

Solexa, Inc.
Form 424B3
January 27, 2006

Prospectus Supplement No. 2

Filed Pursuant to
Rule 424(b)(3) and (c)
File No. 333-127460

**13,657,101 Shares of Common Stock
SOLEXA, INC.**

This prospectus supplement supplements the prospectus, dated September 1, 2005, of Solexa, Inc. relating to the offering and sale by selling stockholders of Solexa (or by donees, pledgees, transferees and other successors in interest that receive such shares as a gift, pledge, partnership distribution or other non-sale transfer) of up to 13,657,101 shares of our common stock. This prospectus supplement should be read in conjunction with the prospectus, and is qualified by reference to the prospectus, except to the extent that the information presented herein supersedes the information contained in the prospectus. The term **Selling Stockholders** as used in the prospectus shall be deemed to include the selling stockholders identified in the table below. This prospectus supplement is not complete without, and may not be delivered or utilized except in connection with, the prospectus, including any amendments or supplements thereto.

Investing in our common stock involves a high degree of risk. See **Risk Factors beginning on page 2 of the prospectus.**

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ADEQUACY OR ACCURACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is January 27, 2006.

This prospectus supplement is being filed in connection with the distribution of shares held by (i) Abingworth Bioventures II S.I.C.A.V, (ii) Abingworth Bioventures IIA L.P., (iii) Abingworth Bioventures IIIA L.P., (iv) Abingworth Bioventures IIIB L.P., (v) Abingworth Bioventures IIIC L.P., and (vi) Abingworth Bioventures III Executives L.P., together the Abingworth Funds, each identified in the prospectus as selling stockholders, to their respective partners. No additional shares of Solexa common stock are being offered for resale hereunder. Except with respect to directors and officers of Solexa, the entities that have filed reports pursuant to Section 13(f) of the Securities Exchange Act of 1934, as amended, or the Act, and statements of beneficial ownership filed pursuant to Sections 13(d) and 13(g) of the Act, the ownership indicated in the table below is based solely on shares owned by the indicated selling stockholders as a result of a distribution of shares by the Abingworth Funds on January 26, 2006. The table appearing on pages 10-13 of the prospectus under the caption *Selling Stockholders* is supplemented and amended to include the following stockholders in addition to those identified in the prospectus:

Security Holders	Shares of Common Stock Beneficially Owned Prior to the Offering		Number of Shares Being Offered	Shares of Common Stock Beneficially Owned After Offering	
	Shares	Percent*		Shares	Percent*
Abingworth Bioventures II, S.I.C.A.V	1,409,723	3.90%	1,409,723	0	**
Abingworth Bioventures IIA L.P.(1)	508,279	1.40%	133,279	375,000	1.03%
Abingworth Bioventures IIIA L.P.(2)	910,420	2.51%	473,953	436,467	1.20%
Abingworth Bioventures IIIB L.P.(3)	555,749	1.53%	289,312	266,437	**
Abingworth Bioventures IIIC L.P.(4)	332,900	**	173,301	159,599	**
Abingworth Bioventures III Executives L.P.(5)	14,514	**	7,558	6,956	**
Abingworth Bioventures III GP LP Adams Street Partnership Fund-2002 Non-U.S. Fund, L.P.	2,136	**	2,136	0	**
Adams Street Partnership Fund-2002 U.S. Fund, L.P.	3,027	**	3,027	0	**
Adams Street Partnership Fund-2003 Non-U.S. Fund, L.P.	12,366	**	12,366	0	**
Adams Street Partnership Fund-2003 U.S. Fund, L.P.	4,427	**	4,427	0	**
Alan Rowe Williamson	12,059	**	12,059	0	**
AMP Society UK	1,022	**	1,022	0	**
AMP Society UK v LLF a/c	3,187	**	3,187	0	**
Bax Portfolios Inc.	7,140	**	7,140	0	**
Blackboard Ventures, Inc	8,500	**	8,500	0	**
Boston Safe Deposit & Trust Co. solely in its capacity as Trustee for the SBC Master Pension Trust (as directed by Adams Street Partners, LLC) & not in its individual capacity	40,889	**	40,889	0	**
Brinson Partnership Fund Program Entity A	24,533	**	24,533	0	**
	20,357	**	20,357	0	**

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Brinson Partnership Fund 2001 Primary Fund, LP	12,807	**	12,807	0	**
Brinson Partnership Fund-2003 Primary Fund, L.P.	4,645	**	4,645	0	**
Chancellor Offshore Partnership Fund	57,897	**	57,897	0	**
Chancellor Partnership Fund	42,039	**	42,039	0	**
Charles Schwab & Co. for benefit of Michael Sherman, IRA	204	**	204	0	**
Christopher Egan	4,250	**	4,250	0	**
Credit Suisse Anlagestiftung	6,133	**	6,133	0	**
Crescent International Holdings Ltd.	26,611	**	26,611	0	**
De Soto Finance Co.	4,250	**	4,250	0	**
EDS Retirement Plan Trust	16,356	**	16,356	0	**
Equitable Life Assurance Society	42,500	**	42,500	0	**
Europe Select Private Equity II Ltd.	40,889	**	40,889	0	**
Ewing Marion Kauffman Foundation	72,194	**	72,194	0	**
Fitzgerald Partners IV	17,000	**	17,000	0	**
Fortis Banque (Crescent Int Holdings)	17,000	**	17,000	0	**
Frank A. Bonsal, Jr.	5,175	**	5,175	0	**
G.I.M.V. N.V.	45,945	**	45,945	0	**
General Practitioner LLC	1,840	**	1,840	0	**
Hajod A/S	4,454	**	4,454	0	**
HarbourVest International Private Equity Partners IV-Partnership Fund L.P.	102,223	**	102,223	0	**
HarbourVest Partners V-Partnership Fund L.P.	150,890	**	150,890	0	**
HarbourVest Partners V-Parallel P/S Fund L.P.	25,148	**	25,148	0	**
Henderson Private Capital (GP) Limited	40,889	**	40,889	0	**
Herbert L. Heyneker	204	**	204	0	**
HIPEP IV-European Venture Partnership Fund LP	10,222	**	10,222	0	**
HSBC Global Custody 813247	8,500	**	8,500	0	**
INVESCO Venture Partnership Fund III, L.P.	20,445	**	20,445	0	**
James A. Wells	204	**	204	0	**
Joel Franklin Martin	204	**	204	0	**
John Egan	4,250	**	4,250	0	**
Key Capital Corporation	17,556	**	17,556	0	**
Knightsbridge Associated Investors X, LP	31,050	**	31,050	0	**
Knightsbridge Associated Investors XI, LP	20,445	**	20,445	0	**
	40,889	**	40,889	0	**

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Finnish Local Government Pension
Institution

Logan Family 1992 Trust dated 3/3/1992

Robert W. Logan	204	**	204	0	**
Luna PCC Limited 2000 Cell	409	**	409	0	**
Lysander LLC	12,267	**	12,267	0	**
Montagu Newhall Global Partners II, L.P.	3,476	**	3,476	0	**
Montagu Newhall Global Partners II-A, L.P.	82	**	82	0	**
Montagu Newhall Global Partners II-B, L.P.	532	**	532	0	**
Montagu Newhall Global Partners, LP	8,178	**	8,178	0	**
Montauk Partners II, L.P.	16,679	**	16,679	0	**
Novartis AG	42,500	**	42,500	0	**

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Orange County Employees Retirement System	4,089	**	4,089	0	**
Pantheon International Participations PLC Partners Group Private Equity	42,500	**	42,500	0	**
Performance Holding Ltd.	8,178	**	8,178	0	**
PAT Pensions	13,727	**	13,727	0	**
Paul Associates II, L.P.	188	**	188	0	**
Paul Capital Partners VII Holdings	5,521	**	5,521	0	**
Paul Capital Partners VII, L.P.	964	**	964	0	**
Paul Capital Partners VII-C, L.P.	49	**	49	0	**
Pearl Assurance PLC	103,445	**	103,445	0	**
Pearl Holding Limited	26,578	**	26,578	0	**
Pensionskasse der UBS	20,445	**	20,445	0	**
Pomona Capital V Fund, L.P.	2,260	**	2,260	0	**
Pomona Capital V, L.P.	4,461	**	4,461	0	**
Prime Edge Investments N.V.	17,173	**	17,173	0	**
Princess Private Equity Subholding Ltd.	10,222	**	10,222	0	**
Quilvest European Venture Ltd.	16,356	**	16,356	0	**
SIF Investment Company Ltd.	25,416	**	25,416	0	**
Sir Winfried Franz Wilhelm Bischoff	2,044	**	2,044	0	**
State Universities Retirement System	16,356	**	16,356	0	**
Stuart J. Collinson	204	**	204	0	**
Tachbrook Investments Limited	4,089	**	4,089	0	**
Technopreneur Investment Pte Ltd.	12,267	**	12,267	0	**
The 1995 Michael Egan Revocable Trust	4,250	**	4,250	0	**
The 2001 Primary Brinson Non US Partnership Fund Offshore Series Company Ltd.	8,644	**	8,644	0	**
The 2001 Primary Brinson Partnership Fund Offshore Series Co. Ltd.	9,775	**	9,775	0	**
The 2003 Primary Brinson Non-U.S. Partnership Fund Offshore Series Co. Ltd.	3,564	**	3,564	0	**
The 2003 Primary Brinson Partnership Fund Offshore Series Co. Ltd.	3,159	**	3,159	0	**
The Brinson Non US Partnership - 2001 Primary Fund, L.P.	5,389	**	5,389	0	**
The Brinson U.S. Partnership Fund - 2003 Primary Fund, L.P.	1,615	**	1,615	0	**
The General Trust Company S.A.	8,687	**	8,687	0	**
The James Irvine Foundation	62,622	**	62,622	0	**
The John Egan Revocable Trust dtd 10/29/91	20,445	**	20,445	0	**

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The Jon S. Saxe & Myrna G. Marshall 1997 Trust	204	**	204	0	**
The Meadows Foundation	30,667	**	30,667	0	**
The Wellcome Trust Limited, as Trustee of the Wellcome Trust	221,828	**	221,828	0	**
Timothy Haines	204	**	204	0	**
Timothy James Rink	204	**	204	0	**
UBS Global Asset Management Trust Co. as Trustee of The Brinson Non-U.S. Partnership Fund Trust - 2003 Primary Fund, L.P.	7,064	**	7,064	0	**

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	Shares	Percent*		Shares	Percent*
UBS Global Asset Management Trust Co. as Trustee of The Brinson Partnership Fund Trust-2003 Primary Fund	9,737	**	9,737	0	**
UBS Global Asset Management Trust Company as Trustee of the Brinson Non US Partnership Fund Trust-2001 Primary Fund	34,915	**	34,915	0	**
UBS Global Asset Management Trust Company as Trustee of The Brinson Partnership Fund Trust-2001 Primary Fund	30,780	**	30,780	0	**
UBS Jersey Nominees Ltd.	6,133	**	6,133	0	**
UBS Private Banking Nominees Ltd. As Nominee for Sachsen LB Corporate Finance Holding GMBH	4,089	**	4,089	0	**
Unicapital II (Guernsey) Limited	6,141	**	6,141	0	**
Valinco Investment Limited	10,757	**	10,757	0	**
Varma Mutual Pension Insurance Company	40,889	**	40,889	0	**
Vega Invest (Guernsey) Limited	8,178	**	8,178	0	**
Wilden Ltd.	4,250	**	4,250	0	**
Total Shares Being Offered	5,731,585	15.78%	4,487,126	1,244,459	3.4%

* Percentage calculations based on 36,300,335 shares of our common stock that were issued and outstanding as of January 26, 2006.

** Represents beneficial ownership of less than 1%.

- (1) Includes 125,000 shares of common stock issuable upon exercise of a warrant.
- (2) Includes 145,489 shares of common stock issuable upon exercise of a warrant.
- (3) Includes 88,812 shares of common stock issuable upon exercise of a warrant.
- (4) Includes 53,200 shares of common stock issuable upon exercise of a warrant.
- (5) Includes 2,319 shares of common stock issuable upon exercise of a warrant.