



101870656

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

1. Name of conveying party(ies):
Synaptics Incorporated

Individual(s) Association
 General Partnership Limited Partnership
 Corporation-State
 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: 8/30/01

10/01/01

2. Name and address of receiving party(ies):
Name: Silicon Valley Bank
Internal Address: Loan Documentation ~~HG150~~ HA155
Street Address: 3003 Tasman Drive
City: Santa Clara State: Ca ZIP: 95054

Individual(s) Citizenship _____
 Association _____
 General Partnership _____
 Limited Partnership _____
 Corporation-State **DE**
 Other _____

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

OCT 1

4. Application number(s) or trademark number(s):

A. Trademark Application No.(s)	B. Trademark Registration No.(s) Please see attached

Additional numbers attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:
Name: Silicon Valley Bank
Internal Address: Loan Documentation ~~HG150~~ HA155
Street Address: 3003 Tasman Dr.
City: Santa Clara State: Ca ZIP: 95054

6. Total number of applications and registrations involved: **8**

7. Total fee (37 CFR 3.41):\$ 215.00
 Enclosed
 Authorized to be charged to deposit account

8. Deposit account number:
(Attach duplicate copy of this page if paying by deposit account)

10/10/2001 DBYRNE 00000141 5095284

01 FC:481 40.00 OP
02 FC:482 175.00 OP

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.

Vince Loomis
Name of Person Signing

Signature

September 19, 2001
Date

Total number of pages comprising cover sheet: 7

EXHIBIT C

Trademarks

<u>Description</u>	<u>Registration/ Application Number</u>	<u>Registration/ Application Date</u>
Computer peripherals-touchpads, software-CCR	1396346	
Computer peripherals-touchpads, software-CCR	881137	
Computer peripherals-touchpads, software-CCR	B06266	
Computer peripherals-touchpads, software-CCR	93/459711	
Computer peripherals-touchpads, software-CCR	2051662	
Electronic circuitry, integrated curcyutsm & circuit boards	1,760,444	
Design and consultation services in microcircuitry	1813466	
computer software CCR	1348784	
computer software CCR	B08611	
computer software, CCR	2296920	
Electromagnetic sensors	2159732	

INTELLECTUAL PROPERTY SECURITY AGREEMENT

This Intellectual Property Security Agreement is entered into as of August 30, 2001 by and between SILICON VALLEY BANK ("Bank") and SYNAPTICS INCORPORATED ("Grantor").

RECITALS

A. Bank has agreed to make certain advances of money and to extend certain financial accommodation to Grantor (the "Loans") in the amounts and manner set forth in that certain Loan and Security Agreement by and between Bank and Grantor dated August 30, 2001 (as the same may be amended, modified or supplemented from time to time, the "Loan Agreement"; capitalized terms used herein are used as defined in the Loan Agreement). Bank is willing to make the Loans to Grantor, but only upon the condition, among others, that Grantor shall grant to Bank a security interest in certain Copyrights, Trademarks, Patents, and Mask Works to secure the obligations of Grantor under the Loan Agreement.

B. Pursuant to the terms of the Loan Agreement, Grantor has granted to Bank a security interest in all of Grantor's right, title and interest, whether presently existing or hereafter acquired, in, to and under all of the Collateral.

NOW, THEREFORE, for good and valuable consideration, receipt 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

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 and under its Intellectual Property Collateral (including without limitation those Copyrights, Patents, Trademarks and Mask Works listed on Schedules A, B, C, and D hereto), and including without limitation all proceeds thereof (such as, by way of example but not by way of limitation, license royalties and proceeds of infringement suits), the right to sue for past, present and future infringements, all rights corresponding thereto throughout the world and all re-issues, divisions continuations, renewals, extensions and continuations-in-part thereof.

This security interest is granted in conjunction with the security interest granted to Bank under the Loan Agreement. The rights and remedies of Bank with respect to the security interest granted hereby are in addition to those 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 herein or 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 right, power or remedy provided for herein and the exercise by Bank of any one or more of the rights, powers or remedies provided for in this Intellectual Property Security Agreement, the Loan Agreement or any of the other Loan Documents, or now or hereafter existing at law or in equity, shall not preclude the simultaneous or later exercise by any Bank designee, including Bank, of any or all other rights, powers or remedies.

IN WITNESS WHEREOF, the parties have cause this Intellectual Property Security Agreement to be duly executed by its officers thereunto duly authorized as of the first date written above.

GRANTOR:

SYNAPTICS INCORPORATED

Address of Grantor:

2381 Bering Drive
San Jose, CA 95131

Attn: CFO

By: R J Kuntze

Title: VP & CFO

BANK:

SILICON VALLEY BANK

Address of Bank:

3003 Tasman Drive
Santa Clara, CA 95054-1191

Attn: _____

By: Emily Drake

Title: VP

EXHIBIT A

Copyrights

Description

Registration/
Application
Number

Registration/
Application
Date

NONE

EXHIBIT B

<u>Description</u>	<u>Registration/ Application Number</u>	<u>Registration /Application Date</u>
Subthreshold CMOS Amplifier with Wide Input Voltage Range	5,095,284	
Synaptic Element and Array	5,083,044	
Subthreshold CMOS Amplifier with Offset Adaptation	,935,702	
Synaptic Element and Array	5,120,996	
Dynamic Synapse for Neural Network	4,962,342	
MOS Device for Long-term Learning	4,953,928	
Method and Apparatus for Performing Neighborhood Operations on a Processing Plane	5,270,963	
CMOS Amplifier with Offset Adaptation	5,068,622	
CMOS Amplifier with Offset Adaptation	5,059,920	
CMOS Amplifier with Offset Adaptation	5,109,261	
Adaptable Current Mirror	5,073,759	
Adaptable CMOS Winner-Take All Circuit	5,049,758	
Circuits for Linear Conversion Between Currents and Voltages	5,165,054	
Integrating Photosensor and Imaging System Having Wide Dynamic Range	5,097,305	
CMOS Current Mirror with Offset Adaptation	5,119,038	
CMOS Winner Take All Circuit with Offset Adaptation	5,146,106	
Writable Analog Reference Voltage Storage Device	5,166,562	
Circuits for Linear Conversion Between Voltages and Currents	5,126,685	
Linear, Continuous-Time Two Quadrant Multiplier	5,107,149	
Integrating Photosensor and Imaging System Having Wide Dynamic Range with Varactors	5,260,592	
Synaptic Element Including Weight-Storage and Weight-Adjustment Circuit	5,204,549	
Adaptable MOS Current Mirror	5,160,899	
Continuous Synaptic Weight Update Mechanism	5,303,329	
Object Position Detector (early technology) (Europe only)	0,574,213	
One-Transistor Adaptable Analog Storage Element and Array	5,336,936	
Sense Amplifier	5,276,407	
Electrically Adaptable Neural Network with Post-Processing Circuitry	5,331,215	
Integrating Imaging System Having Wide Dynamic Range with Sample/Hold Circuits	5,324,958	
High-Density Photosensor and Contactless Imaging Array Having Wide Dynamic Range	5,289,023	
Two Layer Neural Network Comprised of Neurons with Improved Input Range and Input Offset	5,381,515	
Integrated Device for Recognition of Moving Objects	5,248,873	
Writable Analog Reference Voltage Storage Device	5,243,554	
Brain Learning and Recognition Emulation Circuitry and Method of Recognizing Events	4,802,103	
Brain Emulation Circuit with Reduced Confusion	4,773,024	
Scanning Method and Apparatus for Current Signals Having Large Dynamic Range	4,876,534	

EXHIBIT B

Patents

Continued

<u>Description</u>	<u>Registration / Application Number</u>	<u>Registration /Application Date</u>
Adaptive Analog Minimum/Maximum Selector and Subtractor Circuit	5,408,194	
Object Position Detector (early technology)	5,374,787	
TouchPad Driven Handheld Computing Device (pad on back)	5,543,588	
Writable Analog Reference Voltage Storage Device	5,541,878	
Object Position and Proximity Detector (early technology)	5,495,077	
Object Position Detector (first modern pads)	5,914,465	
Object Position Detector with Edge Motion Feature	5,543,590	
Object Position Detector with Edge Motion Feature and Gesture Recognition	5,543,591	
Paintbrush Stylus for Capacitive Touch Sensor Pad	5,488,204	
Object Position Detector (early technology)	5,648,642	
Stylus Input Capacitive Touch Pad Sensor ("Goop pad")	5,942,733	
Pressure Sensitive Scrollbar Feature	5,889,236	
One-Transistor Adaptable Analog Storage Element and Array	5,864,242	
Object Position Detector with Edge Motion Feature and Gesture Recognition	5,880,411	
Writable Analog Reference Voltage Storage Device	5,629,891	
Sense Amplifier for High-Density Imaging Array	5,844,265	
Object Position Detector (moisture)	5,861,583	
Object Position Detector (early technology)	5,841,078	
Force Sensing Touchpad ("X-Pad")	5,854,625	
Incremental Ideographic Character Input Method ("CCR")	5,926,566	
Integrating Imaging System with Phototransistor Having Wide Dynamic Range	5,763,909	
Sense Amplifier for High-Density Imaging Array	6,097,432	
Handwriting Recognition System and Method	5,812,698	
Object Position Detector with Edge Motion Feature and Gesture Recognition	6,028,271	
Method for Changing the Weight of a Synaptic Element	6,023,422	
Incremental Ideographic Character Input Method ("CCR")	6,148,104	
Incremental Ideographic Character Input Method ("CCR")	6,028,959	
Object Position Detector (early technology)	6,239,389	
Electronic Device Employing a Touch Sensitive Transducer ("Ultra Thin")	5,920,310	
Method and Apparatus for Scroll Bar Control ("virtual scrolling")	5,943,052	
A Two-Layer Capacitive Touchpad and Method of Making Same ("APT" technology)	6,188,391	
Position Encoder (SPIRAL II)	5,815,091	

EXHIBIT D

Mask Works

Description

Registration/
Application
Number

Registration/
Application
Date

NONE