

Equity Research Note (July 30, 2003)

Anton Wahlman / 212.705.0436

awahlman@needhamco.com

PCTEL Inc. (PCTI/OTC)
**Radical Changes To The Model; Raising 12-Month Target
From \$13 to \$15**

Brian Coyne / 212.705.0443

bcoyne@needhamco.com

Price (July 29, 2003):	\$12.72	Shares Outstanding (MM):	20.8
52 Week Range:	\$14.22 - \$4.43	Market Cap. (MM):	\$265
Rating / 12 Mo. Target:	Buy / \$15 (Was Buy / \$13)	Average Daily Volume (000):	221
Price / LTM Sales:	5.1x	Tangible BV Per Share:	\$5.11
Convertible Debt:	No	Total Debt / Capitalization:	0.1%

	FY 12/31/02A	FY 12/31/03 E			FY 12/31/04 E		
		Was	Is	Consensus	Was	Is	Consensus
Revenue (MM)	\$48.8	\$38.5	\$32.3	\$33.8	\$66.0	\$41.0	\$45.0
Growth	19%	-21%	-34%	-31%	72%	27%	33%
Op. Margin	-5%	-4%	-21%	NA	42%	12%	NA
EPS: 1Q	\$0.03	(\$0.03)	(\$0.03) A	(\$0.03)	\$0.14	\$0.00	\$0.07
EPS: 2Q	(0.05)	(0.03)	(0.03) A	(0.08)	0.21	0.04	0.12
EPS: 3Q	(0.02)	0.02	(0.09) E	(0.03)	0.28	0.10	0.18
EPS: 4Q	0.05	0.06	(0.07) E	0.02	0.35	0.15	0.24
EPS: Year	\$0.01	\$0.01	(\$0.22) E	(\$0.12)	\$0.99	\$0.29	\$0.54
Growth	NM	136%	NM	NM	NM	NM	NM
P/E Ratio	2065.5x	875.2x	NM	NM	12.9x	43.3x	23.6x

Disclosures applicable to this security (disclosure explanation on the last page of this report): A, B, E, G

Investment Conclusion

We believe in the new PC-Tel management's efforts to develop and assemble a comprehensive portfolio of wireless products, with an emphasis on staking out a leading footprint in the 802.11 area, including roaming into cellular (GPRS/CDMA) environments. Soft access points could also become a standard feature of PCs. A major upside for PC-Tel's financial model could be successful expropriation of legal royalty claims against other analog modem companies.

Summary

- PC-Tel reported an in-line quarter of an adjusted loss per share of \$0.03. This transitional quarter was highly unusual given the sale of the analog modem business in the middle of the quarter.
- Going forward, we have radically changed our model mostly as a result of taking out much royalty revenue from the top line in favor of treating future expected lawsuit settlements as one-time gains that will effectively go directly to PC-Tel's cash pile.
- We believe soft access points, while impractical or unnecessary from certain viewpoints, can be made so cheaply that they may become a staple in future PC platforms.
- Clearly the biggest risk to PC-Tel, beside the legal, is one of simple technology competitiveness. How high are the barriers to entry? What is the proprietary value? If or when will Microsoft or other players copy these products? We view the risk and reward alike to be exceptionally large.
- We are lowering our 2003 and 2004 adjusted EPS estimates from \$0.01 and \$0.99 to (\$0.22) and \$0.29, respectively. Our \$15 12-month price target is based on 50x our 2004 EPS estimate of \$0.29. Major risks include the development of the 802.11 market, technology competition and other risks outlined in the company's 10K and 10Q filings.

PCTEL: 2Q03 Needham & Co. Estimates Vs. Reported Results

<i>(\$mm unless otherwise indicated)</i>	Needham & Co. Estimate	Reported	Reported vs. Estimate
Total revenues	\$9.4	\$10.2	+ 8.3%
Gross margin (%)	49.7%	58.6%	+ 893 bp
R&D	\$2.3	\$2.2	- 5.1%
S&M	2.3	1.9	- 17.7%
G&A	1.7	2.8	+ 64.7%
Operating margin (%)	- 17.3%	- 8.9%	+ 840 bp
Net income	(\$0.7)	(\$0.6)	+ 13.7%
Diluted shares outstanding (m)	20.0	20.8	+ 4.0%
EPS (\$)	(\$0.03)	(\$0.03)	NM

Additional Thoughts

Our model currently shows \$3.4m in WiFi revenue for 2003, and \$18m for 2004. Our current WiFi revenue assumptions from 1Q03 to 4Q04 are built on (1) WiFi users increasing from 10m to 200m, (2) WiFi roamers increasing from 1% to 13% of total WiFi users, (3) PC-Tel's market share declining from 100% to 20% and (4) quarterly software revenue per user staying flat at \$1. We believe there is more upside potential than downside in all those four variables. In terms of a killer application, we believe the key one will be voice, and we believe the killer form factor will be the combined PDA/phone. We see Session Initiation Protocol (SIP) telephony, of the kind provided by companies such as Vonage and 8x8, in combination with WiFi and GPRS or CDMA in the phone/PDA format as a 2004 must-have product for most progressive people. Texas Instruments already introduced its WANDA chip, combining GPRS and 802.11x, and we expect to see a flurry of such phone/PDA combos by the Consumer Electronics Show (CES) in January 2004. We believe the main risk in achieving our \$13 12-18 month price target is the significant uncertainty with respect to the intermediate-term competitive landscape in 802.11 and GPRS/CDMA roaming and utility products, software as well as hardware.

Companies Mentioned (prices as of market close on July 29, 2003)

8x8 (EGHT, \$0.59, Not Rated)

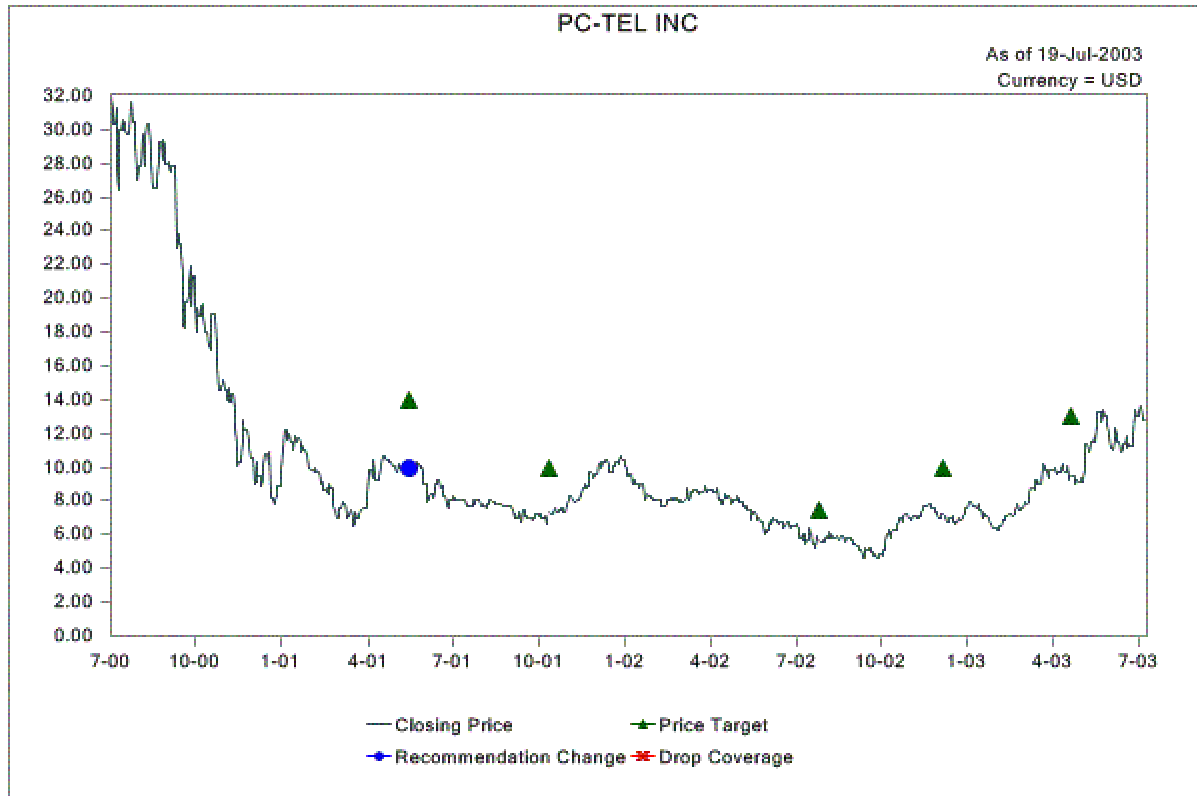
Company Description

PCTEL is a leading provider of wireless Internet access solutions, including 802.11 wireless connectivity software and software-defined radio products. The company also holds a significant portfolio of wireless and soft modem technology patents. PCTEL's Segue line of wireless LAN software products simplify installation, roaming, Internet access and billing. Through its DTI subsidiary, PCTEL designs, manufactures and distributes OEM receivers and receiver-based products that monitor wireless networks.

Analyst Certification

I, Anton Wahlman, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company (ies) and its (their) securities. I also certify that I have not been, am not, and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendation(s) in this report.

I, Brian Coyne, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company (ies) and its (their) securities. I also certify that I have not been, am not, and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendation(s) in this report.



PC-TEL INC

Currency = USD

Date	Closing Price	Recommendation Change	Date	Closing Price	Price Target
30-May-2001	9.95	BUY	30-Apr-2003	9.25	13.00
			17-Dec-2002	7.19	10.00
			07-Aug-2002	5.69	7.50
			24-Oct-2001	7.13	10.00
			30-May-2001	9.95	14.00

PCTEL Inc. (PCTI/OTC)

Anton Wahlman 212.705.0436 / awahlman@needhamco.com

Brian Coyne 212.705.0443 / bcoyne@needhamco.com

(\$mm except per share figures)

	FY 2002					FY 2003					FY 2004				
	1QA-Mar	2QA-Jun	3QA-Sep	4QA-Dec	FY02A	1QA-Mar	2QA-Jun	3QE-Sep	4QE-Dec	FY03E	1QE-Mar	2QE-Jun	3QE-Sep	4QE-Dec	FY04E
Income Statement															
802.11 revenues						\$0.1	\$0.3	\$1.0	\$2.0	\$3.4	\$3.0	\$4.0	\$5.0	\$6.0	\$18.0
DTI revenues						0.5	2.0	2.0	2.0	6.5	3.0	4.0	5.0	6.0	18.0
56 Kbps product revenues						10.6	7.3	0.0	0.0	17.9	0.0	0.0	0.0	0.0	0.0
Licensing revenues						<u>1.9</u>	<u>0.6</u>	<u>1.0</u>	<u>1.0</u>	<u>4.5</u>	<u>1.1</u>	<u>1.2</u>	<u>1.3</u>	<u>1.4</u>	<u>5.0</u>
Total revenues	\$10.3	\$9.6	\$12.5	\$16.3	\$48.8	13.1	10.2	4.0	5.0	32.3	7.1	9.2	11.3	13.4	41.0
Cost of goods sold	5.2	5.6	7.5	9.6	27.8	7.9	4.2	0.9	1.1	14.1	1.7	2.2	2.8	3.3	9.9
Gross profit	5.1	4.0	5.1	6.8	20.9	5.2	6.0	3.2	3.9	18.2	5.5	7.0	8.6	10.1	31.1
Research and development	2.4	2.8	2.5	2.3	10.0	2.1	2.2	2.0	2.1	8.4	2.2	2.3	2.4	2.5	9.4
Sales and marketing	1.6	1.9	1.9	2.3	7.7	2.3	1.9	1.3	1.4	6.9	1.5	1.6	1.7	1.8	6.6
General and administrative	<u>1.5</u>	<u>1.1</u>	<u>1.2</u>	<u>1.7</u>	<u>5.6</u>	<u>1.9</u>	<u>2.8</u>	<u>2.5</u>	<u>2.5</u>	<u>9.7</u>	<u>2.5</u>	<u>2.5</u>	<u>2.5</u>	<u>2.5</u>	<u>10.0</u>
Total operating expenses	5.5	5.8	5.6	6.3	23.2	6.2	6.9	5.8	6.0	24.9	6.2	6.4	6.6	6.8	26.0
Operating income	(0.4)	(1.8)	(0.6)	0.5	(2.3)	(1.1)	(0.9)	(2.7)	(2.1)	(6.7)	(0.8)	0.6	2.0	3.3	5.1
Interest and other	1.1	0.9	0.6	0.6	3.3	0.5	0.3	0.3	0.3	1.4	0.3	0.3	0.3	0.3	1.2
Taxes	(0.0)	(0.2)	0.3	(0.1)	(0.0)	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Net income	\$0.6	(\$1.1)	(\$0.4)	\$1.0	\$0.1	(\$0.6)	(\$0.6)	(\$1.9)	(\$1.3)	(\$4.4)	\$0.0	\$0.9	\$2.3	\$3.6	\$6.8
Fully diluted shares	19.9	19.9	20.0	19.7	19.9	19.9	20.8	19.5	20.0	20.1	20.5	22.5	23.0	23.5	22.4
Fully diluted EPS	\$0.03	(\$0.05)	(\$0.02)	\$0.05	\$0.01	(\$0.03)	(\$0.03)	(\$0.09)	(\$0.07)	(\$0.22)	\$0.00	\$0.04	\$0.10	\$0.15	\$0.29
LTM fully diluted EPS	(\$1.40)	(\$1.16)	(\$0.26)	\$0.01	\$0.01	(\$0.05)	(\$0.03)	(\$0.11)	(\$0.22)	(\$0.22)	(\$0.19)	(\$0.12)	\$0.08	\$0.29	\$0.29
Fully taxed and diluted EPS	\$0.02	(\$0.03)	(\$0.01)	\$0.03	\$0.00	(\$0.02)	(\$0.02)	(\$0.06)	(\$0.04)	(\$0.14)	\$0.00	\$0.03	\$0.06	\$0.10	\$0.19
LTM fully taxed and diluted EPS	(\$0.90)	(\$0.74)	(\$0.17)	\$0.00	\$0.00	(\$0.04)	(\$0.02)	(\$0.07)	(\$0.14)	(\$0.14)	(\$0.12)	(\$0.08)	\$0.05	\$0.19	\$0.19
Margin Analysis															
GM - 802.11 products						80%	95%	75%	75%	77%	75%	75%	75%	75%	75%
GM - DTI business						60%	85%	70%	70%	74%	70%	70%	70%	70%	70%
GM - 56 Kbps products						27%	45%	27%	27%	35%	22%	22%	27%	27%	25%
GM - licensing						100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
GM - overall	49%	42%	40%	41%	43%	40%	59%	79%	78%	56%	77%	76%	76%	75%	76%
Research and development	23%	29%	20%	14%	20%	16%	21%	50%	42%	26%	31%	25%	21%	19%	23%
Sales and marketing	16%	19%	15%	14%	16%	17%	19%	33%	28%	21%	21%	17%	15%	13%	16%
General and administrative	14%	12%	10%	10%	11%	14%	28%	63%	50%	30%	35%	27%	22%	19%	24%
Operating income	-4%	-18%	-4%	3%	-5%	-8%	-9%	-66%	-42%	-21%	-11%	7%	17%	25%	12%
Net income	6%	-11%	-3%	6%	0%	-5%	-6%	-46%	-26%	-14%	1%	10%	20%	27%	17%
QoQ Growth															
Net revenues	37%	-8%	31%	30%	na	-20%	-22%	-61%	25%	na	42%	30%	23%	19%	na
Gross profit	4%	-22%	27%	34%	na	-24%	15%	-47%	24%	na	40%	28%	22%	18%	na
Operating income	nm	nm	nm	nm	na	nm	nm	nm	nm	na	nm	nm	225%	69%	na
Net income	nm	nm	nm	nm	na	nm	nm	nm	nm	na	nm	1700%	150%	60%	na
Fully diluted EPS	nm	nm	nm	nm	na	nm	nm	nm	nm	na	nm	1540%	145%	57%	na
YoY Growth															
Net revenues	-37%	-22%	165%	117%	19%	26%	6%	-68%	-69%	-34%	-46%	-10%	183%	168%	27%
Gross profit	0%	19%	nm	37%	60%	1%	50%	-38%	-42%	-13%	5%	17%	171%	159%	71%
Operating income	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm
Net income	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm
Fully diluted EPS	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm



PCTEL Inc. (PCTI/OTC)

Anton Wahlman 212.705.0436 / awahlman@needhamco.com

Brian Coyne 212.705.0443 / bcoyne@needhamco.com

(\$mm except per share figures)

	FY 2002					FY 2003					FY 2004				
	1QA-Mar	2QA-Jun	3QA-Sep	4QA-Dec	FY02A	1QA-Mar	2QA-Jun	3QE-Sep	4QE-Dec	FY03E	1QE-Mar	2QE-Jun	3QE-Sep	4QE-Dec	FY04E
Balance Sheet															
Cash and equivalents	\$21.7	\$40.5	\$44.0	\$53.0	\$53.0	\$57.5	\$91.5	\$90.0	\$88.5	\$88.5	\$88.1	\$88.6	\$90.4	\$93.6	\$93.6
Short-term investments	90.2	70.5	68.2	58.4	58.4	43.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2
Accounts receivable, net	2.3	2.7	4.2	5.4	5.4	5.3	1.1	1.6	2.0	2.0	2.7	3.3	4.0	4.7	4.7
Inventories	1.3	1.6	1.5	1.1	1.1	2.5	1.0	0.2	0.3	0.3	0.4	0.5	0.7	0.8	0.8
Prepaid and other current assets	5.4	5.2	7.1	5.1	5.1	4.4	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Deferred income taxes	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net PP&E	2.4	2.3	2.1	1.5	1.5	1.5	1.0	0.8	0.5	0.5	0.3	0.0	(0.2)	(0.5)	(0.5)
Goodwill and intangibles	0.4	1.8	1.6	1.6	1.6	9.4	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
Deferred tax assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other long term assets	3.1	3.2	2.9	2.9	2.9	2.9	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Total assets	\$127.1	\$128.1	\$131.7	\$129.4	\$129.4	\$127.2	\$131.7	\$129.5	\$128.3	\$128.3	\$128.4	\$129.5	\$131.8	\$135.6	\$135.6
Accounts payable	\$1.6	\$1.2	\$1.0	\$1.5	\$1.5	\$2.5	\$0.6	\$0.3	\$0.3	\$0.3	\$0.4	\$0.6	\$0.7	\$0.8	\$0.8
Accrued royalties	3.2	3.3	3.5	3.7	3.7	3.5	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Income taxes payable	5.6	5.6	6.9	6.3	6.3	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Accrued liabilities	7.3	7.5	6.1	5.3	5.3	5.3	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
Current portion of l-t debt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long term debt	0.0	0.1	0.0	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total liabilities	\$17.7	\$17.6	\$17.5	\$16.9	\$16.9	\$17.9	\$16.3	\$16.0	\$16.0	\$16.0	\$16.2	\$16.3	\$16.4	\$16.5	\$16.5
Book value of equity	\$109.4	\$110.5	\$114.2	\$112.6	\$112.6	\$109.3	\$115.4	\$113.5	\$112.2	\$112.2	\$112.3	\$113.2	\$115.4	\$119.0	\$119.0
Total liabilities and equity	\$127.1	\$128.1	\$131.7	\$129.4	\$129.4	\$127.2	\$131.7	\$129.5	\$128.3	\$128.3	\$128.4	\$129.5	\$131.8	\$135.6	\$135.6
Cash Flow Statement Items															
Depreciation and amortization	\$0.4	\$0.4	\$0.7	\$0.6	\$2.1	\$0.4	\$0.5	\$0.5	\$0.5	\$1.9	\$0.5	\$0.5	\$0.5	\$0.5	\$2.0
Capital expenditures	(0.0)	(0.0)	(0.4)	(0.2)	(0.6)	(0.1)	(0.3)	(0.3)	(0.3)	(0.9)	(0.3)	(0.3)	(0.3)	(0.3)	(1.0)
Per Share Values															
Revenue (annualized)	\$2.08	\$1.92	\$2.51	\$3.31	\$2.45	\$2.63	\$1.96	\$0.82	\$1.00	\$1.61	\$1.39	\$1.64	\$1.97	\$2.28	\$1.83
Operating income (annualized)	(0.08)	(0.35)	(0.11)	0.09	(0.11)	(0.21)	(0.17)	(0.54)	(0.42)	(0.33)	(0.15)	0.11	0.34	0.56	0.23
Cash and equivalents	5.63	5.57	5.61	5.66	5.62	5.07	5.37	5.65	5.44	5.42	5.28	4.84	4.81	4.84	5.09
Net working capital	5.21	5.18	5.38	5.40	5.36	4.81	5.04	5.29	5.11	5.09	5.00	4.60	4.61	4.68	4.91
Book value	5.50	5.54	5.71	5.70	5.66	5.49	5.55	5.82	5.61	5.60	5.48	5.03	5.02	5.07	5.32
Tangible book value	5.49	5.45	5.63	5.62	5.58	5.01	5.11	5.36	5.16	5.14	5.03	4.63	4.62	4.68	4.91
Ratios															
Debt / equity	0.0%	0.1%	0.0%	0.1%	0.1%	0.4%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Debt / total capital	0.0%	0.1%	0.0%	0.1%	0.1%	0.4%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Receivables DSO	20	25	30	30	na	36	9	20	20	na	20	20	20	20	na
Inventory days	22	26	19	10	na	29	22	22	22	na	22	22	22	22	na
Inventory turnover	4.0x	3.5x	4.9x	8.6x	na	3.1x	4.1x	4.1x	4.1x	na	4.1x	4.1x	4.1x	4.1x	na
Days payables	27	20	12	14	na	28	12	20	20	na	20	20	20	20	na

	% of companies under coverage with this rating	% for which Investment Banking services have been provided for the past 12 months
Strong Buy	8%	29%
Buy	45	14
Hold	38	6
Sell	2	0
Restricted	4	58
Under Review	2	16

Needham & Company, Inc. (the Firm) employs a rating system based on the following (effective July 1, 2003):

Strong Buy: A security, which at the time the rating is instituted, indicates an expectation of a total return of at least 25% over the next 12 months.

Buy: A security, which at the time the rating is instituted, indicates an expectation of a total return between 10% and 25% over the next 12 months.

Hold: A security, which at the time the rating is instituted, indicates an expectation of a total return of +/- 10% over the next 12 months.

Underperform: A security, which at the time the rating is instituted, indicates an expectation that the price will depreciate by more than 10% over the next 12 months.

Under Review: Needham & Company has suspended the rating and/or price target, if any, for this stock, because there is not a sufficient fundamental basis for determining a rating or price target. The previous rating and price target, if any, are no longer in effect and should not be relied upon.

Restricted: Needham & Company policy and/or applicable law and regulations preclude certain types of communications, including an investment recommendation, during the course of Needham & Company's engagement in an investment banking transaction and in certain other circumstances.

For disclosure purposes (in accordance with NASD requirements), we note that our Strong Buy and Buy ratings most closely correspond to a "Buy" recommendation. When combined, 54% of companies under coverage would have a "Buy" rating and 26% have had investment banking services provided within the past 12 months; Hold mostly correspond to a "Hold/ Neutral" recommendation; while our Underperform rating closely corresponds to the Sell recommendation required by the NASD.

Our rating system attempts to incorporate industry, company and/or overall market risk and volatility. Consequently, at any given point in time, our investment rating on a stock and its implied price appreciation may not correspond to the stated 12 month price target. For valuation methods used to determine our price targets and risks related to our price targets, please contact your Needham & Co. salesperson for a copy of the most recent research report on the company you are interested in.

Needham & Company, Inc. rating system prior to July 1, 2003:

Strong Buy: A security, which at the time the rating is instituted, indicates an expectation of a total return of at least 50% over the next 12-18 months.

Buy: A security, which at the time the rating is instituted, indicates an expectation of a total return between 20% and 50% over the next 12-18 months.

Hold: A security, which at the time the rating is instituted, indicates an expectation of a total return of +/- 20% over the next 12-18 months.

Sell: A security, which at the time the rating is instituted, indicates an expectation that the price will depreciate by more than 20% over the next 12-18 months.

Under Review: Needham & Company has suspended the rating and/or price target, if any, for this stock, because there is not a sufficient fundamental basis for determining a rating or price target. The previous rating and price target, if any, are no longer in effect and should not be relied upon.

Restricted: Needham & Company policy and/or applicable law and regulations preclude certain types of communications, including an investment recommendation, during the course of Needham & Company's engagement in an investment banking transaction and in certain other circumstances.

Stock price charts and rating histories for companies under coverage and discussed in this report are available at <http://www.needhamco.com>. You may also request this information by writing to: Needham & Co., 445 Park Ave, 15th Floor (Attn: Compliance/Research), New York, NY 10022.

As noted on the cover page, the following disclosures (as listed by letter on the cover page) apply to the securities discussed in this research report:

"A" The research analyst and/or research associate (or household member) has a financial interest in the securities of the covered company (i.e., a long position consisting of common stock).

"B" The research analyst and research associate have received compensation based upon various factors including quality of research, investor client feedback, and the Firm's overall revenues, which include investment banking revenues.

"C" The Firm has managed or co-managed a public offering of securities for the subject company in the past 12 months.

"D" The Firm has received compensation for investment banking services from the subject company in the past 12 months.

"E" The Firm expects to receive or intends to seek compensation for investment banking services from the subject company in the next three months.

"F" The analyst or a member of the analyst's household serves as officer, director or advisory board member of the covered company.

"G" The Firm, at the time of publication, makes a market in the subject company.

"H" The Firm and/or its affiliates beneficially own 1% or more of any class of common equity securities of the subject company.

This report is for informational purposes only and does not constitute a solicitation or an offer to buy or sell any securities mentioned herein. Information contained in this report has been obtained from sources believed to be reliable, but Needham & Company, Inc. makes no representation as to its accuracy or completeness, except with respect to the Disclosure Section of the report. Any opinions expressed herein reflect our judgment as of the date of the materials and are subject to change without notice. The securities discussed in this report may not be suitable for all investors and are not intended as recommendations of particular securities, financial instruments or strategies to particular clients. Investors must make their own investment decisions based on their financial situations and investment objectives. The value of income from your investment may vary because of changes in interest rates, changes in the financial and operational conditions of the companies and other factors. Investors should be aware that the market price of securities discussed in this report may be volatile. Due to industry, company and overall market risk and volatility, at the securities current price, our investment rating may not correspond to the stated price target. Additional information regarding the securities mentioned in this report is available upon request. (c) Copyright 2003, Needham & Company, Inc., Member NASD, SIPC.