the Taxes are as follows:

(A) Participant may pay the required amount via: (1) a cash transfer to E*Trade within five (5) days of the vesting anniversary date, or (2) a check made out to Rudolph Technologies, Inc.;

(B) as of the vesting anniversary date, E*Trade may sell all of the Shares vested on the anniversary date, apply the appropriate amount to the Taxes and transfer the remainder in cash to the Participant; or

(C) as of the vesting anniversary date, E*Trade may sell a sufficient number of Shares vested on the anniversary date to cover the appropriate amount for the Taxes and the balance of Shares shall be retained in the E*Trade account on behalf of Participant.

(iii) The following restrictions apply:

(A) If Participant is not designated as a Section 16 Insider as set forth above and Participant elects under Section 3(d)(ii)(A), all tax obligations must be satisfied within ninety (90) days of the vesting anniversary date. If such Taxes are not paid within the ninety (90) day timeframe, the amount of Shares vested on the most recent anniversary date shall be forfeited immediately and without any further action by the Company.

(B) If Participant is designated as a Section 16 Insider as set forth above, the following applies:

(1) in the event that Participant elects to satisfy the Taxes via Section 3(d)(ii)(B) or 3(d)(ii)(C) above but the anniversary vesting date for Shares falls within a closed "Trading Window" of the Company (as defined in Rudolph Technologies, Inc. Insider Trading Compliance Program), the Participant shall be required to discharge the tax obligations in accordance with Section 3(d)(ii)(A) notwithstanding the election which the Participant had made.

(2) in the event that Participant elects to pay the Taxes in cash under Section 3(d)(ii)(A) or is required to pay in cash as a result of Section 3(d)(iii)(B)(1), all tax obligations must be satisfied within ninety (90) days of the vesting anniversary date. If such Taxes are not paid within the ninety (90) day timeframe, the amount of Shares vested on the most recent anniversary date shall be forfeited immediately and without any further action by the Company.

(iv) The Company shall not be required to issue or deliver any certificate or certificates for any Shares prior to the fulfillment of all of the following conditions:

(A) the admission of the Shares to listing on all stock exchanges on which such Common Stock is then listed,

(B) the completion of any registration or other qualification of the Shares under any state or federal law or under rulings or regulations of the Securities and Exchange Commission or other governmental regulatory body, which the Committee shall, in its sole and absolute discretion, deem necessary and advisable,

(C) the obtaining of any approval or other clearance from any state or federal governmental agency that the Committee shall, in its absolute discretion, determine to be necessary or advisable, and

(D) the lapse of any such reasonable period of time following the date the Restrictions lapse as the Committee may from time to time establish for reasons of administrative convenience.

4. Section 83(b) Election. Participant understands that Section 83(a) of the Code taxes as ordinary income the difference between the amount, if any, paid for the Shares of Common Stock and the Fair Market Value of such Shares at the time the Restrictions on such Shares lapse. Participant understands that, notwithstanding the preceding sentence, Participant may elect to be taxed at the time of the Award Date, rather that at the time the Restrictions lapse, by filing an election under Section 83(b) of the Code (an "83(b) Election") with the Internal Revenue Service within 30 days of the Award Date. In the event Participant files an 83(b) Election, Participant will recognize ordinary income in an amount equal to the difference between the amount, if any, paid for the Shares of Common Stock and the Fair Market Value of such Shares as of the Award Date. Participant further understands that an additional copy of such 83(b) Election form should be filed with his or her federal income tax return for the calendar year in which the date of this Agreement falls. Participant acknowledges that the foregoing is only a summary of the effect of United States federal income taxation with respect to the award of the RSUs hereunder, and does not purport to be complete. PARTICIPANT FURTHER ACKNOWLEDGES THAT THE COMPANY IS NOT RESPONSIBLE FOR FILING THE PARTICIPANT'S 83(b) ELECTION, AND THE COMPANY HAS DIRECTED PARTICIPANT TO SEEK INDEPENDENT ADVICE REGARDING THE APPLICABLE PROVISIONS OF THE INTERNAL REVENUE CODE, THE INCOME TAX LAWS OF ANY MUNICIPALITY, STATE OR FOREIGN COUNTRY IN WHICH PARTICIPANT MAY RESIDE, AND THE TAX CONSEQUENCES OF PARTICIPANT'S DEATH.

5. Restricted Stock Units Not Transferable. No RSUs or any interest or right therein or part thereof shall be liable for the debts, contracts or engagements of the Participant or his successors in interest or shall be subject to disposition by transfer, alienation, anticipation, pledge, encumbrance, assignment or any other means whether such disposition be voluntary or involuntary or by operation of law by judgment, levy, attachment, garnishment or any

other legal or equitable proceedings (including bankruptcy), and any attempted disposition thereof shall be null and void and of no effect; *provided, however*, that this Section 5 shall not prevent transfers by will or by applicable laws of descent and distribution.

6. Rights as Stockholder. Until the Participant has satisfied all requirements for vesting and the satisfaction of all conditions set forth in Section 3(d) of this Agreement, the Participant shall not be deemed to be a shareholder or to have any of the rights of a shareholder with respect to any Shares of stock subject to the Award..

7. Not a Contract of Employment. Nothing in this Agreement or in the Plan shall confer upon the Participant any right to continue to serve as an employee or other Service Provider of the Company or any of its Subsidiaries.

8. Governing Law. The laws of the State of Delaware shall govern the interpretation, validity, administration, enforcement and performance of the terms of this Agreement regardless of the law that might be applied under principles of conflicts of laws.

9. Conformity to Securities Laws. The Participant acknowledges that the Plan and this Agreement are intended to conform to the extent necessary with all provisions of the Securities Act of 1933, as amended, and the Exchange Act, and any and all regulations and rules promulgated thereunder by the Securities and Exchange Commission, including without limitation Rule 16b-3 under the Exchange Act. Notwithstanding anything herein to the contrary, the Plan shall be administered, and the Awards are granted, only in such a manner as to conform to such laws, rules and regulations. To the extent permitted by applicable law, the Plan and this Agreement shall be deemed amended to the extent necessary to conform to such laws, rules and regulations.

10. Amendment, Suspension and Termination. The Awards may be wholly or partially amended or otherwise modified, suspended or terminated at any time or from time to time by the Committee or the Board, *provided*, that, except as may otherwise be provided by the Plan, neither the amendment, suspension nor termination of this Agreement shall, without the consent of the Participant, alter or impair any rights or obligations under any Award.

11. Notices. Notices required or permitted hereunder shall be given in writing and shall be deemed effectively given upon personal delivery or upon deposit in the United States mail by certified mail, with postage and fees prepaid, addressed to the Participant to his address shown in the Company records, and to the Company at its principal executive office.

The Participant represents that he/she has read this Agreement and the Plan and is familiar with the terms and provisions of each. The Participant acknowledges that the Award is issued pursuant to, and is subject to the terms and conditions of, the Plan, and the Participant will be bound by the terms of the Plan as if it were set forth verbatim in this Agreement. The Participant agrees to comply with all rules the Company may establish with respect to the Plan. The Participant agrees to accept as binding, conclusive and final all decisions or interpretations of the Committee with respect to any questions arising under the Plan or this Agreement. The Participant further acknowledges and agrees that this Agreement (and the Plan) constitutes the entire agreement between the parties with respect to the Award and that this Agreement (and the Plan) supersedes any and all prior agreements, whether written or oral, between the parties with respect to the Award.

IN WITNESS WHEREOF, this Agreement has been executed and delivered by the parties hereto as of the date first set forth above.

RUDOLPH TECHNOLOGIES, INC. PARTICIPANT By:

__________________________ ______________________________

Name:

Title:

Residence Address:
"STREET1"
"STREET2"
"CITY", "STATE" "ZIP"
"COUNTRY"

Aggregate number of Restricted Stock Units subject to the Award: __________________

Rudolph Technologies, Inc.
Restricted Stock Unit Purchase Agreement
(Director Annual Grant Agreement)

THIS AGREEMENT, dated ____________, 200__ (the "Award Date"), is made between Rudolph Technologies, Inc., a Delaware corporation hereinafter referred to as the "Company," and ________________________ (the "Participant"). Participant [ ] is [ ] is not a Section 16 Insider of the Company.

1. Definitions. All capitalized terms used in this Agreement without definition shall have the meanings ascribed in the Company's 1999 Stock Plan, as amended from time to time (the "Plan").

2. Award of Restricted Stock Units.

(a) Award. In consideration of the Participant's agreement to remain in the service or employ of the Company or one of its Subsidiaries, and for other good and valuable consideration which the Committee has determined exceeds the aggregate par value of the shares of the common stock of the Company (the "Common Stock") subject to the Award (as defined below), as of the Award Date, the Company issues to the Participant the Award described in this Agreement (the "Award"). The number of Restricted Stock Units (the "RSUs") subject to the Award (which shall be subject to adjustment in accordance with Section 13 of the Plan) is set forth on the signature page hereof. Upon Award, all RSUs shall be issued to the Participant's employee stock plan account established at E*Trade Financial Corp ("E*Trade") or other stock plan administrator as determined by Company.

(b) Purchase Price; Book Entry Form. The purchase price of the shares underlying the RSUs (the "Shares") is zero dollars ($0.00) per share. The Shares will be issued in uncertificated form. The Shares will be recorded in the name of the Participant in the books and records of the Company's transfer agent with appropriate notations regarding the restrictions on transfer imposed pursuant to this Agreement. Upon vesting and the satisfaction of all conditions set forth in Section 3(d), the Company shall cause certificates representing the Shares to be issued to the Participant.

(c) Plan. The Award granted hereunder is subject to the terms and provisions of the Plan, including without limitation, Article 13 thereof. The Award shall constitute a Stock Purchase Right as described in Section 11 of the Plan.

3. Restrictions.

(a) Forfeiture. Any Award which is not vested as of the date the Participant ceases to be an employee of the Company or one of its Subsidiaries or other Service Provider shall thereupon be forfeited immediately and without any further action by the Company. For purposes of this Agreement, "Restrictions" shall mean the restrictions on sale or other transfer set forth in Section 5 and the exposure to forfeiture set forth in this Section 3(a) and Section 3(d)(iii).

(b) Vesting and Lapse of Restrictions. Subject to Sections 3(a) and 3(c), the Award shall vest and Restrictions shall lapse with respect to one hundred percent (100%) of the Shares subject to the Award on the first anniversary of the Award Date, provided that the Participant remains continuously as a Director or in the service of the Company or a Subsidiary or otherwise as a Service Provider from the Award Date through such date.

(c) Acceleration of Vesting. Notwithstanding Sections 3(a) and 3(b), the Award shall become fully vested and all Restrictions applicable to such Award shall lapse in the event of a merger of the Company with or into another corporation, or the sale of substantially all of the assets of the Company, and the successor corporation refuses to assume or substitute its stock for the Award. Should the successor corporation assume the Award, then no acceleration shall apply.

(d) Tax Withholding; Conditions to Issuance of Certificates. Notwithstanding any other provision of this Agreement (including without limitation Section 2(b)):

(i) No new certificate shall be delivered to the Participant or his legal representative unless and until the Participant or his legal representative shall have paid to the Company the full amount of all federal and state withholding or other taxes applicable to the taxable income of Participant resulting from the grant of the RSUs or the lapse or removal of the Restrictions (the "Taxes").

(ii) Prior to the initial vesting anniversary date, Participant must notify E*Trade of his/her election as to which of the following three (3) methods Participant elects to be utilized to satisfy the tax obligations related to the vested Shares. In the event that Participant does not so notify E*Trade prior to the vesting anniversary date, the method set forth in Section 3(d)(ii)(C) below shall be applied. In the event Participant desires to change his/her election after the initial vesting anniversary date, Participant must notify E*Trade of such change prior to the next vesting anniversary date, provided, however, that if no such notification is given the tax treatment in place as of the initial vesting anniversary date shall apply. The three (3) methods by which Participant may pay the required amount of the Taxes are as follows:

(A) Participant may pay the required amount via:

(1) a cash transfer to E*Trade within five (5) days of the vesting anniversary date, or

(2) a check made out to Rudolph Technologies, Inc.;

(B) as of the vesting anniversary date, E*Trade may sell all of the Shares vested on the anniversary date, apply the appropriate amount to the Taxes and transfer the remainder in cash to the Participant; or

(C) as of the vesting anniversary date, E*Trade may sell a sufficient number of Shares vested on the anniversary date to cover the appropriate amount for the Taxes and the balance of Shares shall be retained in the E*Trade account on behalf of Participant.

(iii) The following restrictions apply:

(A) If Participant is not designated as a Section 16 Insider as set forth above and Participant elects under Section 3(d)(ii)(A), all tax obligations must be satisfied within ninety (90) days of the vesting anniversary date. If such Taxes are not paid within the ninety (90) day timeframe, the amount of Shares vested on the most recent anniversary date shall be forfeited immediately and without any further action by the Company.

(B) If Participant is designated as a Section 16 Insider as set forth above, the following applies:

(1) in the event that Participant elects to satisfy the Taxes via Section 3(d)(ii)(B) or 3(d)(ii)(C) above but the anniversary vesting date for Shares falls within a closed "Trading Window" of the Company (as defined in Rudolph Technologies, Inc. Insider Trading Compliance Program), the Participant shall be required to discharge the tax obligations in accordance with Section 3(d)(ii)(A) notwithstanding the election which the Participant had made.

(2) in the event that Participant elects to pay the Taxes in cash under Section 3(d)(ii)(A) or is required to pay in cash as a result of Section 3(d)(iii)(B)(1), all tax obligations must be satisfied within ninety (90) days of the vesting anniversary date. If such Taxes are not paid within the ninety (90) day timeframe, the amount of Shares vested on the most recent anniversary date shall be forfeited immediately and without any further action by the Company.

(iv) The Company shall not be required to issue or deliver any certificate or certificates for any Shares prior to the fulfillment of all of the following conditions:

(A) the admission of the Shares to listing on all stock exchanges on which such Common Stock is then listed,

(B) the completion of any registration or other qualification of the Shares under any state or federal law or under rulings or regulations of the Securities and Exchange Commission or other governmental regulatory body, which the Committee shall, in its sole and absolute discretion, deem necessary and advisable,

(C) the obtaining of any approval or other clearance from any state or federal governmental agency that the Committee shall, in its absolute discretion, determine to be necessary or advisable, and

(D) the lapse of any such reasonable period of time following the date the Restrictions lapse as the Committee may from time to time establish for reasons of administrative convenience.

4. Section 83(b) Election. Participant understands that Section 83(a) of the Code taxes as ordinary income the difference between the amount, if any, paid for the Shares of Common Stock and the Fair Market Value of such Shares at the time the Restrictions on such Shares lapse. Participant understands that, notwithstanding the preceding sentence, Participant may elect to be taxed at the time of the Award Date, rather that at the time the Restrictions lapse, by filing an election under Section 83(b) of the Code (an "83(b) Election") with the Internal Revenue Service within 30 days of the Award Date. In the event Participant files an 83(b) Election, Participant will recognize ordinary income in an amount equal to the difference between the amount, if any, paid for the Shares of Common Stock and the Fair Market Value of such Shares as of the Award Date. Participant further understands that an additional copy of such 83(b) Election form should be filed with his or her federal income tax return for the calendar year in which the date of this Agreement falls. Participant acknowledges that the foregoing is only a summary of the effect of United States federal income taxation with respect to the award of the RSUs hereunder, and does not purport to be complete. PARTICIPANT FURTHER ACKNOWLEDGES THAT THE COMPANY IS NOT RESPONSIBLE FOR FILING THE PARTICIPANT'S 83(b) ELECTION, AND THE COMPANY HAS DIRECTED PARTICIPANT TO SEEK INDEPENDENT ADVICE REGARDING THE APPLICABLE PROVISIONS OF THE INTERNAL REVENUE CODE, THE INCOME TAX LAWS OF ANY MUNICIPALITY, STATE OR FOREIGN COUNTRY IN WHICH PARTICIPANT MAY RESIDE, AND THE TAX CONSEQUENCES OF PARTICIPANT'S DEATH.

5. Restricted Stock Units Not Transferable. No RSUs or any interest or right therein or part thereof shall be liable for the debts, contracts or engagements of the Participant or his successors in interest or shall be subject to

disposition by transfer, alienation, anticipation, pledge, encumbrance, assignment or any other means whether such disposition be voluntary or involuntary or by operation of law by judgment, levy, attachment, garnishment or any other legal or equitable proceedings (including bankruptcy), and any attempted disposition thereof shall be null and void and of no effect; *provided, however*, that this Section 5 shall not prevent transfers by will or by applicable laws of descent and distribution.

6. Rights as Stockholder. Until the Participant has satisfied all requirements for vesting and the satisfaction of all conditions set forth in Section 3(d) of this Agreement, the Participant shall not be deemed to be a shareholder or to have any of the rights of a shareholder with respect to any Shares of stock subject to the Award..

7. Not a Contract of Employment. Nothing in this Agreement or in the Plan shall confer upon the Participant any right to continue to serve as an employee or other Service Provider of the Company or any of its Subsidiaries.

8. Governing Law. The laws of the State of Delaware shall govern the interpretation, validity, administration, enforcement and performance of the terms of this Agreement regardless of the law that might be applied under principles of conflicts of laws.

9. Conformity to Securities Laws. The Participant acknowledges that the Plan and this Agreement are intended to conform to the extent necessary with all provisions of the Securities Act of 1933, as amended, and the Exchange Act, and any and all regulations and rules promulgated thereunder by the Securities and Exchange Commission, including without limitation Rule 16b-3 under the Exchange Act. Notwithstanding anything herein to the contrary, the Plan shall be administered, and the Awards are granted, only in such a manner as to conform to such laws, rules and regulations. To the extent permitted by applicable law, the Plan and this Agreement shall be deemed amended to the extent necessary to conform to such laws, rules and regulations.

10. Amendment, Suspension and Termination. The Awards may be wholly or partially amended or otherwise modified, suspended or terminated at any time or from time to time by the Committee or the Board, *provided*, that, except as may otherwise be provided by the Plan, neither the amendment, suspension nor termination of this Agreement shall, without the consent of the Participant, alter or impair any rights or obligations under any Award.

11. Notices. Notices required or permitted hereunder shall be given in writing and shall be deemed effectively given upon personal delivery or upon deposit in the United States mail by certified mail, with postage and fees prepaid, addressed to the Participant to his address shown in the Company records, and to the Company at its principal executive office.

The Participant represents that he/she has read this Agreement and the Plan and is familiar with the terms and provisions of each. The Participant acknowledges that the Award is issued pursuant to, and is subject to the terms and conditions of, the Plan, and the Participant will be bound by the terms of the Plan as if it were set forth verbatim in this Agreement. The Participant agrees to comply with all rules the Company may establish with respect to the Plan. The Participant agrees to accept as binding, conclusive and final all decisions or interpretations of the Committee with respect to any questions arising under the Plan or this Agreement. The Participant further acknowledges and agrees that this Agreement (and the Plan) constitutes the entire agreement between the parties with respect to the Award and that this Agreement (and the Plan) supersedes any and all prior agreements, whether written or oral, between the parties with respect to the Award.

IN WITNESS WHEREOF, this Agreement has been executed and delivered by the parties hereto as of the date first set forth above.

RUDOLPH TECHNOLOGIES, INC. PARTICIPANT

By: ___________________________ ________________________________
Name:
Title:

Residence Address:
"STREET1"
"STREET2"
"CITY", "STATE" "ZIP"
"COUNTRY"

Aggregate number of Restricted Stock Units subject to the Award: __________________

Rudolph Technologies, Inc. Restricted
Stock Unit Purchase Agreement
(Standard Employee Agreement)

THIS AGREEMENT, dated ____________, 200__ (the "Award Date"), is made between Rudolph Technologies, Inc., a Delaware corporation hereinafter referred to as the "Company," and ________________________ (the "Participant"). Participant [ ] is [ ] is not a Section 16 Insider of the Company.

1. Definitions. All capitalized terms used in this Agreement without definition shall have the meanings ascribed in the Company's 1999 Stock Plan, as amended from time to time (the "Plan").

2. Award of Restricted Stock Units.

(a) Award. In consideration of the Participant's agreement to remain in the service or employ of the Company or one of its Subsidiaries, and for other good and valuable consideration which the Committee has determined exceeds the aggregate par value of the shares of the common stock of the Company (the "Common Stock") subject to the Award (as defined below), as of the Award Date, the Company issues to the Participant the Award described in this Agreement (the "Award"). The number of Restricted Stock Units (the "RSUs") subject to the Award (which shall be subject to adjustment in accordance with Section 13 of the Plan) is set forth on the signature page hereof. Upon Award, all RSUs shall be issued to the Participant's employee stock plan account established at E*Trade Financial Corp ("E*Trade") or other stock plan administrator as determined by Company.

(b) Purchase Price; Book Entry Form. The purchase price of the shares underlying the RSUs (the "Shares") is zero dollars ($0.00) per share. The Shares will be issued in uncertificated form. The Shares will be recorded in the name of the Participant in the books and records of the Company's transfer agent with appropriate notations regarding the restrictions on transfer imposed pursuant to this Agreement. Upon vesting and the satisfaction of all conditions set forth in Section 3(d), the Company shall cause certificates representing the Shares to be issued to the Participant.

(c) Plan. The Award granted hereunder is subject to the terms and provisions of the Plan, including without limitation, Article 13 thereof. The Award shall constitute a Stock Purchase Right as described in Section 11 of the Plan.

3. Restrictions.

(a) Forfeiture. Any Award which is not vested as of the date the Participant ceases to be an employee of the Company or one of its Subsidiaries or other Service Provider shall thereupon be forfeited immediately and without any further action by the Company. For purposes of this Agreement, "Restrictions" shall mean the restrictions on sale or other transfer set forth in Section 5 and the exposure to forfeiture set forth in this Section 3(a) and Section 3(d)(iii).

(b) Vesting and Lapse of Restrictions. Subject to Sections 3(a) and 3(c), the Award shall vest and Restrictions shall lapse with respect to ________ percent (__%) of the Shares subject to the Award (rounded down to the next whole number of shares) on each of the first ____ (__) anniversaries of the Award Date, provided in each case that the Participant remains continuously as an employee or in the service of the Company or a Subsidiary or otherwise as a Service Provider from the Award Date through such date.

(c) Acceleration of Vesting. Notwithstanding Sections 3(a) and 3(b), the Award shall become fully vested and all Restrictions applicable to such Award shall lapse in the event of a merger of the Company with or into another corporation, or the sale of substantially all of the assets of the Company, and the successor corporation refuses to assume or substitute its stock for the Award. Should the successor corporation assume the Award, then no acceleration shall apply.

(d) Tax Withholding; Conditions to Issuance of Certificates. Notwithstanding any other provision of this Agreement (including without limitation Section 2(b)):

(i) No new certificate shall be delivered to the Participant or his legal representative unless and until the Participant or his legal representative shall have paid to the Company the full amount of all federal and state withholding or other taxes applicable to the taxable income of Participant resulting from the grant of the RSUs or the lapse or removal of the Restrictions (the "Taxes").

(ii) Prior to the initial vesting anniversary date, Participant must notify E*Trade of his/her election as to which of the following three (3) methods Participant elects to be utilized to satisfy the tax obligations related to the vested Shares. In the event that Participant does not so notify E*Trade prior to the vesting anniversary date, the method set forth in Section 3(d)(ii)(C) below shall be applied. In the event Participant desires to change his/her election after the initial vesting anniversary date, Participant must notify E*Trade of such change prior to the next vesting anniversary date, provided, however, that if no such notification is given the tax treatment in place as of the initial vesting anniversary date shall apply. The three (3) methods by which Participant may pay the required amount of the Taxes are as follows:

(A) Participant may pay the required amount via: (1) a cash transfer to E*Trade within five (5) days of the vesting anniversary date, or (2) a check made out to Rudolph Technologies, Inc.;

(B) as of the vesting anniversary date, E*Trade may sell all of the Shares vested on the anniversary date, apply the appropriate amount to the Taxes and transfer the remainder in cash to the Participant; or

(C) as of the vesting anniversary date, E*Trade may sell a sufficient number of Shares vested on the anniversary date to cover the appropriate amount for the Taxes and the balance of Shares shall be retained in the E*Trade account on behalf of Participant.

(iii) The following restrictions apply:

(A) If Participant is not designated as a Section 16 Insider as set forth above and Participant elects under Section 3(d)(ii)(A), all tax obligations must be satisfied within ninety (90) days of the vesting anniversary date. If such Taxes are not paid within the ninety (90) day timeframe, the amount of Shares vested on the most recent anniversary date shall be forfeited immediately and without any further action by the Company.

(B) If Participant is designated as a Section 16 Insider as set forth above, the following applies:

(1) in the event that Participant elects to satisfy the Taxes via Section 3(d)(ii)(B) or 3(d)(ii)(C) above but the anniversary vesting date for Shares falls within a closed "Trading Window" of the Company (as defined in Rudolph Technologies, Inc. Insider Trading Compliance Program), the Participant shall be required to discharge the tax obligations in accordance with Section 3(d)(ii)(A) notwithstanding the election which the Participant had made.

(2) in the event that Participant elects to pay the Taxes in cash under Section 3(d)(ii)(A) or is required to pay in cash as a result of Section 3(d)(iii)(B)(1), all tax obligations must be satisfied within ninety (90) days of the vesting anniversary date. If such Taxes are not paid within the ninety (90) day timeframe, the amount of Shares vested on the most recent anniversary date shall be forfeited immediately and without any further action by the Company.

(iv) The Company shall not be required to issue or deliver any certificate or certificates for any Shares prior to the fulfillment of all of the following conditions:

(A) the admission of the Shares to listing on all stock exchanges on which such Common Stock is then listed,

(B) the completion of any registration or other qualification of the Shares under any state or federal law or under rulings or regulations of the Securities and Exchange Commission or other governmental regulatory body, which the Committee shall, in its sole and absolute discretion, deem necessary and advisable,

(C) the obtaining of any approval or other clearance from any state or federal governmental agency that the Committee shall, in its absolute discretion, determine to be necessary or advisable, and

(D) the lapse of any such reasonable period of time following the date the Restrictions lapse as the Committee may from time to time establish for reasons of administrative convenience.

4. Section 83(b) Election. Participant understands that Section 83(a) of the Code taxes as ordinary income the difference between the amount, if any, paid for the Shares of Common Stock and the Fair Market Value of such Shares at the time the Restrictions on such Shares lapse. Participant understands that, notwithstanding the preceding sentence, Participant may elect to be taxed at the time of the Award Date, rather that at the time the Restrictions lapse, by filing an election under Section 83(b) of the Code (an "83(b) Election") with the Internal Revenue Service within 30 days of the Award Date. In the event Participant files an 83(b) Election, Participant will recognize ordinary income in an amount equal to the difference between the amount, if any, paid for the Shares of Common Stock and the Fair Market Value of such Shares as of the Award Date. Participant further understands that an additional copy of such 83(b) Election form should be filed with his or her federal income tax return for the calendar year in which the date of this Agreement falls. Participant acknowledges that the foregoing is only a summary of the effect of United States federal income taxation with respect to the award of the RSUs hereunder, and does not purport to be complete. PARTICIPANT FURTHER ACKNOWLEDGES THAT THE COMPANY IS NOT RESPONSIBLE FOR FILING THE PARTICIPANT'S 83(b) ELECTION, AND THE COMPANY HAS DIRECTED PARTICIPANT TO SEEK INDEPENDENT ADVICE REGARDING THE APPLICABLE PROVISIONS OF THE INTERNAL REVENUE CODE, THE INCOME TAX LAWS OF ANY MUNICIPALITY, STATE OR FOREIGN COUNTRY IN WHICH PARTICIPANT MAY RESIDE, AND THE TAX CONSEQUENCES OF PARTICIPANT'S DEATH.

5. Restricted Stock Units Not Transferable. No RSUs or any interest or right therein or part thereof shall be liable for the debts, contracts or engagements of the Participant or his successors in interest or shall be subject to disposition by transfer, alienation, anticipation, pledge, encumbrance, assignment or any other means whether such disposition be voluntary or involuntary or by operation of law by judgment, levy, attachment, garnishment or any

other legal or equitable proceedings (including bankruptcy), and any attempted disposition thereof shall be null and void and of no effect; *provided, however*, that this Section 5 shall not prevent transfers by will or by applicable laws of descent and distribution.

6. Rights as Stockholder. Until the Participant has satisfied all requirements for vesting and the satisfaction of all conditions set forth in Section 3(d) of this Agreement, the Participant shall not be deemed to be a shareholder or to have any of the rights of a shareholder with respect to any Shares of stock subject to the Award.

7. Not a Contract of Employment. Nothing in this Agreement or in the Plan shall confer upon the Participant any right to continue to serve as an employee or other Service Provider of the Company or any of its Subsidiaries.

8. Governing Law. The laws of the State of Delaware shall govern the interpretation, validity, administration, enforcement and performance of the terms of this Agreement regardless of the law that might be applied under principles of conflicts of laws.

9. Conformity to Securities Laws. The Participant acknowledges that the Plan and this Agreement are intended to conform to the extent necessary with all provisions of the Securities Act of 1933, as amended, and the Exchange Act, and any and all regulations and rules promulgated thereunder by the Securities and Exchange Commission, including without limitation Rule 16b-3 under the Exchange Act. Notwithstanding anything herein to the contrary, the Plan shall be administered, and the Awards are granted, only in such a manner as to conform to such laws, rules and regulations. To the extent permitted by applicable law, the Plan and this Agreement shall be deemed amended to the extent necessary to conform to such laws, rules and regulations.

10. Amendment, Suspension and Termination. The Awards may be wholly or partially amended or otherwise modified, suspended or terminated at any time or from time to time by the Committee or the Board, *provided*, that, except as may otherwise be provided by the Plan, neither the amendment, suspension nor termination of this Agreement shall, without the consent of the Participant, alter or impair any rights or obligations under any Award.

11. Notices. Notices required or permitted hereunder shall be given in writing and shall be deemed effectively given upon personal delivery or upon deposit in the United States mail by certified mail, with postage and fees prepaid, addressed to the Participant to his address shown in the Company records, and to the Company at its principal executive office.

The Participant represents that he/she has read this Agreement and the Plan and is familiar with the terms and provisions of each. The Participant acknowledges that the Award is issued pursuant to, and is subject to the terms and conditions of, the Plan, and the Participant will be bound by the terms of the Plan as if it were set forth verbatim in this Agreement. The Participant agrees to comply with all rules the Company may establish with respect to the Plan. The Participant agrees to accept as binding, conclusive and final all decisions or interpretations of the Committee with respect to any questions arising under the Plan or this Agreement. The Participant further acknowledges and agrees that this Agreement (and the Plan) constitutes the entire agreement between the parties with respect to the Award and that this Agreement (and the Plan) supersedes any and all prior agreements, whether written or oral, between the parties with respect to the Award.

IN WITNESS WHEREOF, this Agreement has been executed and delivered by the parties hereto as of the date first set forth above.

RUDOLPH TECHNOLOGIES, INC.	PARTICIPANT
By: ____________________________	____________________________
Name:	
Title:	Residence Address:

"STREET1"
"STREET2"
"CITY", "STATE" "ZIP"
"COUNTRY"

Aggregate number of Restricted Stock Units subject to the Award: __________________

EXHIBIT 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Paul F. McLaughlin, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Rudolph 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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) 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. 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 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

    d. 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 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: August 9, 2006

By: /s/ Paul F. McLaughlin
Paul F. McLaughlin
Chairman and Chief Executive Officer

EXHIBIT 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Steven R. Roth, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Rudolph 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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) 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. 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 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

d. 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 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: August 9, 2006

By: /s/ Steven R. Roth
Steven R. Roth
Senior Vice President, Chief Financial Officer

EXHIBIT 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Paul F. McLaughlin, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report of Rudolph Technologies, Inc. on Form 10-Q for the quarter ended June 30, 2006 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Quarterly Report on Form 10-Q fairly presents in all material respects the financial condition and results of operations of Rudolph Technologies, Inc.

Date: August 9, 2006

By: /s/ Paul F. McLaughlin
Paul F. McLaughlin
Chairman and Chief Executive Officer

A signed original of this written statement required by Section 906 has been provided to Rudolph Technologies, Inc. and will be retained by Rudolph Technologies, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

EXHIBIT 32.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Steven R. Roth, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report of Rudolph Technologies, Inc. on Form 10-Q for the quarter ended June 30, 2006 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Quarterly Report on Form 10-Q fairly presents in all material respects the financial condition and results of operations of Rudolph Technologies, Inc.

Date: August 9, 2006

By: /s/ Steven R. Roth
Steven R. Roth
Senior Vice President, Chief Financial Officer

A signed original of this written statement required by Section 906 has been provided to Rudolph Technologies, Inc. and will be retained by Rudolph Technologies, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.