SOUTHWALL TECHNOLOGIES INC /DE/ Form SC 13D/A February 14, 2005

SECURITIES AND EXCHANGE COMMISSION WASHINGTON, DC 20549

SCHEDULE 13D/A (Rule 13d-101)

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO RULE 13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT TO RULE 13d-2(a)

(Amendment No. 3) (1)

Southwall Technologies Inc ______ (Name of Issuer) Common Stock, par value \$.001 per share (Title of Class of Securities) 844909101 ______ _____ (CUSIP Number) Robert Van Grover Seward & Kissel LLP One Battery Park Plaza New York, New York 10004 212-574-1200 _____ (Name, Address and Telephone Number of Person

Authorized to Receive Notices and Communications)

December 31, 2004 (Date of Event which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(e), 13d-1(f) or 13d-1(g), check the following box [_].

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See Rule 13d-7 for other parties to whom copies are to be sent.

(1) The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page. The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 or otherwise

subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

CUSIP No. 844909101

1. NAME OF REPORTING PERSONS

I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

Needham & Company, Inc.

S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (Intentionally ommitted)

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*

- (a) [_]
- (b) [X]

- 3. SEC USE ONLY
- 4. SOURCE OF FUNDS*

WC

5. CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)

[_]

6. CITIZENSHIP OR PLACE OF ORGANIZATION

US

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON

7. SOLE VOTING POWER

1,272,740

8. SHARED VOTING POWER

0

9. SOLE DISPOSITIVE POWER

1,272,740

10. SHARED DISPOSITIVE POWER

0

11. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

1,272,740

- 12. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES*
- 13. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

4.07%

14. TYPE OF REPORTING PERSON*

BD

*SEE INSTRUCTIONS BEFORE FILLING OUT!

CUSIP No. 844909101 _____ 1. NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) Needham Management Partners, L.P. S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (Intentionally Omitted) 2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) [_] (b) [X] 3. SEC USE ONLY SOURCE OF FUNDS* 5. CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e) [_] 6. CITIZENSHIP OR PLACE OF ORGANIZATION U.S. NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON 7. SOLE VOTING POWER SHARED VOTING POWER 700,000 SOLE DISPOSITIVE POWER 10. SHARED DISPOSITIVE POWER 700,000 11. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 700,000 12. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* 13. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 2.24% 14. TYPE OF REPORTING PERSON*

ΡN

*SEE INSTRUCTIONS BEFORE FILLING OUT!

CUSIP No. 844909101 _____ 1. NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) Needham Emerging Growth Partners, L.P. S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (Intentionally Omitted) 2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) [_] (b) [X] 3. SEC USE ONLY 4. SOURCE OF FUNDS* WC 5. CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e) [_] 6. CITIZENSHIP OR PLACE OF ORGANIZATION NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON 7. SOLE VOTING POWER 8. SHARED VOTING POWER 300,000 9. SOLE DISPOSITIVE POWER 0 10. SHARED DISPOSITIVE POWER 300,000 11. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 300,000 12. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* 13. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 0.96%

14. TYPE OF REPORTING PERSON*

ΡN

*SEE INSTRUCTIONS BEFORE FILLING OUT!

CUSIP No. 844909101

NAME OF REPORTING PERSONS
 I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

Needham Contrarian Fund, L.P.

- 2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*
- (a) [_]
- (b) [X]

- 3. SEC USE ONLY
- 4. SOURCE OF FUNDS*

WC

5. CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)

[_]

6. CITIZENSHIP OR PLACE OF ORGANIZATION

U.S.

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON

7. SOLE VOTING POWER

0

8. SHARED VOTING POWER

84,372

9. SOLE DISPOSITIVE POWER

0

10. SHARED DISPOSITIVE POWER

84,372

11. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

84,372

- 12. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES*
- 13. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

0.27%

14. TYPE OF REPORTING PERSON*

ΡN

*SEE INSTRUCTIONS BEFORE FILLING OUT!

CUSIE	P No.	844909101		
1.		OF REPORTING PERSONS . IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)		
	Needha	am Contrarian (QP) Fund, L.P.		
2.	CHECK	THE APPROPRIATE BOX IF A MEMBER OF A GROUP*		[_] [X]
3.	SEC US	SE ONLY		
4.	SOURCE	E OF FUNDS*		
	WC			
5.		BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED ANT TO ITEMS 2(d) OR 2(e)		[_]
6.	CITIZE	ENSHIP OR PLACE OF ORGANIZATION		
	US			
NUMBE	ER OF S	SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON		
7.	SOLE V	VOTING POWER		
	0			
8.	SHAREI	O VOTING POWER		
	215,62	28		
9.	SOLE I	DISPOSITIVE POWER		
	0			
10.	SHAREI	D DISPOSITIVE POWER		
	215,62	28		
11.	AGGREC	GATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	I	
	215,62	28		
12.	CHECK	BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTA	IN S	SHARES'
13.	PERCEN	NT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)		
	0.69%			
14.	TYPE (OF REPORTING PERSON*		

TN

*SEE INSTRUCTIONS BEFORE FILLING OUT!

CUSI	P No. 844909101	
1.	NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)	
	Needham Emerging Growth Partners (Caymans), L.P.	
2.	·	a) [_] b) [X]
3.	SEC USE ONLY	
4.	SOURCE OF FUNDS*	
	WC	
5.	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)	[_]
6.	CITIZENSHIP OR PLACE OF ORGANIZATION	
	U.S.	
NUMBI	ER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON	
7.	SOLE VOTING POWER	
	0	
8.	SHARED VOTING POWER	
	100,000	
9.	SOLE DISPOSITIVE POWER	
	0	
10.	SHARED DISPOSITIVE POWER	
	100,000	
11.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
	100,000	
12.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAI	N SHARES*
13.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)	
	0.32%	
14.	TYPE OF REPORTING PERSON*	

PN

*SEE INSTRUCTIONS BEFORE FILLING OUT!

CUSI	P No. 844909101	
1.	NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)	
	George A. Needham	
2.		(a) [_] (b) [X]
3.	SEC USE ONLY	
4.	SOURCE OF FUNDS*	
	PF	
5.	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)	[_]
6.	CITIZENSHIP OR PLACE OF ORGANIZATION	
	U.S.	
NUMB	ER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON	
7.	SOLE VOTING POWER	
	0	
8.	SHARED VOTING POWER	
	13,117,045	
9.	SOLE DISPOSITIVE POWER	
	0	
10.	SHARED DISPOSITIVE POWER	
	13,117,045	
11.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
	13,117,045	
12.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTA:	IN SHARES*
13.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)	
	42.00%	

14. TYPE OF REPORTING PERSON* ΙN *SEE INSTRUCTIONS BEFORE FILLING OUT! CUSIP No. 844909101 1. NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) Needham Capital Partners II, L.P. 2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) [_] (b) [X] 3. SEC USE ONLY 4. SOURCE OF FUNDS* WC 5. CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e) [_] 6. CITIZENSHIP OR PLACE OF ORGANIZATION U.S. NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON 7. SOLE VOTING POWER SHARED VOTING POWER 3,258,068 9. SOLE DISPOSITIVE POWER 10. SHARED DISPOSITIVE POWER 3,258,068 11. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 3,258,068 12. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* 13. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

10.43%

14. TYPE OF REPORTING PERSON*

	PN	
	*SEE INSTRUCTIONS BEFORE FILLING OUT!	
CUSI	P No. 844909101	
1.	NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)	
	Needham Capital Partners II (Bermuda), L.P.	
2.		[_] [X]
3.	SEC USE ONLY	
4.	SOURCE OF FUNDS*	
	WC	
5.	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)	[_]
6.	CITIZENSHIP OR PLACE OF ORGANIZATION	
	U.S.	
NUMBI	ER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON	
7.	SOLE VOTING POWER	
	0	
8.	SHARED VOTING POWER	
	456,700	
9.	SOLE DISPOSITIVE POWER	
	0	
10.	SHARED DISPOSITIVE POWER	
	456,700	
11.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
	456,700	
12.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN	SHARES
13.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)	

1.46%

14. TYPE OF REPORTING PERSON*

ΡN

*SEE INSTRUCTIONS BEFORE FILLING OUT!

CUSIP No. 844909101

- 1. NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)
- 2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*

(a) [_]

(b) [X]

- 3. SEC USE ONLY
- 4. SOURCE OF FUNDS*

WC

5. CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)

[_]

6. CITIZENSHIP OR PLACE OF ORGANIZATION

U.S.

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON

7. SOLE VOTING POWER

0

8. SHARED VOTING POWER

5,703,716

9. SOLE DISPOSITIVE POWER

0

10. SHARED DISPOSITIVE POWER

5,703,716

11. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

5,703,716

- 12. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES*
- 13. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

18.26%

14. TYPE OF REPORTING PERSON*

	PN
	*SEE INSTRUCTIONS BEFORE FILLING OUT!
CUSI	P No. 844909101
1.	NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)
	Needham Capital Partners IIIA L.P.
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) [_] (b) [X]
3.	SEC USE ONLY
4.	SOURCE OF FUNDS*
	WC
5.	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e) [_]
6.	CITIZENSHIP OR PLACE OF ORGANIZATION
	U.S.
NUMBI	ER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON
7.	SOLE VOTING POWER
	0
8.	SHARED VOTING POWER
	589,054
9.	SOLE DISPOSITIVE POWER
	0
10.	SHARED DISPOSITIVE POWER
	589,054
11.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
	589,054
12.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES
13.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

1.88%

14. TYPE OF REPORTING PERSON*

ΡN

*SEE INSTRUCTIONS BEFORE FILLING OUT!

CUSIP No. 844909101

1. NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

Needham Capital Partners III (Bermuda), L.P.

- 2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*
- (a) [_] (b) [X]

- 3. SEC USE ONLY
- 4. SOURCE OF FUNDS*

WC

5. CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)

[_]

6. CITIZENSHIP OR PLACE OF ORGANIZATION

U.S.

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON

7. SOLE VOTING POWER

0

8. SHARED VOTING POWER

1,136,767

9. SOLE DISPOSITIVE POWER

0

10. SHARED DISPOSITIVE POWER

1,136,767

11. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

1,136,767

- 12. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES*
- 13. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

3.64% 14. TYPE OF REPORTING PERSON* PΝ *SEE INSTRUCTIONS BEFORE FILLING OUT! CUSIP No. 844909101 1. NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) 2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) [_] (b) [X] 3. SEC USE ONLY 4. SOURCE OF FUNDS* WC 5. CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e) [_] 6. CITIZENSHIP OR PLACE OF ORGANIZATION U.S. NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON 7. SOLE VOTING POWER SHARED VOTING POWER 9,550,838 9. SOLE DISPOSITIVE POWER 0 10. SHARED DISPOSITIVE POWER 9,550,838 11. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 9,550,838 12. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES*

13. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

30.58%

14. TYPE OF REPORTING PERSON*

ΡN

*SEE INSTRUCTIONS BEFORE FILLING OUT!

CUSIP No. 844909101

- 1. NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)
 - Needham Capital Management (Bermuda) L.L.C.
- 2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*
- (a) [_]
- (b) [X]

- 3. SEC USE ONLY
- 4. SOURCE OF FUNDS*

WC.

5. CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)

[_]

6. CITIZENSHIP OR PLACE OF ORGANIZATION

U.S.

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON

7. SOLE VOTING POWER

SHARED VOTING POWER

1,593,467

SOLE DISPOSITIVE POWER

10. SHARED DISPOSITIVE POWER

1,593,467

11. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

1,593,467

- 12. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES*
- 13. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

5.10%

14. TYPE OF REPORTING PERSON*

PN

*SEE INSTRUCTIONS BEFORE FILLING OUT!

CUSIP No. 844909101

Item 1. Security and Issuer.

This Statement on Schedule 13D/A (this "Statement") relates to the common stock, par value \$0.001 per share (the "Common Stock") and Series A 10% Cumulative Preferred Stock ("Series A Preferred Stock"), of Southwall Technologies Inc., a Delaware corporation (the "Company"). The principal executive offices of the Company are located at 1029 Corporation Way, Palo Alto, California 94303.

Item 2. Identity and Background.

(a)-(c) and (f) This Statement is filed by Needham & Company, Inc., a Delaware corporation ("Needham & Co."), Needham Management Partners, L.P., a Delaware limited partnership ("NMP"), Needham Emerging Growth Partners, L.P., a Delaware limited partnership ("NEGP"), Needham Contrarian Fund, L.P., a Delaware limited partnership ("NCF"), Needham Contrarian QP Fund, L.P., a Delaware limited partnership ("NCQPF"), Needham Emerging Growth Partners (Caymans), L.P., a Cayman Islands limited partnership ("NEGPC"), George A. Needham, a natural person who is a U.S. citizen, Needham Capital Partners II, L.P., a Delaware limited partnership ("NCPII"), Needham Capital Partners II (Bermuda), L.P., a Bermuda limited partnership ("NCPIIB"), Needham Capital Partners III, L.P, a Delaware limited partnership ("NCPIII"), Needham Capital Partners IIIA, L.P, a Delaware limited partnership ("NCPIIIA"), Needham Capital Partners III (Bermuda), L.P., a Bermuda limited partnership ("NCPIIIB"), Needham Capital Management L.L.C., a Delaware limited liability company ("NCM"), and Needham Capital Management (Bermuda) L.L.C., a Bermuda limited liability company ("NCMB"). Needham & Co., NMP, NEGP, NCF, NEGPC, George A. Needham, NCPII, NCPIIB, NCPIII, NCPIIIA, NCPIIIB, NCM and NCMB are collectively referred to in this Statement as the "Reporting Persons."

The principal business office and mailing address of the Reporting Persons is c/o Needham & Company, Inc., 445 Park Avenue, New York, New York 10022.

Needham & Co. is an investment banking, securities and asset management firm.

The business of NMP is serving as the general partner of NEGP, NCF and NEGPC, each of which are private investment partnerships. The business of NCM is serving as the general partner of NCPII, NCPIII and NCPIIIA, each of which are private investment partnerships. The business of NCMB is serving as the general partner of NCPIIB and NCPIIIB, each of which are private investment partnerships. The present principal occupation of George A. Needham is Chairman of the Board and Chief Executive Officer of Needham & Co. The name and principal occupation or employment of the executive officers, directors or general partners of the Reporting Persons who are corporations, limited partnerships and limited liability companies are set forth on Schedule I to this Statement.

(d) and (e) During the past five years, none of the Reporting Persons or, to the best knowledge of the Reporting Persons, any of the persons listed on

Schedule I, (i) has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors) or (ii) has been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, Federal or State securities laws or finding any violation with respect to such laws.

Item 3. Source and Amount of Funds or Other Consideration.

As of the date hereof, the Reporting Persons may be deemed to beneficially own 9,855,379 shares of Common Stock and 3,261,666 shares of Series A Preferred Stock. The source of funds used to purchase the securities reported herein was working capital of the Reporting Persons. No borrowed funds were used to purchase the securities, other than any borrowed funds used for working capital purposes in the ordinary course of business.

On December 31, 2004, Needham Capital Partners II, L.P., Needham Capital Partners II (Bermuda), L.P., Needham Capital Partners III, L.P., Needham Capital Partners III, L.P., Needham Capital Partners III (Bermuda), L.P. elected to convert all outstanding principal of, and accrued but unpaid interest on, their secured convertible promissory notes (the "Convertible Notes") of Southwall Technologies Inc. ("Southwall") into shares of Series A Preferred Stock. The Convertible Notes by their terms were convertible at the option of the holders into Series A Preferred Stock at a rate of one share for each \$1.00 of principal or interest converted.

The aggregate principal amount of the Convertible Notes converted by the Note Holders was \$4,500,000, and the interest accrued thereon as of the time of conversion was \$392,500; therefore, the aggregate number of shares of Series A Preferred Stock issued as a result of the conversions was \$4,892.500. In particular, the Convertible Note held by Needham Capital Partners II, L.P., in the original principal amount of \$877,058, was converted into 953,557 shares of Series A Preferred Stock; the Convertible Note held by Needham Capital Partners II (Bermuda), L.P., in the original principal amount of \$122,942, was converted into 133,665 shares of Series A Preferred Stock; the Convertible Note held by Needham Capital Partners III, L.P. in the original principal amount of \$1,535,416, was converted into 1,669,339 shares of Series A Preferred Stock; the Convertible Note held by Needham Capital Partners IIIA, L.P. in the original principal amount of \$158,571, was converted into 172,402 shares of Series A Preferred Stock; and the Convertible Note held by Needham Capital Partner III (Bermuda), L.P., in the original principal amount of \$306,013, was converted into 332,704 shares of Series A Preferred Stock.

The Convertible Notes were originally issued to the Note Holders pursuant to the Amended and Restated Investment Agreement dated February 20, 2004, by and among Southwall, Needham & Company, Inc. and the Note Holders. The Convertible Notes and Series A Preferred Stock issued to the Note Holders upon conversion were issued without registration and only to accredited investors in reliance upon Rule 506 of the Securities Act of 1933, as amended.

Item 4. Purpose of Transaction.

The Investment Agreement pursuant to which the warrants were issued to Needham & Co. is described in the Schedule 13D filed by the Reporting Persons on March 8, 2003.

The Reporting Persons have no plans or proposals which relate to or which would result in or relate to any of the actions specified in paragraphs (a)

through (j) of Item 4 of Schedule 13D.

Item 5. Interest in Securities of the Issuer.

(a) (1) Needham & Co. owns 1,272,740 shares of Common Stock, which would constitute 4.07% of the issued and outstanding Common Stock.

- (2) NEGP owns of record and beneficially 300,000 shares of Common Stock, which constitutes 0.96% of the issued and outstanding Common Stock.
- (3) NCF owns of record and beneficially 84,372 shares of Common Stock, which constitutes 0.27% of the issued and outstanding Common Stock.
- (4) NCQPF owns of record and beneficially 215,628 shares of Common Stock, which constitutes 0.69% of the issued and outstanding Common Stock.
- (5) NEGPC owns of record and beneficially 100,000 shares of Common Stock, which constitutes 0.32% of the issued and outstanding Common Stock.
- (6) NMP may be deemed to own beneficially the aggregate amount of 700,000 shares of Common Stock owned by NEGP, NCF and NEGPC by virtue of its position as general partner of those Reporting Persons, which amount constitutes 2.24% of the issued and outstanding Common Stock. NMP disclaims beneficial ownership of all of the reported shares of Common Stock owned by NEGP, NCF and NEGPC, and the inclusion of these shares of Common Stock in this report shall not be deemed an admission by it of beneficial ownership of such shares for any purpose.
- (7) George A. Needham may be deemed to beneficially own (i) the shares of Common Stock owned by Needham & Co. by virtue of his position in and share ownership of Needham & Co., (ii) the shares of Common Stock owned by NEGP, NCF, NCFQP, and NEGPC by virtue of his position as general partner of NMP, the general partner of NEGP, NCF, NCFQP and NEGPC, (iii) the Common Stock and Series A Preferred Common Stock owned by NCPII, NCPIII and NCPIIIA by virtue of his position as a manager of NCM, the general partner of NCPII, NCPIII and NCPIIIA, and (iv) the Common Stock and Series A Preferred Common Stock owned by NCPIIB and NCPIIIB by virtue of his position as a manager of NCMB. The aggregate amount of shares of Common Stock (assuming full conversion of all Series A Preferred Common Stock owned by the Reporting Persons) owned by Mr. Needham is 13,117,045, which constitutes 42.00% of the issued and outstanding shares of Common Stock. Mr. Needham disclaims beneficial ownership of all of the reported shares of Common Stock and the Series A Preferred Common Stock, and the inclusion of these shares in this report shall not be deemed an admission by him of beneficial ownership for any purpose.
- (8) NCPII owns of record and beneficially (i) 953,557 shares of Series A Preferred Stock, which in turn is convertible to 953,557 shares of Common Stock, subject to adjustments applicable to the Series A Preferred Stock, and (ii) 2,304,511 shares of Common Stock. Assuming full conversion of the Series A Preferred Stock, NCPII would own of record 3,258,068 shares of Common Stock, which would constitute 10.43% of the issued and outstanding Common Stock.
- (9) NCPIIB owns of record and beneficially (i) 133,665 shares of Series A Preferred Stock, which in turn is convertible to 133,665 shares of Common Stock, subject to adjustments applicable to the Series A Preferred Stock, and (ii) 323,035 shares of Common Stock. Assuming full conversion of the Series A Preferred Stock, NCPIIB would own of record 456,700 shares of Common Stock, which would constitute 1.46% of the issued and outstanding Common Stock.
- (10) NCPIII owns of record and beneficially (i) 1,669,338 shares of Series A Preferred Stock, which in turn is convertible to 1,669,338 shares of Common

Stock, subject to adjustments applicable to the Series A Preferred Stock, and (ii) 4,034,378 shares of Common Stock. Assuming full conversion of the Series A Preferred Stock, NCPIII would own of record 5,703,716 shares of Common Stock, which would constitute 18.26% of the issued and outstanding Common Stock.

- (11) NCPIIIA owns of record and beneficially (i)172,402 shares of Series A Preferred Stock, which in turn is convertible to 172,402 shares of Common Stock, subject to adjustments applicable to the Series A Preferred Stock, and (ii) 416,552 shares of Common Stock. Assuming full conversion of the Series A Preferred Stock, NCPIIIA would own of record 589,054 shares of Common Stock, which would constitute 1.88% of the issued and outstanding Common Stock.
- (12) NCPIIIB owns of record and beneficially (i) 332,704 shares of Series A Preferred Stock, which in turn is convertible to 332,704 shares of Common Stock, subject to adjustments applicable to the Series A Preferred Stock, and (ii) 804,063 shares of Common Stock. Assuming full conversion of the Series A Preferred Stock, NCPIIIB would own of record 1,136,767 shares of Common Stock, which would constitute 3.64% of the issued and outstanding Common Stock.
- (13) NCM may be deemed to own beneficially the Common and Series A Preferred Stock owned by NCPII, NCPIII and NCPIIIA by virtue of its position as general partner of those Reporting Persons, and accordingly may be deemed to beneficially own the 9,550,838 shares of Common Stock, which amount constitute 30.58% of the issued and outstanding Common Stock. NCM disclaims beneficial ownership of all of the reported shares of Common Stock owned by NCPII, NCPIII and NCPIIIA, and the inclusion of these shares of Common Stock in this report shall not be deemed an admission by it of beneficial ownership of such shares for any purpose.
- (14) NCMB may be deemed to own beneficially the Common and Series A Preferred Stock owned by NCPIIB and NCPIIIB by virtue of its position as general partner of those Reporting Persons, and accordingly may be deemed to beneficially own the 1,593,467 shares of Common Stock, which amount constitute 5.10% of the issued and outstanding Common Stock. NCMB disclaims beneficial ownership of all of the reported shares of Common Stock owned by NCPIIB and NCPIIIB, and the inclusion of these shares of Common Stock in this report shall not be deemed an admission by it of beneficial ownership of such shares for any purpose.
- (b) Needham & Co. has the sole power to direct the vote and disposition of 1,272,740 shares of Common Stock. NMP, the general partner of NEGP, and NEGP have shared power to direct the vote and disposition of 300,000 shares of Common Stock directly owned by NEGP. NMP, the general partner of NCF, and NCF have shared power to direct the vote and disposition of 84,372 shares of Common Stock directly owned by NCF. NMP, the general partner of NCQPF, and NCQPF have shared power to direct the vote and disposition of 215,628 shares of Common Stock directly owned by NCQPF. NMP, the general partner of NEGPC, and NEGPC have shared power to direct the vote and disposition of 100,000 shares of Common Stock directly owned by NEGPC. NCM, the general partner of NCPII, and NCPII have shared power to direct the vote and disposition of 3,258,068 shares of Common Stock and Common Stock issuable upon the conversion of the Series A Preferred Stock. NCMB, the general partner of NCPIIB, and NCPIIB have shared power to direct the vote and disposition of 456,700 shares of Common Stock and Common Stock issuable upon the conversion of the Series A Preferred Stock. NCM, the general partner of NCPIII, and NCPIII have shared power to direct the vote and disposition of 5,703,716 shares of Common Stock and Common Stock issuable upon the conversion of the Series A Preferred Stock. NCM, the general partner of NCPIIIA, and NCPIIIA have shared power to direct the vote and disposition of 589,054 shares of Common Stock and Common Stock issuable upon the conversion of the Series A Preferred Stock. NCMB, the general partner of NCPIIIB, and NCPIIIB have shared power to direct the vote and disposition of 1,136,767 shares of Common Stock and Common Stock issuable upon the conversion of the Series A

Preferred Stock. George A. Needham may be deemed to have shared power to direct the vote and disposition of (i) the shares of Common Stock owned by Needham & Co., and the shares of Common Stock owned by Needham & Co., by virtue of his position in and share ownership of Needham & Co., (ii) the shares of Common Stock owned directly by NEGP, NCF and NEGPC because he serves as managing general partner of NMP, the general partner of NEGP, NCF and NEGPC, (iii) the shares of Common Stock issuable upon the conversion of the Series A Preferred Stock and Common Stock owned directly by NCPII, NCPIII and NCPIIIA because he serves as a manager of NCM, the general partner of NCPII, NCPIII and NCPIIIA, and (iv) the shares of Common Stock issuable upon the conversion of the Series A Preferred Stock and the Common Stock owned directly by NCPIIB and NCPIIIB because he serves as a manager of NCMB, the general partner of NCPIIB and NCPIIIB. Mr. Needham disclaims beneficial ownership of the shares of Common Stock owned by Needham & Co., NCPII, NCPIIB, NCPIIIA and NCPIIIB.

- (c) Except as noted in Item 3 above, the Reporting Persons did not effect any transactions in the securities of the Company during the past 60 days.
 - (d) and (e) Not applicable.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer.

Other than as described in Item 4 above, to the knowledge of the Reporting Persons, there are no contracts, arrangements, understandings or relationships (legal or otherwise) among the persons named in Item 2 with respect to any securities of the Company.

Item 7. Material to be Filed as Exhibits.

1. Joint Filing Agreement

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, ${\tt I}$ certify that the information set forth in this statement is true, complete and correct.

Dated: February 14, 2005

NEEDHAM & COMPANY, INC.

Ву:

Name: Glen W. Albanese

Title Chief Fire in Off

Title: Chief Financial Officer

George A. Needham

NEEDHAM EMERGING GROWTH PARTNERS, L.P.

```
By: Needham Management Partners, L.P.,
   its general partner
By:
   ______
   Name: Glen W. Albanese
   Title: General Partner
NEEDHAM CONTRARIAN FUND, L.P.
By: Needham Management Partners, L.P.,
   its general partner
By:
    ._____
   Name: Glen W. Albanese
   Title: General Partner
NEEDHAM EMERGING GROWTH PARTNERS
(CAYMANS), L.P.
By: Needham Management Partners, L.P.,
   its general partner
By:
   _____
   Name: Glen W. Albanese
   Title: General Partner
NEEDHAM MANAGEMENT PARTNERS, L.P.
   Name: Glen W. Albanese
   Title: General Partner
NEEDHAM CAPITAL PARTNERS II, L.P.
By: Needham Capital Management L.L.C.,
   its general partner
By:
   Name: Glen W. Albanese
   Title: General Partner
NEEDHAM CAPITAL PARTNERS II (BERMUDA), L.P.
By: Needham Capital Management (Bermuda)
   L.L.C., its general partner
By:
    -----
   Name: Glen W. Albanese
   Title: General Partner
NEEDHAM CAPITAL PARTNERS III, L.P.
By: Needham Capital Management L.L.C.,
   its general partner
By:
   Name: Glen W. Albanese
```

Title: General Partner

NEEDHAM CAPITAL PARTNERS IIIA, L.P.

By: Needham Capital Management L.L.C., $\$

its general partner

Bv:

Name: Glen W. Albanese Title: General Partner

NEEDHAM CAPITAL PARTNERS III (BERMUDA), L.P.

By: Needham Capital Management (Bermuda)

L.L.C., its general partner

By:

Name: Glen W. Albanese Title: General Partner

NEEDHAM CAPITAL MANAGEMENT, L.L.C.

Bv:

Name: Glen W. Albanese

Title: General Partner

NEEDHAM CAPITAL MANAGEMENT (BERMUDA), L.L.C.

By:

Name: Glen W. Albanese Title: General Partner

Schedule I

Executive Officers and Directors of Needham & Company, Inc. are:

NAME OF OFFICER OR DIRECTOR	BUSINESS ADDRESS	PRINCIPAL EMPLOYMENT/OFFICE WITH NEEDHAM & COMPANY, INC.
George A. Needham	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	
John C. Michaelson	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	President of Needham Asset Management
John J. Prior, Jr.	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	Managing Director, Chief Executive Officer
Chad W. Keck	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	Managing Director, Corporate Finance
Warren M. Foss	c/o Needham & Company, Inc.	Managing Director, Capital

	445 Park Avenue New York, New York 10022	Markets
Mark Van Valkenburgh	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	Managing Director, Institutional Sales
Sean Dwyer	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	Managing Director, Sales & Trading
John Lazo	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	Managing Director, OTC & Listed Trading
Theodor J. Kundtz	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	Managing Director, Equity Research
Glen W. Albanese	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	Managing Director, Chief Financial Officer
Andre R. Horn	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	Chairman Emeritus
Edgar F. Heizer, Jr.	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	Director Chairman of the Board of Heizer Corporation
Eugene R. White	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	Director
Joseph H. Reich	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	Director Managing General Partner of Centennial Associates

Schedule I

Needham Management Partners, L.P. is the sole general partner of: (a)
Needham Emerging Growth Partners, L.P., (b) Needham Contrarian Fund, L.P., (c)
Needham Contrarian (AP) Fund, L.P. and (d) Needham Emerging Growth Partners
(Caymans), L.P. Needham Capital Management L.L.C. is the sole general partner of
(a) Needham Capital Partners II, L.P., (b) Needham Capital Partners III, L.P.
and (c) Needham Capital Partners IIIA, L.P. Needham Capital Management (Bermuda)
L.L.C. is the sole general partner of (a) Needham Capital Partners II (Bermuda),
L.P. and (b) Needham Capital Partners III (Bermuda), L.P.

The general partners of Needham Management Partners, L.P. are:

NAME OF OFFICER		PRINCIPAL EMPLOYMENT/OFFICE
OR DIRECTOR	BUSINESS ADDRESS	WITH NEEDHAM & COMPANY, INC.
George A. Needham	c/o Needham & Company, Inc. 445 Park Avenue	Chairman of the Board & Chief Executive Officer
	New York, New York 10022	

John C. Michaelson	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	President of Needham Funds
Jane K. Kloppenburg	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	Managing Director, Portfolio Manager
Glen W. Albanese	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	Managing Director, Chief Financial Officer

The general partners of Needham Capital Management L.L.C. are:

NAME OF OFFICER OR DIRECTOR	BUSINESS ADDRESS	PRINCIPAL EMPLOYMENT/OFFICE WITH NEEDHAM & COMPANY, INC.
	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	Chairman of the Board &
John C. Michaelson	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	President of Needham Funds
John J. Prior, Jr.	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	Managing Director, Corporate Finance
Thomas P. Shanahan	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	Managing Director, Needham Asset Management
Glen W. Albanese	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	

The general partners of Needham Capital Management (Bermuda) L.L.C. are:

NAME OF OFFICER OR DIRECTOR	BUSINESS ADDRESS	PRINCIPAL EMPLOYMENT/OFFICE WITH NEEDHAM & COMPANY, INC.
George A. Needham	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	Chairman of the Board & Chief Executive Officer
John C. Michaelson	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	President of Needham Funds
John J. Prior, Jr.	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	Managing Director, Corporate Finance
Thomas P. Shanahan	c/o Needham & Company, Inc. 445 Park Avenue New York, New York 10022	Managing Director, Needham Asset Management
Glen W. Albanese	c/o Needham & Company, Inc. 445 Park Avenue	Managing Director, Chief Financial Officer

New York, New York 10022

EXHIBIT 1

JOINT FILING AGREEMENT

In accordance with Rule 13d-1(f) promulgated under the Securities Exchange Act of 1934, as amended, the undersigned hereby agree to the joint filing with all other Reporting Persons (as such term is defined in the Schedule 13D referred to below) on behalf of each of them of a statement on Schedule 13D (including amendments thereto) with respect to the common shares of beneficial interest, par value \$.001 per share, of Southwall Technologies Inc., a Delaware corporation, and that this Agreement may be included as an Exhibit to such joint filing. This Agreement may be executed in any number of counterparts, all of which taken together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the undersigned hereby execute this Agreement as of the 14th day of February, 2005.

ву:	
	Name: Glen W. Albanese Title: Chief Financial Officer
	George A. Needham
	DHAM EMERGING GROWTH PARTNERS, L.P. Needham Management Partners, L.P., its general partner
By:	
	Name: Glen W. Albanese Title: General Partner
NEE	DHAM CONTRARIAN FUND, L.P.
Ву:	Needham Management Partners, L.P., its general partner
By:	
	Name: Glen W. Albanese Title: General Partner

its general partner

By:
Name: Glen W. Albanese Title: General Partner
NEEDHAM MANAGEMENT PARTNERS, L.P.
Ву:
Name: Glen W. Albanese Title: General Partner
NEEDHAM CAPITAL PARTNERS II, L.P.
By: Needham Capital Management L.L.C., its general partner
By:
Name: Glen W. Albanese Title: General Partner
NEEDHAM CAPITAL PARTNERS II (BERMUDA), L.P
By: Needham Capital Management (Bermuda) L.L.C., its general partner
By:
Name: Glen W. Albanese Title: General Partner
NEEDHAM CAPITAL PARTNERS III, L.P.
By: Needham Capital Management L.L.C., its general partner
By:
Name: Glen W. Albanese Title: General Partner
NEEDHAM CAPITAL PARTNERS IIIA, L.P.
By: Needham Capital Management L.L.C., its general partner
By:
Name: Glen W. Albanese Title: General Partner

NEEDHAM CAPITAL PARTNERS III (BERMUDA), L.P.

By: Needham Capital Management (Bermuda)
L.L.C., its general partner

By:

Name: Glen W. Albanese
Title: General Partner

NEEDHAM CAPITAL MANAGEMENT, L.L.C.

By:

Name: Glen W. Albanese
Title: General Partner

NEEDHAM CAPITAL MANAGEMENT (BERMUDA), L.L.C.

By:

Name: Glen W. Albanese

Name: Glen W. Albanese

Title: General Partner