



11-27-2001



101901844 TRADEMARK

Form PTO-1594 (Rev. 03/01) OMB No. 0651-0027 (exp. 5/31/2002) Tab settings

U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies): DoubleTwist, Inc., formerly known as Pangea Systems, Inc. Individual(s) Association General Partnership Limited Partnership Corporation-State now Delaware, Other originally California

2. Name and address of receiving party(ies) Name: Silicon Valley Bank Internal Address: Attn: Lance Brown Street Address: 185 Berry Street, Suite 190 City: San Francisco State: California Zip: 94107 Individual(s) citizenship Association General Partnership Limited Partnership Corporation-State California Other

Additional name(s) of conveying party(ies) attached? Yes No

3. Nature of conveyance: Assignment Merger Security Agreement Change of Name Other

Execution Date: August 20, 1998 (original)

If assignee is not domiciled in the United States, a domestic representative designation is attached: Yes No (Designations must be a separate document from assignment) Additional name(s) & address(es) attached? Yes No

4. Application number(s) or registration number(s): A. Trademark Application No.(s) See Attached Schedule

B. Trademark Registration No.(s) See Attached Schedule

Additional number(s) attached Yes No

5. Name and address of party to whom correspondence concerning document should be mailed: Name: Silicon Valley Bank Internal Address: Attn: Lance Brown Street Address: 185 Berry Street, Suite 190 City: San Francisco State: California Zip: 94107

6. Total number of applications and registrations involved: 21

7. Total fee (37 CFR 3.41) \$540 Enclosed Authorized to be charged to deposit account

8. Deposit account number:

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Lance Brown Name of Person Signing Silicon Valley Bank by: Signature November 15, 2001 Date

Total number of pages including cover sheet, attachments, and document: Mail documents to be recorded with required cover sheet information to: Commissioner of Patent & Trademarks, Box Assignments Washington, D.C. 20231

TRADEMARK REEL: 002398 FRAME: 0975



Attachment to
Recordation Form Cover Sheet
TradeMarks Only

Item 4. Application Numbers or Registration Numbers:

A. Trademark Application Numbers:

Application Number	Word Mark
75289288	GENETHESAURUS
75794171	DOUBLETWIST
75903255	SOFTWARE FOR LIFE
75903256	EMPOWERING THE SCIENTIST
75903306	PORTAL TO THE CODE
75980676	DOUBLETWIST
76031785	EMPOWERING YOUR DISCOVERY
76032159	[DESIGN MARK]
76032161	TWISTTOOLS
76032163	MYTWIST
76032171	DO SCIENCE WHILE YOU SLEEP
76176339	GENESQUASHER
76199559	DOUBLETWIST.COM
76199633	DOUBLETWIST
76264628	AGAVE
76320242	GENOME ZONE

Attachment to
Recordation Form Cover Sheet
TradeMarks Only
(continued)

B. Trademark Registration Numbers:

Registration Number	Word Mark
2119383	GENEWORLD
2132168	PANGEA SYSTEMS
2176758	GENEMILL
2460384	DOUBLETWIST.COM
2487805	PROPHECY

INTELLECTUAL PROPERTY SECURITY AGREEMENT

This Amended and Restated Intellectual Property Security Agreement (this "Agreement") is dated as of November 1, 2001, by and between SILICON VALLEY BANK, a California banking corporation ("Bank"); and DOUBLETWIST, INC., formerly known as PANGEA SYSTEMS, INC., a Delaware corporation ("Grantor"; and Bank and Grantor, together, the "Parties"), in consideration of and with reference to the facts set out in the paragraphs lettered A through G below (collectively, the "Recitals").

RECITALS

A. Bank has made certain advances of money and extended certain financial accommodations to Grantor (the "Loans") pursuant to that certain Loan and Security Agreement by and between Bank and Grantor dated August 20, 1998 (the "Original Loan Agreement").

B. The Original Loan Agreement was amended and restated by that certain Amended and Restated Loan and Security Agreement by and between Bank and Grantor dated November 29, 1999 (as the same may from time to time be further amended, modified, or supplemented, the "Loan Agreement"; and capitalized terms used but not defined herein have the definitions given such terms in the Loan Agreement).

C. Bank was willing to make the Loans to Grantor, but only upon the condition, among others, that Grantor grant to Bank a security interest in Grantor's Copyrights, Trademarks, Patents, Mask Works, and other Intellectual Property to secure the obligations of Grantor under the Original Loan Agreement, and such condition remained a condition under the Loan Agreement.

D. Pursuant to the terms of the Original Loan Agreement and the Loan Agreement, Grantor granted (the "Grant") to Bank a security interest in, among other things, all of Grantor's right, title, and interest, whether presently existing or hereafter acquired, in, to, and under all of the Collateral which was Intellectual Property.

E. In connection with the Original Loan Agreement, to confirm and restate the Grant, Grantor made, executed, and delivered to and for the benefit of Bank that certain Intellectual Property Security Agreement dated as of August 20, 1998 (the "Original IP Security Agreement").

F. Since the making of the Loan Agreement, Grantor has changed its name as set forth in the preamble of this Agreement.

G. In order to confirm and restate the Grant under the Original Loan Agreement, the Loan Agreement, and the Original IP Security Agreement, the Parties wish to amend and restate the Original IP Security Agreement.

NOW, THEREFORE, for and in consideration of the Recitals, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound, as collateral security for the prompt and complete payment when due of its obligations under the Loan Agreement, Grantor hereby represents, warrants, covenants, and agrees as follows:

AGREEMENT

1. To secure its obligations under the Loan Agreement, Grantor grants and pledges to Bank a security interest in all of Grantor's right, title, and interest in, to, under, and in respect of all of the Collateral which is Intellectual Property (including those Copyrights, Patents, Trademarks, and Mask Works listed on Schedules A, B, C, and D attached hereto), including all licenses (whether exclusive or non-exclusive) of Grantor in any Intellectual Property; the right to sue for past, present, and future infringements thereof; all proceeds of any infringement suits in connection therewith; all rights corresponding thereto throughout the world; and all re-issues, divisions, continuations, renewals, extensions, and continuations-in-part thereof.

2. The security interest granted hereby is a restatement and confirmation of the Grant. It is not intended as and shall not be deemed to be a novation thereof. The rights and remedies of Bank with respect to the security interest granted hereby are set forth in the Loan Agreement and the other Loan Documents, and those which are now or hereafter available to Bank as a matter of law or equity. Each right, power, and remedy of Bank provided for in the Loan Agreement or any of the Loan Documents, or now or hereafter existing at law or in equity, shall be cumulative and concurrent and shall be in addition to every other right, power, or remedy of Bank in respect of the Grant and the Collateral, and the exercise by Bank of any one or more of such rights, powers or remedies shall not preclude the simultaneous or later exercise by any person, including Bank, of any or all other such rights, powers, or remedies.

[Continued on Following Page]

3. The grant and pledge of security interests made hereby is made pursuant to the California Uniform Commercial Code, as the same may be from time to time amended or recodified.

IN WITNESS WHEREOF, the Parties have executed this Agreement to be as of the date first written above.

Address of Grantor:

2001 Broadway
Oakland, California 94612

GRANTOR:

DOUBLETWIST, INC., formerly known as
PANGAEA SYSTEMS, INC. a Delaware
corporation

By: 

Name: Gregory C. Thayer
V.P. Corporate Development
Title: General Counsel
DoubleTwist, Inc.

Address of Bank:

185 Berry Street, Suite 190
San Francisco, California 95107
Attn: Joellen Ademski

BANK:

SILICON VALLEY BANK,
a California banking corporation

By: 

Name: Lance Brown
Title: VP

Intellectual Property Security Agreement
Schedule A — Copyrights

WORK	REG. DATE	REG. NO.	RECORDING VOLUME & PAGE	RECORDING DATE
GeneWorld, version 2.0	1/23/1997	TXu-763-883	Vol. 3346, Page 286-286	2/25/1997

TRADEMARK
REEL: 002398 FRAME: 0981

Silicon Valley Bank/DoubleTwist
Amended and Restated Intellectual Property Security Agreement
SFDOCS\190443 2 62571 0010

Schedule A — Copyrights

**Intellectual Property Security Agreement
Schedule B — Patents**

INVENTOR(S)	DESCRIPTION	TYPE	APP. NO.	APP. DATE	PATENT NO.	PATENT DATE	STATUS
Karlak	Method and Apparatus for Efficient, Orderly Distributed Processing	Utility	08/868,877	6/4/1997			Pending
Karlak	Method and Apparatus for Obtaining Results from Multiple computer Applications	Utility	08/868,874	6/4/1997			Pending
Pouliot, et al.	Method and Apparatus for Simplified Research of Multiple Dynamic Databases	Utility	09/778,181	2/6/2001			Pending
Gao, et al.	System and Method for Performing Biological Research on Information Including Disease Information	Utility	09/933,294	8/20/2001			Originally filed as provisional applications 60/232,096, dated 9/12/2000, and 60/247,118, dated 2/26/2001
Pouliot, et al.	Method and System for Ordering Sequenced Portions of Genetic Material	Utility	60/314,676	8/24/2001			Provisional application; converted to regular utility application dated 10/25/2001; application number not yet assigned

**Intellectual Property Security Agreement
Schedule B — Patents**

INVENTOR(S)	DESCRIPTION	TYPE	APP. NO.	APP. DATE	PATENT NO.	PATENT DATE	STATUS
Cohen/DeFay [UCSF]	System and Method for Determining Three-Dimensional Structure of Protein Sequences	Utility			5,878,373	3/2/1999	Licensed
Cohen/Lichtarge [UCSF]	System and Method for Determining the Binding Surfaces Common to Protein Families	"Evolutionary Trace Application"	Unknown	2/3/1997			Licensed

**Intellectual Property Security Agreement
Schedule C — Trademarks**

MARK	CLASS	APP. DATE	APP. NO.	REG. DATE	REG NO.	STATUS
AGAVE	9	5/30/2001	76/264,628			Published 10/16/91
BODY LANGUAGE	9	4/13/1998	75/467,037			Abandoned
CHEMFOUNDRY	9	6/25/1997	75/314,460			Abandoned
CHEMWORLD	9	3/18/1997	75/259,165	8/18/1998	2,183,003	Abandoned
[DESIGN MARK]	9, 42	4/21/2000	76/032,159			Published 9/25/01
DO SCIENCE WHILE YOU SLEEP	9, 42	4/21/2000	76/032,171			To be Abandoned (Published 9/25/01)
DOUBLETWIST	9	9/8/1999	75/794,171			Pending
DOUBLETWIST	42	1/23/2001	75/980,676			Pending
DOUBLETWIST	42	1/23/2001	76/199,633			Pending
DOUBLETWIST.COM	42	9/8/1999	75/794,167	6/12/2001	2,460,384	Registered
DOUBLETWIST.COM	42	1/23/2001	76/199,559			Pending
EMPOWERING THE SCIENTIST	9	1/25/2000	75/903,256			Petition to Reinstate sent to PTO 3/7/01
EMPOWERING YOUR DISCOVERY	9	4/21/2000	76/031,785			To be Abandoned
EXPRESSION CITY	9	6/25/1997	75/314,657			Abandoned
GENEFOREST	9	5/9/1997	75/289,292			Abandoned
GENEMILL	9	6/25/1997	75/314,584	7/28/1998	2,176,758	To be Abandoned
GENOME ZONE	42	9/25/2001	76/320,242			Pending
GENESQUASHER	9	12/4/2000	76/176,339			Approved
GENESURVEYOR	9	7/20/1999	75/754,863			Abandoned
GENETHESAURUS	9	5/9/1997	75/289,288			SOU due 2/3/2002
GENEWORLD	9	9/20/1996	75/169,150	12/9/1997	2,119,383	Registered
LEA	9	7/6/2000	76/085,088			Abandoned
MYTWIST	9, 42	4/21/2000	76/032,163			Published (9/25/01)
PANGEA SYSTEMS	9	11/8/1996	75/195,089	1/27/1998	2,132,168	Registered
PANGEANETICS	9	5/9/1997	75/289,163			Abandoned
PORTAL TO THE CODE	9, 42	1/25/2000	75/903,306			NOA revd SOU due 2/7/02
PROPHECY	9	5/9/1997	75/289,340	9/11/2001	2,487,805	Registered
PULSE	9	1/12/1998	75/416,784			Abandoned
SOFTWARE FOR LIFE	9	1/25/2000	75/903,255			To be Abandoned

Silicon Valley Bank/DoubleTwist
Amended and Restated Intellectual Property Security Agreement
SFDOCS\190443 2 62571 0010

Intellectual Property Security Agreement
 Schedule C — Trademarks

MARK	CLASS	APP. DATE	APP. NO.	REG. DATE	REG NO.	STATUS
THE POWER TO DISCOVER	9	1/25/2000	75/903,307			To be Abandoned
TWISTTOOLS	9	4/21/2000	76/032,161			Pending
WRAPSODY	9	6/25/1997	75/314,661			Abandoned

**Intellectual Property Security Agreement
Schedule D — Maskworks**

None

Silicon Valley Bank/DoubleTwist
Amended and Restated Intellectual Property Security Agreement
SFDOCS\190443 2 62571 0010

Schedule D — Maskworks