

TRADEMARK ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT		
NATURE OF CONVEYANCE:	SECURITY INTEREST		
CONVEYING PARTY DATA			
Name	Formerly	Execution Date	Entity Type
Asyst Shinko, Inc.		07/27/2007	CORPORATION:
RECEIVING PARTY DATA			
Name:	KeyBank National Association, as administrative agent		
Street Address:	127 Public Square		
City:	Cleveland		
State/Country:	OHIO		
Postal Code:	44114		
Entity Type:	Bank:		
PROPERTY NUMBERS Total: 1			
Property Type	Number	Word Mark	
Registration Number:	2981421	SYST SHINKO	
CORRESPONDENCE DATA			
Fax Number:	(415)391-8269		
	<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>		
Phone:	415-659-5944		
Email:	mbarni@reedsmith.com		
Correspondent Name:	Michele Barni, Corporate Paralegal		
Address Line 1:	Two Embarcadero Center, Suite 2000		
Address Line 4:	San Francisco, CALIFORNIA 94111		
ATTORNEY DOCKET NUMBER:	357440.20001		
NAME OF SUBMITTER:	Glenn Nieves		
Signature:	/Glenn Nieves/		
Date:	08/15/2007		

CH \$40.00 2981421

Total Attachments: 75

source=USPledgeAndSecurityAgreement1#page1.tif
source=USPledgeAndSecurityAgreement1#page2.tif
source=USPledgeAndSecurityAgreement1#page3.tif
source=USPledgeAndSecurityAgreement1#page4.tif
source=USPledgeAndSecurityAgreement1#page5.tif
source=USPledgeAndSecurityAgreement1#page6.tif
source=USPledgeAndSecurityAgreement1#page7.tif
source=USPledgeAndSecurityAgreement1#page8.tif
source=USPledgeAndSecurityAgreement1#page9.tif
source=USPledgeAndSecurityAgreement1#page10.tif
source=USPledgeAndSecurityAgreement1#page11.tif
source=USPledgeAndSecurityAgreement1#page12.tif
source=USPledgeAndSecurityAgreement1#page13.tif
source=USPledgeAndSecurityAgreement1#page14.tif
source=USPledgeAndSecurityAgreement1#page15.tif
source=USPledgeAndSecurityAgreement1#page16.tif
source=USPledgeAndSecurityAgreement1#page17.tif
source=USPledgeAndSecurityAgreement1#page18.tif
source=USPledgeAndSecurityAgreement1#page19.tif
source=USPledgeAndSecurityAgreement1#page20.tif
source=USPledgeAndSecurityAgreement1#page21.tif
source=USPledgeAndSecurityAgreement1#page22.tif
source=USPledgeAndSecurityAgreement1#page23.tif
source=USPledgeAndSecurityAgreement1#page24.tif
source=USPledgeAndSecurityAgreement1#page25.tif
source=USPledgeAndSecurityAgreement1#page26.tif
source=USPledgeAndSecurityAgreement1#page27.tif
source=USPledgeAndSecurityAgreement1#page28.tif
source=USPledgeAndSecurityAgreement1#page29.tif
source=USPledgeAndSecurityAgreement1#page30.tif
source=USPledgeAndSecurityAgreement1#page31.tif
source=USPledgeAndSecurityAgreement1#page32.tif
source=USPledgeAndSecurityAgreement1#page33.tif
source=USPledgeAndSecurityAgreement1#page34.tif
source=USPledgeAndSecurityAgreement1#page35.tif
source=USPledgeAndSecurityAgreement1#page36.tif
source=USPledgeAndSecurityAgreement1#page37.tif
source=USPledgeAndSecurityAgreement1#page38.tif
source=USPledgeAndSecurityAgreement1#page39.tif
source=USPledgeAndSecurityAgreement1#page40.tif
source=USPledgeAndSecurityAgreement1#page41.tif
source=USPledgeAndSecurityAgreement1#page42.tif
source=USPledgeAndSecurityAgreement1#page43.tif
source=USPledgeAndSecurityAgreement1#page44.tif
source=USPledgeAndSecurityAgreement1#page45.tif
source=USPledgeAndSecurityAgreement1#page46.tif
source=USPledgeAndSecurityAgreement1#page47.tif
source=USPledgeAndSecurityAgreement1#page48.tif
source=USPledgeAndSecurityAgreement1#page49.tif
source=USPledgeAndSecurityAgreement1#page50.tif
source=USPledgeAndSecurityAgreement1#page51.tif
source=USPledgeAndSecurityAgreement1#page52.tif
source=USPledgeAndSecurityAgreement1#page53.tif
source=USPledgeAndSecurityAgreement1#page54.tif

source=USPledgeAndSecurityAgreement1#page55.tif
source=USPledgeAndSecurityAgreement1#page56.tif
source=USPledgeAndSecurityAgreement1#page57.tif
source=USPledgeAndSecurityAgreement1#page58.tif
source=USPledgeAndSecurityAgreement1#page59.tif
source=USPledgeAndSecurityAgreement1#page60.tif
source=USPledgeAndSecurityAgreement1#page61.tif
source=USPledgeAndSecurityAgreement1#page62.tif
source=USPledgeAndSecurityAgreement1#page63.tif
source=USPledgeAndSecurityAgreement1#page64.tif
source=USPledgeAndSecurityAgreement1#page65.tif
source=USPledgeAndSecurityAgreement1#page66.tif
source=USPledgeAndSecurityAgreement1#page67.tif
source=USPledgeAndSecurityAgreement1#page68.tif
source=USPledgeAndSecurityAgreement1#page69.tif
source=USPledgeAndSecurityAgreement1#page70.tif
source=USPledgeAndSecurityAgreement1#page71.tif
source=USPledgeAndSecurityAgreement1#page72.tif
source=USPledgeAndSecurityAgreement1#page73.tif
source=USPledgeAndSecurityAgreement1#page74.tif
source=USPledgeAndSecurityAgreement1#page75.tif

US PLEDGE AND SECURITY AGREEMENT

This US PLEDGE AND SECURITY AGREEMENT, dated as of July 27, 2007 (as amended, supplemented, amended and restated or otherwise modified from time to time, this "Security Agreement"), is made by ASYST TECHNOLOGIES, INC., a California corporation (the "Company"), ASYST JAPAN, INC., a Japanese corporation ("AJI"), ASYST SHINKO, INC., a Japanese corporation ("ASI") and each Subsidiary Guarantor (terms used in the preamble and the recitals have the definitions set forth in or incorporated by reference in Article I) from time to time a party to this Security Agreement (each of the foregoing individually a "Grantor" and collectively, the "Grantors"), in favor of KeyBank National Association as the administrative agent (together with its successor(s) thereto in such capacity, the "Administrative Agent") for each of the Secured Parties.

WITNESSETH:

WHEREAS, pursuant to a Credit Agreement, dated as of July 27, 2007 (as amended, supplemented, amended and restated or otherwise modified from time to time, the "Credit Agreement"), among the Company, AJI, ASI and certain other Subsidiaries of the Company party thereto from time to time (each a "Designated Borrower" and, collectively with the Company AJI and ASI, the "Borrowers"), the Lenders and the Administrative Agent, the Lenders and the L/C Issuer have extended Commitments to make Credit Extensions to the Borrowers; and

WHEREAS, as a condition precedent to the making of the Credit Extensions under the Credit Agreement, each Grantor is required to execute and deliver this Security Agreement;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each Grantor agrees, for the benefit of each Secured Party, as follows:

ARTICLE I DEFINITIONS

SECTION 1.1. Certain Terms. The following terms (whether or not underscored) when used in this Security Agreement, including its preamble and recitals, shall have the following meanings (such definitions to be equally applicable to the singular and plural forms thereof):

"Administrative Agent" is defined in the preamble.

"Borrowers" is defined in the first recital.

"Collateral" is defined in Section 2.1.

"Collateral Account" is defined in clause (b) of Section 4.3.

"Computer Hardware and Software Collateral" means all of the Grantors' right, title and interest throughout the world in and to:

(a) all computer and other electronic data processing hardware, integrated computer systems, central processing units, memory units, display terminals, printers, features, computer elements, card readers, tape drives, hard and soft disk drives, cables, electrical supply hardware, generators, power equalizers, accessories and all peripheral devices and other related computer hardware, including all operating system software, utilities and application programs in whatsoever form;

(b) all software programs (including both source code, object code and all related applications and data files), designed for use on the computers and electronic data processing hardware described in clause (a) above;

(c) all firmware associated therewith;

(d) all documentation (including flow charts, logic diagrams, manuals, guides, specifications, training materials, charts and pseudo codes) with respect to such hardware, software and firmware described in the preceding clauses (a) through (c); and

(e) all rights with respect to all of the foregoing, including copyrights, licenses, options, warranties, service contracts, program services, test rights, maintenance rights, support rights, improvement rights, renewal rights and indemnifications and any substitutions, replacements, improvements, error corrections, updates, additions or model conversions of any of the foregoing.

“Control Agreement” means an authenticated record in form and substance reasonably satisfactory to the Administrative Agent, that provides for the Administrative Agent to have “control” (as defined in the UCC) over certain Collateral.

“Copyright Collateral” means all of the Grantors’ right, title and interest throughout the world in and to:

(a) all copyrights, registered or unregistered and whether published or unpublished, now or hereafter in force including copyrights registered in the United States Copyright Office and corresponding offices in other countries of the world (except Japan and Taiwan), and registrations and recordings thereof and all applications for registration thereof, whether pending or in preparation and all extensions and renewals of the foregoing (“Copyrights”), including the Copyrights which are the subject of a registration or application referred to in Item A of Schedule V;

(b) all express or implied Copyright licenses and other agreements for the grant by or to such Grantor of any right to use any items of the type referred to in clause (a) above (each a “Copyright License”), including each Copyright License referred to in Item B of Schedule V;

(c) the right to sue for past, present and future infringements of any of the Copyrights owned by such Grantor, and for breach or enforcement of any Copyright License; and

(d) all proceeds of, and rights associated with, the foregoing (including Proceeds, licenses, royalties, income, payments, claims, damages and proceeds of infringement suits).

"Credit Agreement" is defined in the first recital.

"Distributions" means all dividends paid on Equity Interests, liquidating dividends paid on Equity Interests, shares (or other designations) of Equity Interests resulting from (or in connection with the exercise of) stock splits, reclassifications, warrants, options, non-cash dividends, mergers, consolidations, and all other distributions (whether similar or dissimilar to the foregoing) on or with respect to any Equity Interests constituting Collateral.

"Filing Statements" is defined in clause (b) of Section 3.7.

"General Intangibles" means all "general intangibles" and all "payment intangibles", each as defined in the UCC, and shall include all interest rate or currency protection or hedging arrangements, all tax refunds, all licenses, permits, concessions and authorizations and all Intellectual Property Collateral (in each case, regardless of whether characterized as general intangibles under the UCC).

"Grantor" and "Grantors" are defined in the preamble.

"Intellectual Property" means Trademarks, Patents, Copyrights, Trade Secrets and all other similar types of intellectual property under any Law, statutory provision or common Law doctrine in the United States or anywhere else in the world.

"Intellectual Property Collateral" means, collectively, the Computer Hardware and Software Collateral, the Copyright Collateral, the Patent Collateral, the Trademark Collateral and the Trade Secrets Collateral.

"Owned Intellectual Property Collateral" means all Intellectual Property that is necessary for or used in the business of each Grantor that is (a) not licensed to a Grantor pursuant to a Trademark License, Patent License or Copyright License set forth in Schedules III, IV or V; and (b) not in the public domain.

"Patent Collateral" means all of the Grantors' right, title and interest throughout the world in and to:

(a) inventions and discoveries, whether patentable or not, all letters patent and applications for letters patent throughout the world (except Japan and Taiwan), including all patent applications in preparation for filing, including all reissues, divisions, continuations, continuations-in-part, extensions, renewals and reexaminations of any of the foregoing ("Patents"), including each Patent and Patent application referred to in Item A of Schedule III;

(b) all Patent licenses, and other agreements for the grant by or to such Grantor of any right to use any items of the type referred to in clause (a) above (each a "Patent License"), including each Patent License referred to in Item B of Schedule III;

(c) the right to sue third parties for past, present and future infringements of any Patent or Patent application, and for breach or enforcement of any Patent License; and

(d) all proceeds of, and rights associated with, the foregoing (including Proceeds, licenses, royalties, income, payments, claims, damages and proceeds of infringement suits).

"Permitted Liens" means all Liens permitted by Section 7.01 of the Credit Agreement or any other Loan Document.

"Security Agreement" is defined in the preamble.

"Specified Default" means (a) an Event of Default or (b) a Default under clause (f) or (g) of Section 8.01 of the Credit Agreement.

"Termination Date" means the date on which all Obligations have been paid in full in cash, all Letters of Credit have been terminated or have expired (or have been Cash Collateralized), all Secured Hedge Agreements have been terminated or have otherwise been provided for on terms reasonably satisfactory to the parties, and all Commitments shall have been terminated.

"Trademark Collateral" means all of the Grantors' right, title and interest throughout the world in and to:

(a) (i) all trademarks, trade names, corporate names, company names, business names, fictitious business names, trade styles, service marks, certification marks, collective marks, logos and other source or business identifiers, and all goodwill of the business associated therewith, now existing or hereafter adopted or acquired, whether currently in use or not, all registrations and recordings thereof and all applications in connection therewith, whether pending or in preparation for filing, including registrations, recordings and applications in the United States Patent and Trademark Office and corresponding offices in other countries of the world (except Japan and Taiwan), and all common-Law rights relating to the foregoing, and (ii) the right to obtain all reissues, extensions or renewals of the foregoing (collectively referred to as "Trademarks"), including those Trademarks referred to in Item A of Schedule IV;

(b) all Trademark licenses and other agreements for the grant by or to such Grantor of any right to use any Trademark (each a "Trademark License"), including each Trademark License referred to in Item B of Schedule IV; and

(c) all of the goodwill of the business connected with the use of, and symbolized by the Trademarks described in clause (a) and, to the extent applicable, clause (b);

(d) the right to sue third parties for past, present and future infringements or dilution of the Trademarks described in clause (a) and, to the extent applicable, clause (b)

or for any injury to the goodwill associated with the use of any such Trademark or for breach or enforcement of any Trademark License; and

(e) all proceeds of, and rights associated with, the foregoing (including Proceeds, licenses, royalties, income, payments, claims, damages and proceeds of infringement suits).

"Trade Secrets Collateral" means all of the Grantors' right, title and interest throughout the world in and to (a) all common Law and statutory trade secrets and all other confidential, proprietary or useful information and all know-how (collectively referred to as "Trade Secrets") obtained by or used in or contemplated at any time for use in the business of a Grantor, whether or not such Trade Secret has been reduced to a writing or other tangible form, including all documents and things embodying, incorporating or referring in any way to such Trade Secret, (b) all Trade Secret licenses and other agreements for the grant by or to such Grantor of any right to use any Trade Secret (each a "Trade Secret License") including the right to sue for and to enjoin and to collect damages for the actual or threatened misappropriation of any Trade Secret and for the breach or enforcement of any such Trade Secret License, and (d) all proceeds of, and rights associated with, the foregoing (including Proceeds, licenses, royalties, income, payments, claims, damages and proceeds of infringement suits).

SECTION 1.2. Credit Agreement Definitions. Unless otherwise defined herein or the context otherwise requires, terms used in this Security Agreement, including its preamble and recitals, have the meanings provided in the Credit Agreement.

SECTION 1.3. UCC Definitions. When used herein the terms Account, Certificated Securities, Chattel Paper, Commercial Tort Claim, Commodity Account, Commodity Contract, Deposit Account, Document, Electronic Chattel Paper, Equipment, Goods, Instrument, Inventory, Investment Property, Letter-of-Credit Rights, Proceeds, Promissory Notes, Securities Account, Security Entitlement, Supporting Obligations and Uncertificated Securities have the meaning provided in Article 8 or Article 9, as applicable, of the UCC. Letters of Credit has the meaning provided in Section 5-102 of the UCC.

ARTICLE II SECURITY INTEREST

SECTION 2.1. Grant of Security Interest. Each Grantor hereby grants to the Administrative Agent, for its benefit and the ratable benefit of each other Secured Party, a continuing security interest in all of such Grantor's right, title and interest in the following property, whether now or hereafter existing, owned or acquired by such Grantor, and wherever located, (collectively, the "Collateral"):

- (a) Accounts;
- (b) Chattel Paper;
- (c) Commercial Tort Claims listed on Item I of Schedule II (as such schedule may be amended or supplemented from time to time);

- (d) Deposit Accounts;
- (e) Documents;
- (f) General Intangibles;
- (g) Goods;
- (h) Instruments;
- (i) Investment Property;
- (j) Letter-of-Credit Rights and Letters of Credit;
- (k) Supporting Obligations;
- (l) all books, records, writings, databases, information and other property relating to, used or useful in connection with, evidencing, embodying, incorporating or referring to, any of the foregoing in this Section;
- (m) all Proceeds of the foregoing and, to the extent not otherwise included, (A) all payments under insurance (whether or not the Administrative Agent is the loss payee thereof) and (B) all tort claims; and
- (n) all other property and rights of every kind and description and interests therein.

Notwithstanding the foregoing, the term "Collateral" shall not include, and the grant of a security interest as provided hereunder shall not extend to:

- (i) such Grantor's real property interests (other than fixtures);
- (ii) any General Intangibles or other rights arising under any contracts, instruments, licenses or other documents (including the Acquisition Agreement and Related Documents) to the extent the grant of a security interest would (A) constitute a violation of a valid and enforceable restriction in favor of a third party on such grant, unless and until any required consents shall have been obtained (it being agreed that no Grantor shall be required to obtain such consent with respect to the Acquisition Agreement and Related Documents), or (B) give any other party to such contract, instrument, license or other document a valid and enforceable right to terminate its obligations thereunder;
- (iii) any asset, the granting of a security interest in which would be void or illegal under any applicable governmental Law, rule or regulation, or pursuant thereto would result in, or permit the termination of, such asset;
- (iv) any rights or interests of any Grantor in and to the Japanese Collateral, the Taiwanese Collateral or any Other Foreign Collateral in each case

not located in the US to the extent that any such Collateral is subject to a security interest in favor of a Secured Party under any Collateral Document (other than US Collateral Documents); or

(v) any asset subject to a Permitted Lien (other than Liens in favor of the Administrative Agent) to the extent that the grant of other Liens on such asset (A) would result in a breach or violation of, or constitute a default under, the agreement or instrument governing such Permitted Lien, (B) would result in the loss of use of such asset or (C) would permit the holder of such Permitted Lien to terminate the Grantor's use of such asset.

SECTION 2.2. Security for Obligations. This Security Agreement and the Collateral in which the Administrative Agent for the benefit of the Secured Parties is granted a security interest hereunder by the Grantors secure the payment and performance of (a) with respect to each of the Company and each Grantor that is a US Subsidiary Guarantor, all of the Obligations; provided that Investment Property consisting of Equity Interests of any Foreign Subsidiary of such Grantor in excess of 65% of the total combined voting power of all Equity Interests of such Foreign Subsidiary shall not secure the Obligations of any US Loan Party, except that such 65% limitation shall not apply to a Foreign Subsidiary that (x) is treated as a partnership under the Code or (y) is not treated as an entity that is separate from (A) such Grantor; (B) any Person that is treated as a partnership under the Code or (C) any "United States person" (as defined in Section 7701(a)(30) of the Code) and (b) with respect to each Grantor, all of the Obligations of the Foreign Obligors.

SECTION 2.3. Grantors Remain Liable. Anything herein to the contrary notwithstanding:

(a) the Grantors will remain liable under the contracts and agreements included in the Collateral to the extent set forth therein, and will perform all of their duties and obligations under such contracts and agreements to the same extent as if this Security Agreement had not been executed;

(b) the exercise by the Administrative Agent of any of its rights hereunder will not release any Grantor from any of its duties or obligations under any such contracts or agreements included in the Collateral; and

(c) no Secured Party will have any obligation or liability under any contracts or agreements included in the Collateral by reason of this Security Agreement, nor will any Secured Party be obligated to perform any of the obligations or duties of any Grantor thereunder or to take any action to collect or enforce any claim for payment assigned hereunder.

SECTION 2.4. Distributions on Pledged Shares. In the event that any Distribution with respect to any Equity Interests pledged hereunder is permitted to be paid (in accordance with Section 7.06 of the Credit Agreement), such Distribution or payment may be paid directly to the applicable Grantor. If any Distribution is made in contravention of Section 7.06 of the Credit

Agreement, such Grantor shall hold the same segregated and in trust for the Administrative Agent until paid to the Administrative Agent in accordance with Section 4.1.5.

SECTION 2.5. Security Interest Absolute, etc. This Security Agreement shall in all respects be a continuing, absolute, unconditional and irrevocable grant of security interest, and shall remain in full force and effect until the Termination Date. All rights of the Secured Parties and the security interests granted to the Administrative Agent (for its benefit and the ratable benefit of each other Secured Party) hereunder, and all obligations of the Grantors hereunder, shall, in each case, be absolute, unconditional and irrevocable irrespective of:

- (a) any lack of validity, legality or enforceability of any Loan Document;
- (b) the failure of any Secured Party (i) to assert any claim or demand or to enforce any right or remedy against any Loan Party or any other Person (including any other Grantor) under the provisions of any Loan Document or otherwise, or (ii) to exercise any right or remedy against any other guarantor (including any other Grantor) of, or collateral securing, any Obligations;
- (c) any change in the time, manner or place of payment of, or in any other term of, all or any part of the Obligations, or any other extension, compromise or renewal of any Obligations;
- (d) any reduction, limitation, impairment or termination of any Obligations for any reason, including any claim of waiver, release, surrender, alteration or compromise, and shall not be subject to (and each Grantor hereby waives any right to or claim of) any defense or setoff, counterclaim, recoupment or termination whatsoever by reason of the invalidity, illegality, nongenuineness, irregularity, compromise, unenforceability of, or any other event or occurrence affecting, any Obligations or otherwise;
- (e) any amendment to, rescission, waiver, or other modification of, or any consent to or departure from, any of the terms of any Loan Document;
- (f) any addition, exchange or release of any Collateral or of any Person that is (or will become) a Grantor (including the Grantors hereunder) of the Obligations, or any surrender or non-perfection of any collateral, or any amendment to or waiver or release or addition to, or consent to or departure from, any other guaranty held by any Secured Party securing any of the Obligations; or
- (g) any other circumstance which might otherwise constitute a defense available to, or a legal or equitable discharge of, any Loan Party, any surety or any guarantor.

SECTION 2.6. Postponement of Subrogation. Each Grantor agrees that it will not exercise any rights against another Grantor which it may acquire by way of rights of subrogation under any Loan Document to which it is a party. No Grantor shall seek or be entitled to seek any contribution or reimbursement from any Loan Party, in respect of any payment made under any Loan Document or otherwise, until following the Termination Date. Any amount paid to such

Grantor on account of any such subrogation rights prior to the Termination Date shall be held in trust for the benefit of the Secured Parties and shall immediately be paid and turned over to the Administrative Agent for the benefit of the Secured Parties in the exact form received by such Grantor (duly endorsed in favor of the Administrative Agent, if required), to be credited and applied against the Obligations, whether matured or unmatured, in accordance with Section 6.1; provided that if such Grantor has made payment to the Secured Parties of all or any part of the Obligations and the Termination Date has occurred, then at such Grantor's request, the Administrative Agent (on behalf of the Secured Parties) will, at the expense of such Grantor, execute and deliver to such Grantor appropriate documents (without recourse and without representation or warranty) necessary to evidence the transfer by subrogation to such Grantor of an interest in the Obligations resulting from such payment. In furtherance of the foregoing, at all times prior to the Termination Date, such Grantor shall refrain from taking any action or commencing any proceeding against any Loan Party (or its successors or assigns, whether in connection with a bankruptcy proceeding or otherwise) to recover any amounts in respect of payments made under this Security Agreement to any Secured Party.

ARTICLE III REPRESENTATIONS AND WARRANTIES

In order to induce the Secured Parties to enter into the Credit Agreement and make Credit Extensions thereunder, and to induce the Secured Parties to enter into Swap Contracts, the Grantors represent and warrant to each Secured Party as set forth below.

SECTION 3.1. As to Equity Interests of the Subsidiaries, Investment Property.

- (a) With respect to any direct Subsidiary of any Grantor that is
 - (i) a corporation, business trust, joint stock company or similar Person, all Equity Interests issued by such Subsidiary are duly authorized and validly issued, fully paid and non-assessable (or equivalent thereof to the extent applicable in the jurisdiction in which Equity Interests are issued), and represented by a certificate; and
 - (ii) a limited liability company organized under the laws of any State of the US, no Equity Interests issued by such Subsidiary fails to expressly provide that such Equity Interests is a security governed by Article 8 of the UCC;
 - (iii) a partnership or limited liability company, no Equity Interests issued by such Subsidiary (A) is dealt in or traded on securities exchanges or in securities markets, or (B) is held in a Securities Account, except, with respect to this clause (a)(ii), Equity Interests (x) for which the Administrative Agent is the registered owner or (y) with respect to which the issuer has agreed in an authenticated record with such Grantor and the Administrative Agent to comply with any instructions of the Administrative Agent without the consent of such Grantor.

(b) Subject to Section 6.25 of the Credit Agreement, each Grantor has delivered all Certificated Securities constituting Collateral held by such Grantor on the Closing Date to the Administrative Agent, together with duly executed undated blank stock powers, or other equivalent instruments of transfer acceptable to the Administrative Agent.

(c) With respect to Uncertificated Securities constituting Collateral owned by any Grantor, such Grantor has caused the issuer thereof either to (i) register the Administrative Agent as the registered owner of such security or (ii) agree in an authenticated record with such Grantor and the Administrative Agent that such issuer will comply with instructions with respect to such security originated by the Administrative Agent without further consent of such Grantor.

(d) The percentage of the issued and outstanding Equity Interests of each Subsidiary pledged by each Grantor hereunder is as set forth on Schedule I.

SECTION 3.2. Grantor Name, Location, etc.

(a) The jurisdiction in which each Grantor is located for purposes of Sections 9-301 and 9-307 of the UCC is set forth in Item A of Schedule II.

(b) Each location a secured party would have filed a UCC financing statement in the five years prior to the date hereof to perfect a security interest in Equipment, Inventory and General Intangibles owned by such Grantor is set forth in Item B of Schedule II.

(c) The Grantors do not have any trade names other than those set forth in Item C of Schedule II hereto.

(d) During the four months preceding the date hereof, no Grantor has been known by any legal name different from the one set forth on the signature page hereto, nor has such Grantor been the subject of any merger or other corporate reorganization, except as set forth in Item D of Schedule II hereto.

(e) Each Grantor's federal taxpayer identification number is (and, during the four months preceding the date hereof, such Grantor has not had a federal taxpayer identification number different from that) set forth in Item E of Schedule II hereto.

(f) No Grantor is a party to any federal, state or local government contract except as set forth in Item F of Schedule II hereto.

(g) [Grantor maintains the Deposit Accounts, Securities Accounts and Commodity Accounts (excluding Excluded Accounts) with the Person, in each case, as set forth on Item G of Schedule II.]

(h) No Grantor is the beneficiary of any Letters of Credit, except as set forth on Item H of Schedule II.

(i) No Grantor has Commercial Tort Claims (x) in which a suit has been filed by such Grantor and (y) where the amount of damages reasonably expected to be claimed exceeds \$1,000,000, except as set forth on Item I of Schedule II.

(j) The name set forth on the signature page attached hereto is the true and correct legal name (as defined in the UCC) of each Grantor.

(k) With respect to Letters of Credit with an aggregate face amount of \$500,000 or more, each Grantor has, to the extent reasonably requested by Administrative Agent, obtained a legal, valid and enforceable consent of each issuer of any such Letter of Credit to the assignment of the Proceeds of such Letter of Credit to the Administrative Agent and no Grantor has consented to, and is otherwise aware of, any Person (other than the Administrative Agent pursuant hereto) having control (within the meaning of Section 9-104 of the UCC) over, or any other interest in any of such Grantor's rights in respect thereof.

SECTION 3.3. Ownership, No Liens, etc. Each Grantor has rights in or the power to transfer the Collateral, and each Grantor owns its Collateral free and clear of any Lien, except for any security interest in Collateral (other than the Equity Interests of each Subsidiary pledged hereunder) that is a Permitted Lien. No effective financing statement or other filing similar in effect covering all or any part of the Collateral is on file in any recording office, except those filed in favor of the Administrative Agent relating to this Security Agreement, Permitted Liens or as to which a duly authorized termination statement relating to such financing statement or other instrument has been delivered to the Administrative Agent on the Closing Date.

SECTION 3.4. Possession of Inventory, Control; etc.

(a) Each Grantor has, and agrees that it will maintain, exclusive possession of its Documents, Instruments, Promissory Notes, Goods, Equipment and Inventory, other than (i) Equipment and Inventory in transit in the ordinary course of business, (ii) Equipment and Inventory that is in the possession or control of a warehouseman, bailee agent or other Person (other than a Person controlled by or under common control with the) that has been notified of the security interest created in favor of the Secured Parties pursuant to this Security Agreement, and has authenticated a record acknowledging that it holds possession of such Collateral for the Secured Parties' benefit and waives any Lien held by it against such Collateral, and (iii) Instruments or Promissory Notes that have been delivered to the Administrative Agent pursuant to Section 3.5. In the case of Equipment or Inventory described in clause (ii) above, to the best of the applicable Grantor's knowledge, no lessor or warehouseman of any premises or warehouse upon or in which such Equipment or Inventory is located has (i) issued any warehouse receipt or other receipt in the nature of a warehouse receipt in respect of any such Equipment or Inventory, (ii) issued any Document for any such Equipment or Inventory, (iii) received notification of any Secured Party's interest (other than the security interest granted hereunder) in any such Equipment or Inventory or (iv) any Lien on any such Equipment or Inventory.

(b) Each Grantor is the sole entitlement holder of its Accounts and no other Person (other than the Administrative Agent pursuant to this Security Agreement or any other Person with respect to Permitted Liens) has control or possession of, or any other interest in, any of its Accounts or any other securities or property credited thereto.

SECTION 3.5. Negotiable Documents, Instruments and Chattel Paper. Each Grantor has delivered to the Administrative Agent possession of all originals of all Documents, Instruments, Promissory Notes, and tangible Chattel Paper constituting Collateral and owned or held by such Grantor on the Closing Date.

SECTION 3.6. Intellectual Property Collateral.

(a) In respect of the Intellectual Property Collateral:

(i) set forth in Item A of Schedule III hereto is a complete and accurate list of all issued and applied-for Patents owned by each Grantor, including those that have been issued by or are on file with the United States Patent and Trademark Office or corresponding offices in other countries of the world (except Japan and Taiwan), and set forth in Item B of Schedule III hereto is a complete and accurate list of all Patent Licenses;

(ii) set forth in Item A of Schedule IV hereto is a complete and accurate list all registered and applied-for Trademarks owned by each Grantor, including those that are registered, or for which an application for registration has been made, with the United States Patent and Trademark Office or corresponding offices in other countries of the world (except Japan and Taiwan), and set forth in Item B of Schedule IV hereto is a complete and accurate list all Trademark Licenses; and

(iii) set forth in Item A of Schedule V hereto is a complete and accurate list of all registered and applied-for Copyrights owned by each Grantor, including those that are registered, or for which an application for registration has been made, with the United States Copyright Office or corresponding offices in other countries of the world (except Japan and Taiwan), and set forth in Item B of Schedule V hereto is a complete and accurate list of all Copyright Licenses, including an indication of which of those Copyright Licenses are exclusive licenses granted to such Grantor in respect of any Copyright that is registered with the United States Copyright Office.

(b) Except as disclosed on Schedules III through V, in respect of each Grantor:

(i) the Owned Intellectual Property Collateral is valid, subsisting, unexpired and enforceable and has not been abandoned or adjudged invalid or unenforceable, in whole or in part;

(ii) such Grantor is the sole and exclusive owner of the entire and unencumbered right, title and interest in and to the Owned Intellectual Property

Collateral (except for the Permitted Liens), and such Grantor has not received any written notice claiming or otherwise has knowledge that such Grantor is or may be, in conflict with, infringing, misappropriating, diluting, misusing or otherwise violating any of the rights of any third party or that challenges the ownership, use, protectability, registerability, validity, enforceability of any Owned Intellectual Property Collateral or, to such Grantor's knowledge, any other Intellectual Property Collateral and, to such Grantor's knowledge, there is no valid basis for any such claims;

(iii) such Grantor has made all necessary filings and recordations to protect its interest in any Owned Intellectual Property Collateral that is material to the business of such Grantor, including recordations of all of its interests in the Patent Collateral, the Trademark Collateral and the Copyright Collateral in the United States Patent and Trademark Office, the United States Copyright Office and corresponding offices in other countries of the world, as appropriate, and has used proper statutory notice, as applicable, in connection with its use of any Patent, Trademark or Copyright;

(iv) such Grantor has taken all reasonable steps to safeguard its Trade Secrets and to its knowledge (A) none of the Trade Secrets of such Grantor has been used, divulged, disclosed or appropriated for the benefit of any other Person other than such Grantor; (B) no employee, independent contractor or agent of such Grantor has misappropriated any Trade Secrets of any other Person in the course of the performance of his or her duties as an employee, independent contractor or agent of such Grantor; and (C) no employee, independent contractor or agent of such Grantor is in default or breach of any term of any employment agreement, non-disclosure agreement, assignment of inventions agreement or similar agreement or contract relating in any way to the protection, ownership, development, use or transfer of such Grantor's material Intellectual Property Collateral;

(v) no action by such Grantor is currently pending or threatened in writing which asserts that any third party is infringing, misappropriating, diluting, misusing or voiding any Owned Intellectual Property Collateral and, to such Grantor's knowledge, no third party is infringing upon, misappropriating, diluting, misusing or voiding any Intellectual Property owned or used by such Grantor in any material respect, or any of its respective licensees;

(vi) no settlement or consents, covenants not to sue, nonassertion assurances, or releases have been entered into by such Grantor or to which such Grantor is bound that adversely affects its rights to own or use any Intellectual Property Collateral;

(vii) except for the Permitted Liens, such Grantor has not made a previous assignment, sale, transfer or agreement constituting a present or future assignment, sale or transfer of any Intellectual Property Collateral for purposes of

granting a security interest or as collateral that has not been terminated or released;

(viii) such Grantor has executed and delivered to the Administrative Agent, Intellectual Property Collateral security agreements for all Copyrights, Patents and Trademarks owned by such Grantor, including all Copyrights, Patents and Trademarks on Schedules III, IV or V (as such schedules may be amended or supplemented from time to time);

(ix) the consummation of the transactions contemplated by the Credit Agreement and this Security Agreement will not result in the termination or material impairment of any of the Intellectual Property Collateral;

(x) all employees, independent contractors and agents who have contributed to the creation or development of any Owned Intellectual Property Collateral have been a party to an enforceable "work for hire" and assignment agreement with such Grantor in accordance with applicable Laws, according and granting exclusive ownership of such Owned Intellectual Property Collateral to such Grantor; and

(xi) such Grantor owns directly or is entitled to use by license or otherwise, all Intellectual Property used in, necessary for or of importance to the conduct of such Grantor's business.

SECTION 3.7. Validity, etc.

(a) This Security Agreement creates a valid security interest in the Collateral securing the payment of the Obligations as set forth in Section 2.2.

(b) Each Grantor has filed or caused to be filed all UCC-1 financing statements in the filing office for each Grantor's jurisdiction of organization listed in Item A of Schedule II (collectively, the "Filing Statements") (or has authenticated and delivered to the Administrative Agent the Filing Statements suitable for filing in such offices) and has taken all other:

(i) actions necessary to obtain control of the Collateral as provided in Sections 9-104 (other than Excluded Accounts), 9-105, 9-106 (subject to Section 6.25 of the Credit Agreement) and 9-107 of the UCC; and

(ii) actions necessary to perfect the Administrative Agent's security interest with respect to any Collateral evidenced by a certificate of ownership.

(c) Upon the filing of the Filing Statements with the appropriate agencies therefor the security interests created under this Security Agreement shall constitute a perfected security interest in the Collateral described on such Filing Statements in favor of the Administrative Agent on behalf of the Secured Parties to the extent that a security interest therein may be perfected by filing pursuant to the relevant UCC, prior to all other Liens, except for Permitted Liens (in which case such security interest shall be second in

priority of right only to the Permitted Liens until the obligations secured by such Permitted Liens have been satisfied).

SECTION 3.8. Authorization, Approval, etc. Except as have been obtained or made and are in full force and effect, no authorization, approval or other action by, and no notice to or filing with, any Governmental Authority or any other third party is required either

(a) for the grant by the Grantors of the security interest granted hereby or for the execution, delivery and performance of this Security Agreement by the Grantors;

(b) for the perfection or maintenance of the security interests hereunder including the first priority (subject to Permitted Liens (in which case such security interest shall be second in priority of right only to the Permitted Liens until the obligations secured by such Permitted Liens have been satisfied)) nature of such security interest (except with respect to the Filing Statements or, with respect to Intellectual Property Collateral, the recordation of any agreements with the United States Patent and Trademark Office or the United States Copyright Office) or the exercise by the Administrative Agent of its rights and remedies hereunder; or

(c) for the exercise by the Administrative Agent of the voting or other rights provided for in this Security Agreement, or, except (i) with respect to any securities issued by a Subsidiary of the Grantors, as may be required in connection with a disposition of such securities by Laws affecting the offering and sale of securities generally, the remedies in respect of the Collateral pursuant to this Security Agreement and (ii) any "change of control" or similar filings required by state licensing agencies.

SECTION 3.9. Best Interests. It is in the best interests of each Grantor (other than the Company) to execute this Security Agreement inasmuch as such Grantor will, as a result of being a Subsidiary of the Company, derive substantial direct and indirect benefits from the Credit Extensions made from time to time to the Borrowers by the Lenders and the L/C Issuer pursuant to the Credit Agreement, and each Grantor agrees that the Secured Parties are relying on this representation in agreeing to make Credit Extensions pursuant to the Credit Agreement to the Borrowers.

ARTICLE IV COVENANTS

Except as expressly provided in the Credit Agreement, each Grantor covenants and agrees that, until the Termination Date, such Grantor will perform, comply with and be bound by the obligations set forth below.

SECTION 4.1. As to Investment Property, etc.

SECTION 4.1.1. Equity Interests of Subsidiaries. No Grantor will allow any of its Subsidiaries:

(a) that is a corporation, business trust, joint stock company or similar Person, to issue Uncertificated Securities;

(b) that is a limited liability company organized under the laws of any State of the US, fails to expressly provide that such Equity Interests is a security governed by Article 8 of the UCC;

(c) that is a partnership or limited liability company, to (i) issue Equity Interests that are to be dealt in or traded on securities exchanges or in securities markets, or (ii) place such Subsidiary's Equity Interests in a Securities Account; and

(d) to issue Equity Interests in addition to or in substitution for the Equity Interests pledged hereunder, except to such Grantor (and such Equity Interests are immediately pledged and delivered to the Administrative Agent pursuant to the terms of this Security Agreement).

SECTION 4.1.2. Investment Property (other than Certificated Securities).

(a) With respect to any Deposit Accounts, Securities Accounts, Commodity Accounts, Commodity Contracts or Security Entitlements constituting Investment Property (in each case other than Excluded Accounts) owned or held by any Grantor, such Grantor will, cause the intermediary maintaining such Investment Property to execute a Control Agreement relating to such Investment Property pursuant to which such intermediary agrees to comply with the Administrative Agent's instructions with respect to such Investment Property without further consent by such Grantor.

(b) With respect to any Uncertificated Securities (other than Uncertificated Securities credited to a Securities Account) constituting Investment Property owned or held by any Grantor, such Grantor will cause the issuer of such securities to either (i) register the Administrative Agent as the registered owner thereof on the books and records of the issuer or (ii) execute a Control Agreement relating to such Investment Property pursuant to which the issuer agrees to comply with the Administrative Agent's instructions with respect to such Uncertificated Securities without further consent by such Grantor.

SECTION 4.1.3. Certificated Securities (Stock Powers). Subject to Section 6.25 of the Credit Agreement, each Grantor agrees that all Certificated Securities that constitute Collateral will be delivered to the Administrative Agent and that all such Certificated Securities will be accompanied by duly executed undated blank stock powers, or other equivalent instruments of transfer reasonably acceptable to the Administrative Agent.

SECTION 4.1.4. Continuous Pledge. Each Grantor will (subject to the terms of the Credit Agreement) deliver to the Administrative Agent and at all times keep pledged to the Administrative Agent pursuant hereto, on a first-priority, perfected basis all Investment Property, all Distributions with respect thereto, all Payment Intangibles to the extent they are evidenced by a Document, Instrument, Promissory Note or Chattel Paper, and all interest and principal with respect to such Payment Intangibles, and all Proceeds and rights from time to time received by or distributable to such Grantor in respect of any of the foregoing Collateral. Each Grantor agrees

that it will, promptly following receipt thereof, deliver to the Administrative Agent possession of all originals of negotiable Documents, Instruments, Promissory Notes and Chattel Paper that it acquires following the Closing Date.

SECTION 4.1.5. Voting Rights; Distributions, etc. Each Grantor agrees promptly upon (x) receipt of notice of the occurrence of a Specified Default from the Administrative Agent and (y) request therefor by the Administrative Agent, so long as such Specified Default shall continue,

(a) to deliver (properly endorsed where required hereby or requested by the Administrative Agent) to the Administrative Agent all Distributions with respect to Investment Property, all interest, principal, other cash payments on Payment Intangibles, and all Proceeds of the Collateral, in each case thereafter received by such Grantor, all of which shall be held by the Administrative Agent as additional Collateral; and

(b) with respect to Collateral consisting of general partner interests or limited liability company interests,

(i) to promptly modify its Organizational Documents to admit the Administrative Agent as a general partner or member, as applicable,

(ii) that the Administrative Agent may exercise (to the exclusion of such Grantor) the voting power and all other incidental rights of ownership with respect to any Investment Property constituting Collateral and such Grantor hereby grants the Administrative Agent an irrevocable proxy, exercisable under such circumstances, to vote such Investment Property; and

(iii) to promptly deliver to the Administrative Agent such additional proxies and other documents as may be necessary to allow the Administrative Agent to exercise such voting power.

All dividends, Distributions, interest, principal, cash payments, Payment Intangibles and Proceeds that may at any time and from time to time be held by such Grantor, but which such Grantor is then obligated to deliver to the Administrative Agent, shall, until delivery to the Administrative Agent, be held by such Grantor separate and apart from its other property in trust for the Administrative Agent. The Administrative Agent agrees that unless a Specified Default shall have occurred and be continuing, such Grantor will have the exclusive voting power with respect to any Investment Property constituting Collateral and the Administrative Agent will, upon the written request of such Grantor, promptly deliver such proxies and other documents, if any, as shall be reasonably requested by such Grantor which are necessary to allow such Grantor to exercise that voting power; provided that no vote shall be cast, or consent, waiver, or ratification given, or action taken by such Grantor that would materially impair any such Collateral or be inconsistent with or violate any provision of any Loan Document.

SECTION 4.2. Change of Name, etc. No Grantor will change its name or place of incorporation or organization or federal taxpayer identification number except upon 30 days' prior written notice to the Administrative Agent.

SECTION 4.3. As to Accounts.

(a) Each Grantor shall have the right to collect all Accounts so long as no Specified Default shall have occurred and be continuing.

(b) Upon the occurrence and during the continuance of a Specified Default, all Proceeds of Collateral received by such Grantor shall be delivered in kind to the Administrative Agent for deposit in a Deposit Account of such Grantor maintained with the Administrative Agent (together with any other Accounts pursuant to which any portion of the Collateral is deposited with the Administrative Agent, the "Collateral Accounts"), and such Grantor shall not commingle any such Proceeds, and shall hold separate and apart from all other property, all such Proceeds in express trust for the benefit of the Administrative Agent until delivery thereof is made to the Administrative Agent.

(c) The Administrative Agent shall have the right to apply any amount in the Collateral Account to the payment of any Obligations which are due and payable.

(d) With respect to each of the Collateral Accounts, it is hereby confirmed and agreed that (i) deposits in such Collateral Account are subject to a security interest as contemplated hereby, (ii) such Collateral Account shall be under the control of the Administrative Agent and (iii) the Administrative Agent shall have the sole right of withdrawal over such Collateral Account.

SECTION 4.4. As to Grantors' Use of Collateral.

(a) Subject to clause (b), each Grantor (i) may in the ordinary course of its business, at its own expense, sell, lease or furnish under the contracts of service any of the Inventory normally held by such Grantor for such purpose, and use and consume, in the ordinary course of its business, any raw materials, work in process or materials normally held by such Grantor for such purpose, (ii) will, at its own expense, endeavor to collect, as and when due, all amounts due with respect to any of the Collateral, including the taking of such action with respect to such collection as the Administrative Agent may request following the occurrence and during the continuance of a Specified Default or, in the absence of such request, as such Grantor may deem advisable, and (iii) may grant, in the ordinary course of business, to any party obligated on any of the Collateral, any rebate, refund or allowance to which such party may be lawfully entitled, and may accept, in connection therewith, the return of Goods, the sale or lease of which shall have given rise to such Collateral.

(b) At any time following the occurrence and during the continuance of a Specified Default, whether before or after the maturity of any of the Obligations, the Administrative Agent may (i) revoke any or all of the rights of each Grantor set forth in clause (a), (ii) notify any parties obligated on any of the Collateral to make payment to the Administrative Agent of any amounts due or to become due thereunder and (iii) enforce collection of any of the Collateral by suit or otherwise and surrender, release, or exchange all or any part thereof, or compromise or extend or renew for any period

(whether or not longer than the original period) any indebtedness thereunder or evidenced thereby.

(c) Upon request of the Administrative Agent following the occurrence and during the continuance of a Specified Default, each Grantor will, at its own expense, notify any parties obligated on any of the Collateral to make payment to the Administrative Agent of any amounts due or to become due thereunder.

(d) At any time following the occurrence and during the continuation of a Specified Default, the Administrative Agent may endorse, in the name of such Grantor, any item, howsoever received by the Administrative Agent, representing any payment on or other Proceeds of any of the Collateral.

SECTION 4.5. As to Intellectual Property Collateral. Each Grantor covenants and agrees to comply with the following provisions as such provisions relate to any Intellectual Property Collateral material to the operations or business of such Grantor:

(a) such Grantor shall not (i) do or fail to perform any act whereby any of the Patent Collateral may lapse or become abandoned or dedicated to the public or unenforceable, (ii) itself or permit any of its licensees to (A) fail to continue to use any of the Trademark Collateral in order to maintain the Trademark Collateral in full force free from any claim of abandonment for non-use, (B) fail to maintain as in the past the quality of products and services offered under the Trademark Collateral, (C) fail to employ the Trademark Collateral registered with any federal or state or foreign authority with an appropriate notice of such registration, (D) adopt or use any other Trademark which is confusingly similar or a colorable imitation of any of the Trademark Collateral, unless rights in such Trademark Collateral inure solely to Grantor and do not infringe or weaken the validity or enforceability of any of the Intellectual Property Collateral or (E) do or permit any act or knowingly omit to do any act whereby any of the Trademark Collateral may lapse or become invalid or unenforceable, or (iii) do or permit any act or knowingly omit to do any act whereby any of the Copyright Collateral or any of the Trade Secrets Collateral may lapse or become invalid or unenforceable or placed in the public domain except upon expiration of the end of an unrenovable term of a registration thereof, unless, in the case of any of the foregoing requirements in clauses (i), (ii) and (iii), such Grantor shall reasonably and in good faith determine that any of such Intellectual Property Collateral is of negligible economic value to such Grantor, and the loss of such Intellectual Property Collateral would not have a Material Adverse Effect on the business;

(b) such Grantor shall promptly notify the Administrative Agent if it knows, or reasonably suspects, that any application or registration relating to any material item of the Intellectual Property Collateral may become abandoned or dedicated to the public or placed in the public domain or invalid or unenforceable, or of any adverse determination or development (including the institution of, or any such determination or development in, any proceeding in the United States Patent and Trademark Office, the United States Copyright Office or any foreign counterpart thereof or any court) regarding such

Grantor's ownership of any Intellectual Property Collateral, its right to register the same or to keep and maintain and enforce the same;

(c) such Grantor shall (i) within sixty (60) days of such Grantor or any of its agents, employees, designees or licensees filing an application for the registration of any Patent or Trademark with the United States Patent and Trademark Office or corresponding offices in other countries of the world (except Japan and Taiwan) or (ii) within twenty (20) days of such Grantor receiving, as owner or exclusive licensee, a Copyright registration with the United States Copyright Office or corresponding offices in other countries of the world (except Japan and Taiwan), inform the Administrative Agent, and upon request of the Administrative Agent, promptly execute and deliver an Intellectual Property Security Agreement substantially in the form set forth as Exhibits A, B and C hereto and other documents as the Administrative Agent may request to evidence the Administrative Agent's security interest in such Intellectual Property Collateral;

(d) such Grantor shall take all necessary steps, including in any proceeding before the United States Patent and Trademark Office, the United States Copyright Office and corresponding offices in other countries of the world (except Japan and Taiwan), to maintain and pursue any application (and to obtain the relevant registration) filed with respect to, and to maintain any registration of, the Intellectual Property Collateral, including the filing of applications for renewal, affidavits of use, affidavits of incontestability and opposition, interference and cancellation proceedings and the payment of fees and taxes (except to the extent that dedication, abandonment or invalidation is permitted under the foregoing clause (a) or (b)); and

(e) such Grantor shall promptly, but within sixty (60) days, after it obtains an ownership interest in any Patent or Trademark, execute and deliver to the Administrative Agent a Patent Security Agreement or a Trademark Security Agreement in the form of Exhibit A and Exhibit B, as applicable, and Grantor shall promptly, but within twenty (20) days, after it obtains an ownership interest or an exclusive license in any Copyright, execute and deliver to the Administrative Agent a Copyright Security Agreement in the form of Exhibit C, and in each case such Grantor shall execute and deliver to the Administrative Agent any other document required to acknowledge or register, record or perfect the Administrative Agent's interest in any part of such item of Intellectual Property unless such Grantor shall determine in good faith using its commercially reasonable business judgment (with the consent of the Administrative Agent) that any such Intellectual Property is not material and is of negligible economic value to such Grantor.

SECTION 4.6. As to Letter-of-Credit Rights.

(a) Each Grantor, by granting a security interest in its Letter-of-Credit Rights to the Administrative Agent, intends to (and hereby does) collaterally assign to the Administrative Agent its rights (including its contingent rights) to the Proceeds of all Letter-of-Credit Rights of which it is or hereafter becomes a beneficiary or assignee. Such Grantor will promptly use commercially reasonable efforts to cause the issuer of

each Letter of Credit and each nominated person (if any) with respect thereto to consent to such assignment of the Proceeds thereof in a consent agreement in form and substance reasonably satisfactory to the Administrative Agent and deliver written evidence of such consent to the Administrative Agent.

(b) Upon the occurrence and during the continuance of a Specified Default, such Grantor will, promptly upon request by the Administrative Agent, (i) notify (and such Grantor hereby authorizes the Administrative Agent to notify) the issuer and each nominated person with respect to each of the Letters of Credit that the Proceeds thereof have been assigned to the Administrative Agent hereunder and any payments due or to become due in respect thereof are to be made directly to the Administrative Agent and (ii) arrange for the Administrative Agent to become the transferee beneficiary Letter of Credit.

SECTION 4.7. As to Commercial Tort Claims. Each Grantor covenants and agrees that, until the Termination Date, with respect to any Commercial Tort Claim in excess of \$1,000,000 individually or in the aggregate hereafter arising, it shall deliver to the Administrative Agent a supplement in form and substance reasonably satisfactory to the Administrative Agent, together with all supplements to schedules thereto identifying such new Commercial Tort Claims.

SECTION 4.8. Electronic Chattel Paper and Transferable Records. If any Grantor at any time holds or acquires an interest in any electronic chattel paper or any "transferable record," as that term is defined in Section 201 of the U.S. Federal Electronic Signatures in Global and National Commerce Act, or in Section 16 of the U.S. Uniform Electronic Transactions Act as in effect in any relevant jurisdiction, with a value in excess of \$1,000,000, such Grantor shall promptly notify the Administrative Agent thereof and, at the request of the Administrative Agent, shall take such action as the Administrative Agent may request to vest in the Administrative Agent control under Section 9-105 of the U.C.C. of such electronic chattel paper or control under Section 201 of the Federal Electronic Signatures in Global and National Commerce Act or, as the case may be, Section 16 of the Uniform Electronic Transactions Act, as so in effect in such jurisdiction, of such transferable record. The Administrative Agent agrees with such Grantor that the Administrative Agent will arrange, pursuant to procedures satisfactory to the Administrative Agent and so long as such procedures will not result in the Administrative Agent's loss of control, for the Grantor to make alterations to the electronic chattel paper or transferable record permitted under Section 9-105 of the U.C.C. or, as the case may be, Section 201 of the U.S. Federal Electronic Signatures in Global and National Commerce Act or Section 16 of the U.S. Uniform Electronic Transactions Act for a party in control to allow without loss of control, unless an Event of Default has occurred and is continuing or would occur after taking into account any action by such Grantor with respect to such electronic chattel paper or transferable record.

SECTION 4.9. Deposit Accounts. Such Grantor will maintain all of its Deposit Accounts, Securities Accounts and Commodities Accounts (in each case, other than Excluded Accounts) only with the Administrative Agent or with any depository institution that has entered into a Control Agreement.

SECTION 4.10. Further Assurances, etc. Each Grantor agrees that, from time to time at its own expense, it will promptly execute and deliver all further instruments and documents, and take all further action, that may be necessary or that the Administrative Agent may request, in order to perfect, preserve and protect any security interest granted or purported to be granted hereby or to enable the Administrative Agent to exercise and enforce its rights and remedies hereunder with respect to any Collateral. Without limiting the generality of the foregoing, such Grantor will

(a) from time to time upon the request of the Administrative Agent, promptly deliver to the Administrative Agent such stock powers, instruments and similar documents, reasonably satisfactory in form and substance to the Administrative Agent, with respect to such Collateral as the Administrative Agent may request and will, from time to time upon the request of the Administrative Agent, after the occurrence and during the continuance of any Specified Default, promptly transfer any securities constituting Collateral into the name of any nominee designated by the Administrative Agent; if any Collateral shall be evidenced by an Instrument, negotiable Document, Promissory Note or tangible Chattel Paper, deliver and pledge to the Administrative Agent hereunder such Instrument, negotiable Document, Promissory Note or tangible Chattel Paper duly endorsed and accompanied by duly executed instruments of transfer or assignment, all in form and substance reasonably satisfactory to the Administrative Agent;

(b) file (and hereby authorize the Administrative Agent to file) such Filing Statements or continuation statements, or amendments thereto, and such other instruments or notices (including any assignment of claim form under or pursuant to the federal assignment of claims statute, 31 U.S.C. § 3726, any successor or amended version thereof or any regulation promulgated under or pursuant to any version thereof), as may be necessary or that the Administrative Agent may request in order to perfect and preserve the security interests and other rights granted or purported to be granted to the Administrative Agent hereby;

(c) deliver to the Administrative Agent and at all times keep pledged to the Administrative Agent pursuant hereto, on a first-priority, perfected basis, at the request of the Administrative Agent, all Investment Property constituting Collateral, all Distributions with respect thereto, and all interest and principal with respect to Promissory Notes, and all Proceeds and rights from time to time received by or distributable to such Grantor in respect of any of the foregoing Collateral;

(d) not take or omit to take any action the taking or the omission of which would result in any material impairment or alteration of any obligation of the maker of any Payment Intangible or other Instrument constituting Collateral, except as provided in Section 4.4;

(e) not create any tangible Chattel Paper without placing a legend on such tangible Chattel Paper acceptable to the Administrative Agent indicating that the Administrative Agent has a security interest in such Chattel Paper;

(f) furnish to the Administrative Agent, from time to time at the Administrative Agent's request, statements and schedules further identifying and describing the Collateral and such other reports in connection with the Collateral as the Administrative Agent may request, all in reasonable detail; and

(g) do all things requested by the Administrative Agent in accordance with this Security Agreement in order to enable the Administrative Agent to have and maintain control over the Collateral consisting of Investment Property (subject to Section 6.25 of the Credit Agreement), Deposit Accounts (other than Excluded Accounts), Letter-of-Credit-Rights and Electronic Chattel Paper.

With respect to the foregoing and the grant of the security interest hereunder, each Grantor hereby authorizes the Administrative Agent to file one or more financing or continuation statements, and amendments thereto, relative to all or any part of the Collateral; and to make all relevant filings with the United States Patent and Trademark Office, the United States Copyright Office and corresponding offices in other countries of the world (except Japan and Taiwan) in respect of the Intellectual Property Collateral. Each Grantor agrees that a carbon, photographic or other reproduction of this Security Agreement or any UCC financing statement covering the Collateral or any part thereof shall be sufficient as a UCC financing statement where permitted by Law. Each Grantor hereby authorizes the Administrative Agent to file financing statements describing as the collateral covered thereby "all of the debtor's personal property or assets" or words to that effect, notwithstanding that such wording may be broader in scope than the Collateral described in this Security Agreement.

ARTICLE V THE ADMINISTRATIVE AGENT

SECTION 5.1. Administrative Agent Appointed Attorney-in-Fact. Each Grantor hereby irrevocably appoints the Administrative Agent its attorney-in-fact, with full authority in the place and stead of such Grantor and in the name of such Grantor or otherwise, from time to time in the Administrative Agent's discretion, following the occurrence and during the continuance of a Specified Default, to take any action and to execute any instrument which the Administrative Agent may deem necessary or advisable to accomplish the purposes of this Security Agreement, including:

(a) to ask, demand, collect, sue for, recover, compromise, receive and give acquittance and receipts for moneys due and to become due under or in respect of any of the Collateral;

(b) to receive, endorse, and collect any drafts or other Instruments, Documents and Chattel Paper, in connection with clause (a) above;

(c) to file any claims or take any action or institute any proceedings which the Administrative Agent may deem necessary or desirable for the collection of any of the Collateral or otherwise to enforce the rights of the Administrative Agent with respect to any of the Collateral; and

- (d) to perform the affirmative obligations of such Grantor hereunder.

Each Grantor hereby acknowledges, consents and agrees that the power of attorney granted pursuant to this Section is irrevocable and coupled with an interest.

SECTION 5.2. Administrative Agent May Perform. If any Grantor fails to perform any obligation contained herein, the Administrative Agent may, after prior written notice to such Grantor, itself perform, or cause performance of, such agreement, and the expenses of the Administrative Agent incurred in connection therewith shall be payable by such Grantor pursuant to Section 10.04 of the Credit Agreement.

SECTION 5.3. Administrative Agent Has No Duty. The powers conferred on the Administrative Agent hereunder are solely to protect its interest (on behalf of the Secured Parties) in the Collateral and shall not impose any duty on it to exercise any such powers. Except for reasonable care of any Collateral in its possession, the accounting for moneys actually received by it hereunder and any other duties of a secured party provided in the UCC, the Administrative Agent shall have no duty as to any Collateral or responsibility for

(a) ascertaining or taking action with respect to calls, conversions, exchanges, maturities, tenders or other matters relative to any Investment Property, whether or not the Administrative Agent has or is deemed to have knowledge of such matters, or

(b) taking any necessary steps to preserve rights against prior parties or any other rights pertaining to any Collateral.

SECTION 5.4. Reasonable Care. The Administrative Agent is required to exercise reasonable care in the custody and preservation of any of the Collateral in its possession; provided that the Administrative Agent shall be deemed to have exercised reasonable care in the custody and preservation of any of the Collateral, if it takes such action for that purpose as each Grantor reasonably requests in writing at times other than upon the occurrence and during the continuance of any Specified Default, but failure of the Administrative Agent to comply with any such request at any time shall not in itself be deemed a failure to exercise reasonable care.

ARTICLE VI REMEDIES

SECTION 6.1. Certain Remedies. If any Specified Default shall have occurred and be continuing:

(a) The Administrative Agent may exercise in respect of the Collateral, in addition to other rights and remedies provided for herein or otherwise available to it, all the rights and remedies of a Secured Party on default under the UCC (whether or not the UCC applies to the affected Collateral) and also may

(i) take possession of any Collateral not already in its possession without demand and without legal process;

(ii) require each Grantor to, and each Grantor hereby agrees that it will, at its expense and upon request of the Administrative Agent forthwith, assemble all or part of the Collateral as directed by the Administrative Agent and make it available to the Administrative Agent at a place to be designated by the Administrative Agent that is reasonably convenient to both parties,

(iii) enter onto the property where any Collateral is located and take possession thereof without demand and without legal process;

(iv) without notice except as specified below, lease, license, sell or otherwise dispose of the Collateral or any part thereof in one or more parcels at public or private sale, at any of the Administrative Agent's offices or elsewhere, for cash, on credit or for future delivery, and upon such other terms as the Administrative Agent may deem commercially reasonable. Each Grantor agrees that, to the extent notice of sale shall be required by Law, at least ten days' prior notice to such Grantor of the time and place of any public sale or the time after which any private sale is to be made shall constitute reasonable notification. The Administrative Agent shall not be obligated to make any sale of Collateral regardless of notice of sale having been given. The Administrative Agent may adjourn any public or private sale from time to time by announcement at the time and place fixed therefor, and such sale may, without further notice, be made at the time and place to which it was so adjourned.

(b) All cash Proceeds received by the Administrative Agent in respect of any sale of, collection from, or other realization upon, all or any part of the Collateral shall be applied by the Administrative Agent against, all or any part of the Obligations as set forth in Section 8.03 of the Credit Agreement.

(c) The Administrative Agent may

(i) transfer all or any part of the Collateral into the name of the Administrative Agent or its nominee, with or without disclosing that such Collateral is subject to the Lien hereunder,

(ii) notify the parties obligated on any of the Collateral to make payment to the Administrative Agent of any amount due or to become due thereunder,

(iii) withdraw, or cause or direct the withdrawal, of all funds with respect to the Collateral Account;

(iv) enforce collection of any of the Collateral by suit or otherwise, and surrender, release or exchange all or any part thereof, or compromise or extend or renew for any period (whether or not longer than the original period) any obligations of any nature of any party with respect thereto,

(v) endorse any checks, drafts, or other writings in any Grantor's name to allow collection of the Collateral,

- (vi) take control of any Proceeds of the Collateral, and
- (vii) execute (in the name, place and stead of any Grantor) endorsements, assignments, stock powers and other instruments of conveyance or transfer with respect to all or any of the Collateral.

(d) Without limiting the foregoing, in respect of the Intellectual Property Collateral:

(i) upon the request of the Administrative Agent, each Grantor shall execute and deliver to the Administrative Agent an assignment or assignments of the Intellectual Property Collateral, subject (in the case of any licenses thereunder) to any valid and enforceable requirements to obtain consents from any third parties, and such other documents as are necessary or appropriate to carry out the intent and purposes hereof;

(ii) each Grantor agrees that the Administrative Agent may file applications and maintain registrations for the protection of the Intellectual Property Collateral and/or bring suit in the name of such Grantor, the Administrative Agent or any Secured Party to enforce the Intellectual Property Collateral and any licenses thereunder and, upon the request of the Administrative Agent, each Grantor shall use all commercially reasonable efforts to assist with such filing or enforcement (including the execution of relevant documents); and

(iii) in the event that the Administrative Agent elects not to make any filing or bring any suit as set forth in clause (ii), each Grantor shall, upon the request of Administrative Agent, use all commercially reasonable efforts, whether through making appropriate filings or bringing suit or otherwise, to protect, enforce and prevent the infringement, misappropriation, dilution, unauthorized use or other violation of the Intellectual Property Collateral.

Notwithstanding the foregoing provisions of this Section 6.1, for the purposes of this Section 6.1, "Collateral" and "Intellectual Property Collateral" shall include any "intent to use" trademark application only to the extent (i) that the business of such Grantor, or portion thereof, to which that mark pertains is also included in the Collateral and (ii) that such business is ongoing and existing.

SECTION 6.2. Securities Laws. If the Administrative Agent shall determine to exercise its right to sell all or any of the Collateral that are Equity Interests pursuant to Section 6.1, each Grantor agrees that, upon request of the Administrative Agent, each Grantor will, at its own expense do or cause to be done all such acts and things as may be necessary to make such sale of the Collateral or any part thereof valid and binding and in compliance with applicable Law. Each Grantor acknowledges the impossibility of ascertaining the amount of damages that would be suffered by the Administrative Agent or the Secured Parties by reason of the failure by such Grantor to perform any of the covenants contained in this Section and consequently agrees that, if such Grantor shall fail to perform any of such covenants, it shall pay, as liquidated damages and not as a penalty, an amount equal to the value (as determined by the Administrative Agent)

of such Collateral on the date the Administrative Agent shall demand compliance with this Section.

SECTION 6.3. Compliance with Restrictions. Each Grantor agrees that in any sale of any of the Collateral whenever a Specified Default shall have occurred and be continuing, the Administrative Agent is hereby authorized to comply with any limitation or restriction in connection with such sale as it may be advised by counsel is necessary in order to avoid any violation of applicable Law (including compliance with such procedures as may restrict the number of prospective bidders and purchasers, require that such prospective bidders and purchasers have certain qualifications, and restrict such prospective bidders and purchasers to Persons who will represent and agree that they are purchasing for their own account for investment and not with a view to the distribution or resale of such Collateral), or in order to obtain any required approval of the sale or of the purchaser by any Governmental Authority or official, and such Grantor further agrees that such compliance shall not result in such sale being considered or deemed not to have been made in a commercially reasonable manner, nor shall the Administrative Agent be liable nor accountable to such Grantor for any discount allowed by the reason of the fact that such Collateral is sold in compliance with any such limitation or restriction.

SECTION 6.4. Protection of Collateral. The Administrative Agent may from time to time, at its option, perform any act which any Grantor fails to perform after being requested in writing so to perform (it being understood that no such request need be given after the occurrence and during the continuance of a Specified Default) and the Administrative Agent may from time to time take any other action which the Administrative Agent deems necessary for the maintenance, preservation or protection of any of the Collateral or of its security interest therein.

ARTICLE VII MISCELLANEOUS PROVISIONS

SECTION 7.1. Loan Document. This Security Agreement is a Loan Document executed pursuant to the Credit Agreement and shall (unless otherwise expressly indicated herein) be construed, administered and applied in accordance with the terms and provisions thereof, including Article X thereof.

SECTION 7.2. Binding on Successors, Transferees and Assigns; Assignment. This Security Agreement shall be binding upon the Grantors and their successors, transferees and assigns and shall inure to the benefit of and be enforceable by each Secured Party and its successors, transferees and assigns; provided that no Grantor may (unless otherwise permitted under the terms of the Credit Agreement or this Security Agreement) assign any of its obligations hereunder without the prior written consent of all Lenders.

SECTION 7.3. Amendments, etc. No amendment to or waiver of any provision of this Security Agreement, nor consent to any departure by any Grantor from its obligations under this Security Agreement, shall in any event be effective unless the same shall be in writing and signed by the Administrative Agent (on behalf of the Lenders or the Required Lenders, as the case may be, pursuant to Section 10.01 of the Credit Agreement) and the Grantors and then such

waiver or consent shall be effective only in the specific instance and for the specific purpose for which given.

SECTION 7.4. Notices. All notices and other communications provided for hereunder shall be in writing or by facsimile and addressed, delivered or transmitted to the appropriate party at the address or facsimile number of such party specified in the Credit Agreement or at such other address or facsimile number as may be designated by such party in a notice to the other party. Any notice or other communication, if mailed and properly addressed with postage prepaid or if properly addressed and sent by pre-paid courier service, shall be deemed given when received; any such notice or other communication, if transmitted by facsimile, shall be deemed given when transmitted and electronically confirmed.

SECTION 7.5. Release of Liens. Upon (a) the Disposition of Collateral in accordance with the Credit Agreement or (b) the occurrence of the Termination Date, the security interests granted herein shall automatically terminate with respect to (i) such Collateral (in the case of clause (a)) or (ii) all Collateral (in the case of clause (b)), without delivery of any instrument or performance of any act by any party. Upon any such Disposition or termination, the Administrative Agent will, at the Grantors' sole expense, deliver to the Grantors, without any representations, warranties or recourse of any kind whatsoever, all Collateral held by the Administrative Agent hereunder, and execute and deliver to the Grantors such documents as the Grantors shall reasonably request to evidence such termination.

SECTION 7.6. Additional Grantors. Upon the execution and delivery by any other Person of a supplement in the form of Annex I hereto, such Person shall become a "Grantor" hereunder with the same force and effect as if it were originally a party to this Security Agreement and named as a "Grantor" hereunder. The execution and delivery of such supplement shall not require the consent of any other Grantor hereunder, and the rights and obligations of each Grantor hereunder shall remain in full force and effect notwithstanding the addition of any new Grantor as a party to this Security Agreement.

SECTION 7.7. No Waiver; Remedies. In addition to, and not in limitation of Section 2.4, no failure on the part of any Secured Party to exercise, and no delay in exercising, any right hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any right hereunder preclude any other or further exercise thereof or the exercise of any other right. The remedies herein provided are cumulative and not exclusive of any remedies provided by Law.

SECTION 7.8. Headings. The various headings of this Security Agreement are inserted for convenience only and shall not affect the meaning or interpretation of this Security Agreement or any provisions thereof.

SECTION 7.9. Severability. If any provision of this Security Agreement or the other Loan Documents is held to be illegal, invalid or unenforceable, (a) the legality, validity and enforceability of the remaining provisions of this Security Agreement and the other Loan Documents shall not be affected or impaired thereby and (b) the parties shall endeavor in good faith negotiations to replace the illegal, invalid or unenforceable provisions with valid provisions the economic effect of which comes as close as possible to that of the illegal, invalid or

unenforceable provisions. The invalidity of a provision in a particular jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction.

SECTION 7.10. Governing Law; Jurisdiction; Etc. (a) GOVERNING LAW. THIS SECURITY AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK.

(b) SUBMISSION TO JURISDICTION. EACH GRANTOR IRREVOCABLY AND UNCONDITIONALLY SUBMITS, FOR ITSELF AND ITS PROPERTY, TO THE NONEXCLUSIVE JURISDICTION OF THE COURTS OF THE STATE OF NEW YORK SITTING IN NEW YORK COUNTY AND OF THE UNITED STATES DISTRICT COURT OF THE SOUTHERN DISTRICT OF NEW YORK, AND ANY APPELLATE COURT FROM ANY THEREOF, IN ANY ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS SECURITY AGREEMENT OR ANY OTHER LOAN DOCUMENT, OR FOR RECOGNITION OR ENFORCEMENT OF ANY JUDGMENT, AND EACH OF THE PARTIES HERETO IRREVOCABLY AND UNCONDITIONALLY AGREES THAT ALL CLAIMS IN RESPECT OF ANY SUCH ACTION OR PROCEEDING MAY BE HEARD AND DETERMINED IN SUCH NEW YORK STATE COURT OR, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, IN SUCH FEDERAL COURT. EACH OF THE PARTIES HERETO AGREES THAT A FINAL JUDGMENT IN ANY SUCH ACTION OR PROCEEDING SHALL BE CONCLUSIVE AND MAY BE ENFORCED IN OTHER JURISDICTIONS BY SUIT ON THE JUDGMENT OR IN ANY OTHER MANNER PROVIDED BY LAW. NOTHING IN THIS SECURITY AGREEMENT OR IN ANY OTHER LOAN DOCUMENT SHALL AFFECT ANY RIGHT THAT THE ADMINISTRATIVE AGENT, ANY LENDER OR THE L/C ISSUER MAY OTHERWISE HAVE TO BRING ANY ACTION OR PROCEEDING RELATING TO THIS SECURITY AGREEMENT OR ANY OTHER LOAN DOCUMENT AGAINST ANY GRANTOR OR ITS PROPERTIES IN THE COURTS OF ANY JURISDICTION.

(c) WAIVER OF VENUE. EACH GRANTOR IRREVOCABLY AND UNCONDITIONALLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY OBJECTION THAT IT MAY NOW OR HEREAFTER HAVE TO THE LAYING OF VENUE OF ANY ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS SECURITY AGREEMENT OR ANY OTHER LOAN DOCUMENT IN ANY COURT REFERRED TO IN PARAGRAPH (B) OF THIS SECTION. EACH OF THE PARTIES HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, THE DEFENSE OF AN INCONVENIENT FORUM TO THE MAINTENANCE OF SUCH ACTION OR PROCEEDING IN ANY SUCH COURT.

(d) SERVICE OF PROCESS. EACH PARTY HERETO IRREVOCABLY CONSENTS TO SERVICE OF PROCESS IN THE MANNER PROVIDED FOR NOTICES IN SECTION 10.02 OF THE CREDIT AGREEMENT. EACH FOREIGN OBLIGOR HEREBY IRREVOCABLY APPOINTS THE COMPANY, AS ITS AUTHORIZED AGENT TO RECEIVE ON ITS BEHALF SERVICE OF ALL

PROCESS IN ANY SUCH PROCEEDINGS IN ANY SUCH COURT AND CONSENTS TO THE SERVICE OF PROCESS OUT OF ANY SUCH COURTS BY MAILING A COPY THEREOF, BY REGISTERED MAIL, POSTAGE PREPAID, TO SUCH AGENT AT SUCH ADDRESS, AND AGREES THAT SUCH SERVICE, TO THE FULLEST EXTENT PERMITTED BY LAW: (I) SHALL BE DEEMED IN EVERY RESPECT EFFECTIVE SERVICE OF PROCESS UPON IT IN ANY SUCH SUIT, ACTION OR PROCEEDING; AND (II) SHALL BE TAKEN AND HELD TO BE VALID PERSONAL SERVICE UPON AND PERSONAL DELIVERY TO IT. IF ANY AGENT APPOINTED BY ANY PERSON PARTY HERETO REFUSES TO ACCEPT SERVICE, SUCH PERSON HEREBY AGREES THAT SERVICE UPON IT BY MAIL SHALL UPON RECEIPT CONSTITUTE SUFFICIENT NOTICE. NOTHING HEREIN CONTAINED SHALL AFFECT THE RIGHT TO SERVE PROCESS IN ANY OTHER MANNER PERMITTED BY LAW OR SHALL LIMIT THE RIGHT OF ANY OTHER PERSON PARTY HERETO TO BRING PROCEEDINGS AGAINST SUCH PARTY IN THE COURTS OF ANY OTHER JURISDICTION.

SECTION 7.11. Waiver of Jury Trial. EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW; ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY LEGAL PROCEEDING DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS SECURITY AGREEMENT OR ANY OTHER LOAN DOCUMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY OR THEREBY (WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY). EACH PARTY HERETO (A) CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PERSON HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PERSON WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER AND (B) ACKNOWLEDGES THAT IT AND THE OTHER PARTIES HERETO HAVE BEEN INDUCED TO ENTER INTO THIS SECURITY AGREEMENT AND THE OTHER LOAN DOCUMENTS BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION.

SECTION 7.12. California Judicial Reference. If any action or proceeding is filed in a court of the State of California by or against any party hereto in connection with any of the transactions contemplated by this Security Agreement or any other Loan Document, (a) the court shall, and is hereby directed to, make a general reference pursuant to California Code of Civil Procedure Section 638 to a referee (who shall be a single active or retired judge) to hear and determine all of the issues in such action or proceeding (whether of fact or of Law) and to report a statement of decision, provided that at the option of any party to such proceeding, any such issues pertaining to a "provisional remedy" as defined in California Code of Civil Procedure Section 1281.8 shall be heard and determined by the court; and (b) without limiting the generality of Section 10.04 of the Credit Agreement, the Grantors, jointly and severally, shall be solely responsible to pay all fees and expenses of any referee appointed in such action or proceeding.

SECTION 7.13. Counterparts. This Security Agreement may be executed by the parties hereto in several counterparts, each of which shall be deemed to be an original and all of which

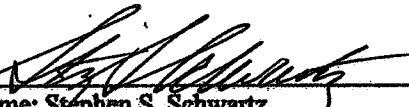
shall constitute together but one and the same agreement. Delivery of an executed counterpart of a signature page to this Security Agreement by facsimile or via other electronic means shall be effective as delivery of a manually executed counterpart of this Security Agreement.

SECTION 7.14. Security Agreements. Without limiting any of the rights, remedies, privileges or benefits provided hereunder to the Administrative Agent for its benefit and the ratable benefit of the other Secured Parties, each Grantor and the Administrative Agent hereby agree that the terms and provisions of this Security Agreement in respect of any Collateral subject to the pledge or other Lien of any other Security Agreement (as defined in the Credit Agreement) are, and shall be deemed to be, supplemental and in addition to the rights, remedies, privileges and benefits provided to the Administrative Agent and the other Secured Parties under such other Security Agreement (as defined in the Credit Agreement) and under applicable Law to the extent consistent with applicable Law; provided that, in the event that the terms of this Security Agreement conflict or are inconsistent with the applicable other Security Agreement (as defined in the Credit Agreement) or applicable Law governing such other Security Agreement (as defined in the Credit Agreement), (a) to the extent that the provisions of such other Security Agreement (as defined in the Credit Agreement) or applicable foreign Law are, under applicable foreign Law, necessary for the creation, perfection or priority of the security interests in the Collateral subject to such Foreign Pledge Agreement, the terms of such other Security Agreement (as defined in the Credit Agreement) or such applicable Law shall be controlling and (b) otherwise, the terms hereof shall be controlling.


SECTION 7.15. ENTIRE AGREEMENT. THIS SECURITY AGREEMENT AND THE OTHER LOAN DOCUMENTS REPRESENT THE FINAL AGREEMENT AMONG THE PARTIES AND MAY NOT BE CONTRADICTED BY EVIDENCE OF PRIOR, CONTEMPORANEOUS, OR SUBSEQUENT ORAL AGREEMENTS OF THE PARTIES. THERE ARE NO UNWRITTEN ORAL AGREEMENTS AMONG THE PARTIES.

IN WITNESS WHEREOF, each of the parties hereto has caused this Security Agreement to be duly executed and delivered by its Responsible Officer as of the date first above written.


ASYST TECHNOLOGIES, INC.

By: 
Name: Stephen S. Schwartz
Title: President and Chief Executive Officer

ASYST JAPAN, INC.

By: 
Name: Stephen S. Schwartz
Title: Director

ASYST SHINKO, INC.

By: 
Name: Stephen S. Schwartz
Title: Director


ASYST TECHNOLOGIES, (TAIWAN) LTD.

By: _____
Name: Steve Debenham
Title: Director

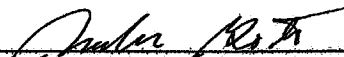
Signature Page to US Pledge and Security Agreement

IN WITNESS WHEREOF, each of the parties hereto has caused this Security Agreement to be duly executed and delivered by its Responsible Officer as of the date first above written.

ASYST TECHNOLOGIES, (TAIWAN) LTD.

By: 
Name: _____
Title: Director

ASYST SHINKO TAIWAN, INC.

By: 
Name: NOBORU GOTO
Title: CEO


Signature Page to US Pledge and Security Agreement

TRADEMARK
REEL: 003602 FRAME: 0426

IN WITNESS WHEREOF, each of the parties hereto has caused this Security Agreement to be duly executed and delivered by its Responsible Officer as of the date first above written.

ASYST SHINKO AMERICA, INC.


By:


Name: Noboru Gotō
Title: President

Signature Page to US Pledge and Security Agreement

TRADEMARK
REEL: 003602 FRAME: 0427

KEYBANK NATIONAL ASSOCIATION,
as Administrative Agent

By: 
Name: Raed Alfayoum
Title: Vice President

Signature Page to US Pledge and Security Agreement

SCHEDULE I
to Security Agreement

A. Name of Grantor:
Asyst Technologies, Inc.

<u>Issuer (corporate)</u>	<u>Cert. #</u>	<u># of Shares</u>	<u>Authorized Shares</u>	<u>Common Stock</u>	
				<u>Outstanding Shares</u>	<u>% of Shares Pledged</u>
Asyst Japan, Inc.	2006-1	23,772,600	90,000,000	24,470,400	99.79%
	2006-2	80,400	90,000,000	24,470,400	99.79%
	2006-3	25,000	90,000,000	24,470,400	99.79%
	2006-4	20,100	90,000,000	24,470,400	99.79%
	2007-1	520,000	90,000,000	24,470,400	99.79%
Asyst Technologies, (Taiwan) Ltd.	95-NX-0000001	150,000	15,000,000	150,000	100%
Asyst Korea, Ltd.	uncertificated	16,000	64,000	16,000	100%
Asyst Technologies, GmbH	N/A ¹	N/A ²	(See footnote #1)	(See footnote #1)	100%
Asyst Technologies (Far East) Pte. Ltd.	No. 3	2	100,000	100,000	100%
	No. 4	99,998	100,000	100,000	100%

¹ GmbH's do not have certificated shares.

² One quota of DM50,000.

Asyst Technologies Malaysia Sdn. Bhd.	No. 3	2	500,000	100,000	100%
	No. 4	99,998	500,000	100,000	100%

Limited Liability Company Interests

<u>Issuer (limited liability company)</u>	<u>% of Limited Liability Company Interests Pledged</u>	<u>Type of Limited Liability Company Interests Pledged</u>
SMIF Equipment (Tianjin) Co., Ltd.	100%	See Footnote ³

Partnership Interests

<u>Issuer (partnership)</u>	<u>% of Partnership Interests Owned</u>	<u>% of Partnership Interests Pledged</u>
N/A	N/A	N/A

B. Name of Grantor:
Asyst Japan Inc.

<u>Issuer (corporate)</u>	<u>Cert. #</u>	<u># of Shares</u>	<u>Common Stock</u>		
			<u>Authorized Shares</u>	<u>Outstanding Shares</u>	<u>% of Shares Pledged</u>
Asyst Shinko, Inc.	No. A-001	5,049	39,600	9,900	100%
	No. B-001	4,366	39,600	9,900	100%

³ Asyst Tianjin is a non-share issuing limited liability company ("LLC"), so under Chinese law the equity interest is not divided into shares. Instead, for these types of LLCs, a shareholder's percentage of ownership is evidenced by the amount of its contribution to the LLC's registered capital (a concept that is akin to paid-in capital). According to the Certificate of Approval of Asyst Tianjin, Asyst Technologies Inc. is the sole owner of Asyst Tianjin, and it has contributed in full Asyst Tianjin's total registered capital of US\$200,000.

C. Name of Grantor:
Asyst Shinko, Inc.

<u>Issuer (corporate)</u>	<u>Cert. #</u>	<u># of Shares</u>	<u>Common Stock</u>		
			<u>Authorized Shares</u>	<u>Outstanding Shares</u>	<u>% of Shares Pledged</u>
Asyst Shinko America, Inc.	No. 1	940,000	1,000,000	940,000	100%
Asyst Shinko Taiwan, Inc.	95-NF-0000001	100,000	1,000,000	800,000	100%
	95-NF-0000002	100,000	1,000,000	800,000	100%
	95-NF-0000003	100,000	1,000,000	800,000	100%
	95-NF-0000004	100,000	1,000,000	800,000	100%
	95-NF-0000005	100,000	1,000,000	800,000	100%
	95-NF-0000006	100,000	1,000,000	800,000	100%
	95-NF-0000007	100,000	1,000,000	800,000	100%
	95-NF-0000008	100,000	1,000,000	800,000	100%
Asyst Shinko Korea, Inc.	No. 1	40,000	160,000	40,000	100%
Asyst Shinko Ireland, Ltd.	uncertificated	10,000	10,000 ⁴	10,000	100%
Asyst Shinko Shanghai, Inc.	uncertificated	N/A	US\$200,000 ⁵	N/A	100%

⁴ Asyst Shinko Ireland, Inc. does not have an amount of authorized shares but allows for 10,000EUR in authorized capital.

⁵ Asyst Shinko Shanghai, Inc. does not have an amount of authorized shares but has US\$200,000 in authorized capital.

**SCHEDULE II
to Security Agreement**

Item A. Location of each Grantor.

Name of Grantor:	Location for purposes of UCC:
Asyst Technologies, Inc.	California
Asyst Japan, Inc.	Washington, D.C.
Asyst Shinko, Inc.	Washington, D.C.

Item B. Filing locations last five years.

Name of Grantor:	Filing locations last five years:
Asyst Technologies, Inc.	California
Asyst Japan, Inc.	Washington, D.C.
Asyst Shinko, Inc.	Washington, D.C.

Item C. Trade names.

Name of Grantor:	Trade Names:
Asyst Technologies, Inc.	N/A
Asyst Japan, Inc.	N/A
Asyst Shinko, Inc.	N/A

Item D. Merger or other corporate reorganization.

Name of Grantor:	Merger or other corporate reorganization:
Asyst Technologies, Inc.	N/A
Asyst Japan, Inc.	N/A

Name of Grantor:	Merger or other corporate reorganization:
Asyst Shinko, Inc.	N/A

Item E. Taxpayer ID numbers.

Name of Grantor:	Taxpayer ID numbers:
Asyst Technologies, Inc.	94-2942251
Asyst Japan, Inc.	12327
Asyst Shinko, Inc.	00031095

Item F. Government Contracts.

Name of Grantor:	Description of Contract:
Asyst Technologies, Inc.	None
Asyst Japan, Inc.	None
Asyst Shinko, Inc.	None

Item G. Deposit Accounts and Securities Accounts.

Asyst Technologies, Inc.

Entity	Country	Account Number	Bank	Account Type	Conversion Rate	3 month Average	Excluded Account
Asyst Technologies, Inc.	US	1892019504 / 1080022229	Comerica Bank - California	Checking / Sweep	1	14,447,819	NO
Asyst Technologies, Inc.	US	607020	Union Banc	Investment	1	1,666,667	NO
Asyst Technologies, Inc.	US	223-50181-1-2	Bank of America	Sweep / Investment	1	21,256,898	NO

Asyst Japan, Inc.

Entity	Country	Account Number	Bank	Account Type	Conversion Rate 3-31-07	3 month Average	Excluded Account
Asyst Japan, Inc.	Japan	157650	Tokyo-Mitsubishi UFJ/Shin-Yokohama	Savings ¥	117.926	1,837,096	NO

Asyst Shinko, Inc.

Entity	Country	Account Number	Bank	Account Type	Conversion Rate 12/31/01	YTD Average	Included Account
Asyst Shinko, Inc.	Japan	8069069	Mizuho Bank - (Akasaka)	Yen	117.926	1,090,641	NO
Asyst Shinko, Inc.	Japan	2108311	Bank of Tokyo - Mitsubishi UFJ (Oodenma)	Yen	117.926	9,913,691	NO
Asyst Shinko, Inc.	Japan	8638717	Sumitomo Mitsui (Shinjuku-nishiguchi)	Yen	117.926	3,080,354	NO
Asyst Shinko, Inc.	Japan	708556	Hyakugo (Ise)	Yen	117.926	3,206,931	NO
Asyst Shinko, Inc.	Japan	706936	Hyakugo (Ise)	Yen	117.926	7,962,160	NO
Asyst Shinko, Inc.	Japan	1349	Risona (Toranomori)	Yen	117.926	605,134	NO

Item H. Letter of Credit Rights.

LC Number	Issuing Bank	Addressing Bank	Customer Name	Invoice No.	Ship Date	Crtd Invoic. Amt.	Amount Paid	Amount to be Paid
LC#100LC072040143	Agricultural Bk China WUXI LTD.	B of A	HYNIX SEMICONDUCTOR(WUXI) LTD	IF665372	05/14/07	\$160,000.00	\$144,000.00	\$16,000.00
LC#1000LC0700018	China Citic Bank	B of A	CENSION SEMICONDUCTOR MFG CORP	IF662457	03/21/07	\$54,600.00	\$49,140.00	\$5,460.00
LC#1000LC0700018	China Citic Bank	B of A	CENSION SEMICONDUCTOR MFG CORP	IF662458	03/21/07	\$54,600.00	\$49,140.00	\$5,460.00
LC#1000LC0700018	China Citic Bank	B of A	CENSION SEMICONDUCTOR MFG CORP	IF662459	03/21/07	\$54,600.00	\$49,140.00	\$5,460.00
LC#1000LC0700018	China Citic Bank	B of A	CENSION SEMICONDUCTOR MFG CORP	IF662460	03/21/07	\$54,600.00	\$49,140.00	\$5,460.00
LC#1000LC0700018	China Citic Bank	B of A	CENSION SEMICONDUCTOR MFG CORP	IF662461	03/21/07	\$54,600.00	\$49,140.00	\$5,460.00
LC#51091010000404.	China Construction Bank	B of A	CENSION SEMICONDUCTOR MFG CORP	IF662463	03/21/07	\$57,210.00	\$51,489.00	\$5,721.00
LC#51091010000404.	China Construction Bank	B of A	CENSION SEMICONDUCTOR MFG CORP	IF662587	03/22/07	\$20,000.00	\$18,000.00	\$2,000.00
LC#51091010000404.	China Construction Bank	B of A	CENSION SEMICONDUCTOR MFG CORP	IF663659	04/12/07	\$27,300.00	\$24,570.00	\$2,730.00
LC#51091010000413	China Construction Bank	B of A	CENSION SEMICONDUCTOR MFG CORP	IF663720	04/13/07	\$54,600.00	\$49,140.00	\$5,460.00
LC#51091010000413	China Construction Bank	B of A	CENSION SEMICONDUCTOR MFG CORP	0000093704	05/03/07	\$54,600.00	\$49,140.00	\$5,460.00
LC#51091010000413	China Construction Bank	B of A	CENSION SEMICONDUCTOR MFG CORP	IF665022	05/07/07	\$27,300.00	\$24,570.00	\$2,730.00
LC#51091010000752	China Construction Bank	B of A	CENSION SEMICONDUCTOR MFG CORP	IF667843	06/21/07	\$27,300.00	\$0.00	\$27,300.00
LC# 51091010000495	China Construction Bank, Sichuan Br.	B of A	CENSION SEMICONDUCTOR MFG CORP	IF664176	04/20/07	\$27,300.00	\$24,570.00	\$2,730.00
LC# 51091010000495	China Construction Bank, Sichuan Br.	B of A	CENSION SEMICONDUCTOR MFG CORP	IF664773	05/02/07	\$54,600.00	\$49,140.00	\$5,460.00
LC# 51091010000495	China Construction Bank, Sichuan Br.	B of A	CENSION SEMICONDUCTOR MFG CORP	0000093703	05/03/07	\$54,600.00	\$49,140.00	\$5,460.00

LC Number	Issuing Bank	Advising Bank	GS Field Name	Invoice #	Ship Date	Original Invoice Amt	Amount Paid	Am. Being Collected
LC# 51091010000495	China Construction Bank, Sichuan Br.	B of A	CENSION SEMICONDUCTOR MFG CORP	IF664882	05/04/07	\$54,600.00	\$49,140.00	\$5,460.00
LC# 107PS703NS20484	Citybank, N.A.	B of A	HYNIX SEMICONDUCTOR INC	IF662805	03/27/07	\$160,000.00	\$144,000.00	\$16,000.00
LC# 107PS703NS20491	Citybank, N.A.	B of A	HYNIX SEMICONDUCTOR INC	IF662804	03/27/07	\$160,000.00	\$144,000.00	\$16,000.00
LC# M45W2705NS00025	KORAM BANK	B of A	HYNIX SEMICONDUCTOR INC	IF665417	05/14/07	\$160,000.00	\$144,000.00	\$16,000.00
LC# M45W2705NS00032	KORAM BANK	B of A	HYNIX SEMICONDUCTOR INC	IF665416	05/14/07	\$160,000.00	\$144,000.00	\$16,000.00
LC# 5666ILS070310076	KOREA EXCHANGE BANK	B of A	HYNIX-ST SEMICONDUCTOR(WUXI)	IF661674	03/11/07	\$160,000.00	\$144,000.00	\$16,000.00
LC# 5666ILS070310077	KOREA EXCHANGE BANK	B of A	HYNIX-ST SEMICONDUCTOR(WUXI)	IF661676	03/11/07	\$150,000.00	\$135,000.00	\$15,000.00
LC#5666ILS070310076	KOREA EXCHANGE BANK	B of A	HYNIX SEMICONDUCTOR(WUXI) LTD	IF662736	03/26/07	\$160,000.00	\$144,000.00	\$16,000.00
LC#5666ILS070310076	KOREA EXCHANGE BANK	B of A	HYNIX SEMICONDUCTOR(WUXI) LTD	IF662737	03/26/07	\$160,000.00	\$144,000.00	\$16,000.00
LC#5666ILS070310077	KOREA EXCHANGE BANK	B of A	HYNIX SEMICONDUCTOR(WUXI) LTD	IF662735	03/26/07	\$150,000.00	\$135,000.00	\$15,000.00

SFODMS/6524208.5

Item I. Commercial Tort Claims.

Asyst Technologies, Inc.

Matter	Nature of Claim	Counsel	Damages Claimed	Exposure	Date Filed	Status
Asyst v. Jenoptik, et al	Patent Infringement	Fenwick & West (Mtn. View, CA)	\$10,000,000+	N/A	10/28/96	On 10/28/96 Asyst filed suit in the US District Court for the Northern District of CA against Erpak, Inc., Emtrak, Inc., Jenoptik AG, and Jenoptik Infab, Inc., alleging, among other things, that certain products of these defendants infringe upon specified Asyst patents. The case is now at the trial court on remand from the Appellate Court. Further details are set out in Asyst's Form 10-K for FY2005 and its Form 10-Q for the quarter ended 31 December 2005, both of which are on file with the Securities & Exchange Commission.

Asyst Japan, Inc.

None.

Asyst Shinko, Inc.

None.

SCHEDULE III
to Security Agreement

Item A. Patents

I. Issued Patents

a. United States

Country	Patent No.	Issue Date	Inventor(s)	Title	Owner
United States	4,700,321	October 13, 1987	Assigned from Proconics	TIMING SIGNAL GENERATOR	Asyst Technologies, Inc.
United States	4,724,874	February 16, 1988	M. Parikh and A. Bonora	SEALABLE TRANSPORTABLE CONTAINER HAVING A PARTICLE FILTERING SYSTEM	Asyst Technologies, Inc.
United States	4,735,548	April 5, 1988	Assigned to Asyst Japan, Inc.	CARRIER SYSTEM FOR CLEAN ROOM	Asyst Japan, Inc.
United States	4,749,330	June 7, 1988	Assigned from Hine Design	TRANSPORT MECHANISM	Asyst Technologies, Inc.
United States	4,770,600	September 13, 1988	Assigned to Asyst Japan, Inc.	APPARATUS FOR POSITIONING SILICON WAFER	Asyst Japan, Inc.
United States	4,778,331	October 18, 1988	Assigned to Asyst Japan, Inc.	CARRIER SYSTEM FOR SILICON WAFER	Asyst Japan, Inc.
United States	4,802,809	February 7, 1989	A. Bonora	MANIPULATOR FOR STANDARD MECHANICAL INTERFACE APPARATUS	Asyst Technologies, Inc.
United States	4,827,110	May 2, 1989	Assigned from Fluoroware	METHOD AND APPARATUS FOR MONITORING THE LOCATION OF WAFER DISKS	Asyst Technologies, Inc.
United States	4,833,306	May 23, 1989	Assigned from Fluoroware	BAR CODE REMOTE RECOGNITION SYSTEM FOR PROCESS CARRIERS OF WAFER DISKS	Asyst Technologies, Inc.
United States	4,859,137	August 22, 1989	A. Bonora and F. Rosenquist	APPARATUS FOR TRANSPORTING A HOLDER BETWEEN A PORT OPENING OF A STANDARDIZED MECHANICAL INTERFACE SYSTEM AND A LOADING AND UNLOADING STATION	Asyst Technologies, Inc.
United States	4,880,348	November 14, 1989	Assigned from Roboptek	WAFER CENTRATION DEVICE	Asyst Technologies, Inc.
United States	4,888,473 B1	October 15, 1996	Assigned from Fluoroware	WAFER DISK LOCATION MONITORING SYSTEM AND TAGGED PROCESS CARRIERS FOR USE THEREWITH	Asyst Technologies, Inc.
United States	4,888,473	December 19, 1989	Assigned from Fluoroware	WAFER DISK LOCATION MONITORING SYSTEM AND TAGGED PROCESS CARRIERS FOR USE THEREWITH	Asyst Technologies, Inc.
United States	4,892,455	January 9, 1990	Assigned from Hine Design	WAFER ALIGNMENT AND TRANSFER MECHANISM	Asyst Technologies, Inc.
United States	4,893,932	January 16, 1990	Assigned from Particle Measuring Systems, Inc.	SURFACE ANALYSIS SYSTEM AND METHOD	Asyst Technologies, Inc.

Country	Patent No.	Issue Date	Inventor	Title	Owner
United States	4,895,486	January 23, 1990	Assigned from Robotek	WAFER MONITORING DEVICE	Asyst Technologies, Inc.
United States	4,974,166	November 27, 1990	G. Maney, A. Bonora, M. Parikh and M. Brain	PROCESSING SYSTEMS WITH INTELLIGENT ARTICLE TRACKING	Asyst Technologies, Inc.
United States	4,977,688	December 12, 1990	Assigned from Semifab, Inc.	VAPOR DEVICE AND METHOD FOR DRYING ARTICLES AS SEMICONDUCTOR WAFER WITH SUBSTANCES SUCH AS ISOPROPYL ALCOHOL	Asyst Technologies, Inc.
United States	4,983,093	January 8, 1991	Assigned from Proconics	WAFER TRANSFER APPARATUS	Asyst Technologies, Inc.
United States	4,986,729	January 22, 1991	Assigned from Proconics	WAFER TRANSFER APPARATUS	Asyst Technologies, Inc.
United States	5,054,991	October 8, 1991	Assigned to Asyst Japan, Inc.	WAFER POSITIONING APPARATUS	Asyst Japan, Inc.
United States	5,059,079	October 22, 1991	Assigned from Proconics	PARTICLE-FREE STORAGE FOR ARTICLES	Asyst Technologies, Inc.
United States	5,097,421	March 17, 1992	M. Parikh	INTELLIGENT WAFER CARRIER (COMPUTER AIDED DISCRETE TRAVELER SYSTEM FOR INTEGRATED CONTROL)	Asyst Technologies, Inc.
United States	5,102,291	April 7, 1992	Assigned from Hine Design	METHOD FOR TRANSPORTING SILICON WAFERS	Asyst Technologies, Inc.
United States	5,115,576	May 26, 1992	Assigned from Semifab, Inc.	VAPOR DEVICE AND METHOD FOR DRYING ARTICLES AS SEMICONDUCTOR WAFER WITH SUBSTANCES SUCH AS ISOPROPYL ALCOHOL	Asyst Technologies, Inc.
United States	5,125,790	June 30, 1992	Assigned from Proconics	WAFER TRANSFER APPARATUS	Asyst Technologies, Inc.
United States	5,166,884	November 24, 1992	G. Maney, A. O'Sullivan and W. Faraco	INTELLIGENT SYSTEM FOR PROCESSING AND STORING ARTICLES	Asyst Technologies, Inc.
United States	5,169,272	December 8, 1992	A. Bonora, G. Guerre and M. Parikh	METHOD AND APPARATUS FOR TRANSFERRING ARTICLES BETWEEN TWO CONTROLLED ENVIRONMENTS	Asyst Technologies, Inc.
United States	5,315,766	May 31, 1994	Assigned from Semifab, Inc.	VAPOR DEVICE AND METHOD FOR DRYING ARTICLES AS SEMICONDUCTOR WAFER WITH SUBSTANCES SUCH AS ISOPROPYL ALCOHOL	Asyst Technologies, Inc.
United States	5,339,074	August 16, 1994	Assigned from Fluoroware	VERY LOW FREQUENCY TRACKING SYSTEM	Asyst Technologies, Inc.
United States	5,365,672	November 22, 1994	Assigned to Asyst Japan, Inc.	POSITIONING APPARATUS FOR A SEMICONDUCTOR WAFER	Asyst Japan, Inc.
United States	5,370,491	December 6, 1994	A. Bonora, G. Guerre, M. Parikh, F. Rosenquist and S. Jain	METHOD AND APPARATUS FOR TRANSFERRING ARTICLES BETWEEN TWO CONTROLLED ENVIRONMENTS	Asyst Technologies, Inc.
United States	5,386,481	January 31, 1995	Assigned from Hine Design	DEVICES AND METHODS FOR READING IDENTIFICATION MARKS ON SEMICONDUCTOR WAFERS	Asyst Technologies, Inc.
United States	5,493,123	February 20, 1996	Assigned from Particle Measuring Systems, Inc.	SURFACE DEFECT INSPECTION SYSTEM AND METHOD	Asyst Technologies, Inc.

Country	Patent No.	Issue Date	Inventor(s)	Title	Owner
United States	5,547,328	August 20, 1996	A. Bonora, G. Guerre, M. Parikh, F. Rosenquist and S. Jain	METHOD AND APPARATUS FOR TRANSFERRING ARTICLES BETWEEN TWO CONTROLLED ENVIRONMENTS	Asyst Technologies, Inc.
United States	5,570,990	November 5, 1996	A. Bonora, B. Richardson, M. Brain, E. Cortez and B. Huang	HUMAN GUIDED MICRO STOCKER AND PLACEMENT SYSTEM	Asyst Technologies, Inc.
United States	5,586,585	December 24, 1996	A. Bonora and J. Oen	CYLINDRICAL LOADLOCK CHAMBER WITH INTEGRAL PORT	Asyst Technologies, Inc.
United States	5,653,565	August 5, 1997	A. Bonora, W. Fosnight, R. Martin and B. Rhine	ADAPTER FOR SMIF PORT INTERFACE	Asyst Technologies, Inc.
United States	5,664,926	September 9, 1997	Assigned from Progressive	STAGE ASSEMBLY FOR A SUBSTRATE PROCESSING SYSTEM	Asyst Technologies, Inc.
United States	5,674,123	October 7, 1997	Assigned from Semifab, Inc.	DOCKING AND ENVIRONMENTAL PURGING SYSTEM FOR INTEGRATED CIRCUIT WAFER TRANSPORT	Asyst Technologies, Inc.
United States	5,788,458	August 4, 1998	A. Bonora, M. Neads and J. Oen	METHOD AND APPARATUS FOR VERTICAL TRANSFER OF A SEMICONDUCTOR WAFER CASSETTE	Asyst Technologies, Inc.
United States	5,803,979	September 8, 1998	Assigned from Hine Design	TRANSPORT APPARATUS FOR SEMICONDUCTOR WAFER (CMP)	Asyst Technologies, Inc.
United States	5,815,637	September 29, 1998	Assigned from Semifab, Inc.	HUMIDIFIER FOR CONTROL OF SEMI-CONDUCTOR MANUFACTURING ENVIRONMENTS	Asyst Technologies, Inc.
United States	5,831,738	November 3, 1998	Assigned from Hine Design	APPARATUS AND METHODS FOR VIEWING IDENTIFICATION MARKS ON SEMICONDUCTOR WAFERS	Asyst Technologies, Inc.
United States	5,846,338	December 8, 1998	A. Bonora, N. Kedamath and J. Oen	METHOD AND APPARATUS FOR DRY CLEANING CLEAN ROOM CONTAINERS	Asyst Technologies, Inc.
United States	5,848,933	December 15, 1998	Assigned from Semifab, Inc.	DOCKING AND ENVIRONMENTAL PURGING SYSTEM FOR INTEGRATED CIRCUIT WAFER TRANSPORT	Asyst Technologies, Inc.
United States	5,853,214	December 29, 1998	Sold to Entegris	ALIGNER FOR A SUBSTRATE CARRIER	Asyst Technologies, Inc.
United States	5,879,458	March 9, 1999	Assigned from Semifab, Inc.	MOLECULAR CONTAMINATION CONTROL SYSTEM	Asyst Technologies, Inc.
United States	5,895,191	April 20, 1999	A. Bonora and W. Fosnight	SEALABLE, TRANSPORTABLE CONTAINER ADAPTED FOR HORIZONTAL LOADING AND UNLOADING	Asyst Technologies, Inc.
United States	5,931,631	August 3, 1999	A. Bonora, M. Neads and J. Oen	METHOD AND APPARATUS FOR VERTICAL TRANSFER OF A SEMICONDUCTOR WAFER CASSETTE	Asyst Technologies, Inc.
United States	5,944,475	August 31, 1999	A. Bonora, W. Fosnight and R. Martin	ROTATED, ORTHOGONAL LOAD COMPATIBLE FRONT-OPENING INTERFACE	Asyst Technologies, Inc.
United States	5,980,183	November 9, 1999	W. Fosnight	INTEGRATED INTRABAY BUFFER, DELIVERY, AND STOCKER SYSTEM	Asyst Technologies, Inc.

Country	Patent No.	Issue Date	Inventor(s)	Title	Owner
United States	5,984,610	November 16, 1999	Assigned from Fortrend Engineering Corporation	POD LOADER INTERFACE	Asyst Technologies, Inc.
United States	5,988,233	November 23, 1999	W. Fosnight, A. Bonora, R. Martin and J. Tatro	EVACUATION-DRIVEN SMIF POD PURGE SYSTEM	Asyst Technologies, Inc.
United States	6,056,026	May 2, 2000	W. Fosnight and J. Shenk	PASSIVELY ACTIVATED VALVE FOR CARRIER PURGING	Asyst Technologies, Inc.
United States	6,077,026	June 20, 2000	Assigned from Progressive	A PROGRAMMABLE SUBSTRATE SUPPORT FOR A SUBSTRATE POSITIONING SYSTEM	Asyst Technologies, Inc.
United States	6,082,949	July 4, 2000	F. Rosenquist	LOAD PORT OPENER	Asyst Technologies, Inc.
United States	6,086,323	July 11, 2000	Assigned from Fortrend Engineering Corporation	METHOD FOR SUPPLYING WAFERS TO AN IC MANUFACTURING PROCESS	Asyst Technologies, Inc.
United States	6,120,371	September 19, 2000	Assigned from Semifab, Inc.	DOCKING AND ENVIRONMENTAL PURGING SYSTEM FOR INTEGRATED CIRCUIT WAFER TRANSPORT	Asyst Technologies, Inc.
United States	6,135,698	October 24, 2000	A. Bonora, E. Cortez, J. DiPaola and R. Netsch	UNIVERSAL TOOL INTERFACE AND/OR WORKPIECE TRANSFER APPARATUS FOR SMIF AND OPEN POD APPLICATIONS	Asyst Technologies, Inc.
United States	6,138,721	October 31, 2000	A. Bonora, E. Cortez, J. Kyffin and M. Ng	TILT AND GO LOAD PORT INTERFACE ALIGNMENT SYSTEMS	Asyst Technologies, Inc.
United States	6,164,664	December 26, 2000	W. Fosnight, J. Shenk and P. Peterson	KINEMATIC COUPLING COMPATIBLE PASSIVE INTERFACE SEAL	Asyst Technologies, Inc.
United States	6,168,085	January 2, 2001	Assigned from Semifab, Inc.	SYSTEM AND METHOD FOR CASCADE CONTROL OF TEMPERATURE AND HUMIDITY FOR SEMI-CONDUCTOR MANUFACTURING ENVIRONMENTS	Asyst Technologies, Inc.
United States	6,187,182 B1			FILTER CARTRIDGE ASSEMBLY FOR A GAS PURGING SYSTEM	Asyst Technologies, Inc.
United States	6,188,323	February 13, 2001	F. Rosenquist, B. Richardson, W. Fosnight and A. Bonora	WAFER MAPPING SYSTEM	Asyst Technologies, Inc.
United States	6,220,808	April 24, 2001	A. Bonora, W. Fosnight and R. Martin	ERGONOMIC, VARIABLE SIZE, BOTTOM OPENING SYSTEM COMPATIBLE WITH A VERTICAL INTERFACE	Asyst Technologies, Inc.
United States	6,223,886	May 1, 2001	M. Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	INTEGRATED ROLLER TRANSPORT POD AND ASYNCHRONOUS CONVEYOR	Asyst Technologies, Inc.
United States	6,234,738	May 22, 2001	Assigned to Asyst Japan, Inc.	THIN SUBSTRATE TRANSFERRING APPARATUS	Asyst Japan, Inc.
United States	6,240,335	May 29, 2001	B. Wehrung, C. Holden Assigned from Palo Alto Technologies, Inc.	DISTRIBUTED CONTROL SYSTEM ARCHITECTURE AND METHOD FOR A MATERIAL TRANSPORT	Asyst Technologies, Inc.

Country	Patent No.	Issue Date	Inventor(s)	Title	Owner
United States	6,261,044	July 17, 2001	W. Fosnight and J. Shenk	POD TO PORT DOOR RETENTION AND EVACUATION SYSTEM	Asyst Technologies, Inc.
United States	6,298,280	October 2, 2001	A. Bonora, W. Fosnight, K. Swamy, M. Davis and M. Cookson	METHOD AND APPARATUS FOR IN-CASSETTE WAFER CENTER DETERMINATION	Asyst Technologies, Inc.
United States	6,308,818	October 30, 2001	A. Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	TRANSPORT SYSTEM WITH INTEGRATED TRANSPORT CARRIERS AND DIRECTOR	Asyst Technologies, Inc.
United States	6,318,953	November 20, 2001	A. Bonora, R. Netsch, P. Sullivan, W. Fosnight, J. Shenk and E. Noma	SMIF-COMPATIBLE OPEN CASSETTE ENCLOSURE	Asyst Technologies, Inc.
United States	6,326,755	December 4, 2001	D. Babbs, T. Ewald, M. Coady and J. Kim	SYSTEM FOR PARALLEL PROCESSING OF WORKPIECES	Asyst Technologies, Inc.
United States	6,364,595	April 2, 2002	A. Bonora, W. Fosnight and J. Shenk	RETICLE TRANSFER SYSTEM	Asyst Technologies, Inc.
United States	6,419,438	July 16, 2002	F. Rosenquist	FIMS INTERFACE WITHOUT ALIGNMENT PINS	Asyst Technologies, Inc.
United States	6,430,877	August 13, 2002	A. Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	POD DOOR ALIGNMENT DEVICE	Asyst Technologies, Inc.
United States	6,435,330	August 20, 2002	A. Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	IN/OUT LOAD PORT TRANSFER MECHANISM	Asyst Technologies, Inc.
United States	6,468,021	October 22, 2002	A. Bonora, R. Gould, M. Brain, D. Adams Assigned from Palo Alto Technologies, Inc.	INTEGRATED INTRA-BAY TRANSFER, STORAGE AND DELIVERY SYSTEM	Asyst Technologies, Inc.
United States	6,470,227	October 22, 2002	M. Rangachari, A. Sharma, R. Balakrishnan and B. Pitschaikani	METHOD AND APPARATUS FOR AUTOMATING A MICROELECTRONIC MANUFACTURING PROCESS	Asyst Technologies, Inc.
United States	6,473,668	October 29, 2002	S. Abuzeid, X. He and G. Tannous	INTELLIGENT MINIENVIRONMENT	Asyst Technologies, Inc.
United States	6,478,532	November 12, 2002	M. Coady and H. Bailey	WAFER ORIENTING AND READING MECHANISM	Asyst Technologies, Inc.
United States	6,481,558	November 19, 2002	A. Bonora, R. Gould, J. Kerr Assigned from Palo Alto Technologies, Inc.	INTEGRATED LOAD PORT-CONVEYOR TRANSFER SYSTEM	Asyst Technologies, Inc.
United States	6,494,308	December 18, 2002	A. Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	INTEGRATED ROLLER TRANSPORT AND ASYNCHRONOUS CONVEYOR	Asyst Technologies, Inc.
United States	6,502,869	January 7, 2003	F. Rosenquist and M. Ng	POD DOOR TO PORT DOOR RETENTION SYSTEM	Asyst Technologies, Inc.
United States	6,520,727	February 18, 2003	D. Babbs, T. Ewald, M. Coady and W. Fosnight	MODULAR SORTER	Asyst Technologies, Inc.
United States	6,530,736	March 11, 2003	F. Rosenquist	SMIF LOAD PORT INTERFACE INCLUDING SMART PORT	Asyst Technologies, Inc.
United States	6,533,101	March 18, 2003	A. Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	INTEGRATED TRANSPORT CARRIER AND CONVEYOR SYSTEM	Asyst Technologies, Inc.

Country	Patent No.	Issue Date	Inventors	Title	Owner
United States	6,575,687	June 10, 2003	A. Bonora, R. Netsch and R. Gould	WAFER TRANSPORT SYSTEM	Asyst Technologies, Inc.
United States	6,579,052	June 17, 2003	A. Bonora, R. Martin, W. Fosnight, R. Netsch, J. Oen and T. Mosier	SMIF POD STORAGE, DELIVERY AND RETRIEVAL SYSTEM	Asyst Technologies, Inc.
United States	6,591,160	July 8, 2003	R. Hine and G. Hine	SELF TEACHING ROBOT	Asyst Technologies, Inc.
United States	6,591,162	July 8, 2003	R. Martin	SMART LOAD PORT WITH INTEGRATED CARRIER MONITORING AND FAB-WIDE CARRIER MANAGEMENT SYSTEM	Asyst Technologies, Inc.
United States	6,591,960	July 15, 2003	D. Babbs, J. Kim, M. Coady and W. Fosnight	EDGE GRIP ALIGNER WITH BUFFERING CAPABILITIES	Asyst Technologies, Inc.
United States	6,592,317	July 15, 2003	J. Rush, T. Ulander Assigned from Fortrend Engineering Corporation	POD LOADER INTERFACE END EFFECTORS	Asyst Technologies, Inc.
United States	6,592,679	July 15, 2003	Michael Krolak	CLEAN METHOD AND APPARATUS FOR VACUUM HOLDING OF SUBSTRATES	Asyst Technologies, Inc.
United States	6,612,797	September 2, 2003	A. Bonora, W. Fosnight and J. Shenk	CASSETTE BUFFERING WITHIN A MINIENVIRONMENT	Asyst Technologies, Inc.
United States	6,634,851	October 21, 2003	A. Bonora, R. Hine, M. Krolak, and J. Grilli	WORKPIECE HANDLING ROBOT	Asyst Technologies, Inc.
United States	6,704,998	March 16, 2004	A. Bonora, W. Fosnight and R. Martin	PORT DOOR REMOVAL AND WAFER HANDLING ROBOTIC SYSTEM	Asyst Technologies, Inc.
United States	6,709,225 B1	March 23, 2004	L. Pitts, J. Rydman, W. Oliver and M. Neads	SYSTEM FOR INSTALLATION, MAINTENANCE AND REMOVAL OF MINIENVIRONMENT COMPONENTS	Asyst Technologies, Inc.
United States	6,810,294 B2	October 26, 2004	M. Rangachari, A. Sharma, R. Balakrishnan, and B. Pitchaikani	METHOD AND APPARATUS FOR AUTOMATING MICROELECTRONIC MANUFACTURING PROCESS	Asyst Technologies, Inc.
United States	6,677,690	January 13, 2004	W. Fosnight, D. Babbs, R. Gould, M. Krolak, D. Feindel and T. Luong	SYSTEM FOR SAFEGUARDING INTEGRATED INTRABAY POD DELIVERY AND STORAGE SYSTEM	Asyst Technologies, Inc.
United States	6,729,462	May 4, 2004	D. Babbs, J. Kim, M. Coady and W. Fosnight	EDGE GRIP ALIGNER WITH BUFFERING CAPABILITIES	Asyst Technologies, Inc.
United States	6,848,876	February 1, 2005	D. Babbs, W. Fosnight, T. Cosentino, M. Sammut, P. Pinna and R. Zemen	WORKPIECE SORTER OPERATING WITH MODULAR BARE WORKPIECE STOCKERS AND/OR CLOSED CONTAINER STOCKERS	Asyst Technologies, Inc.
United States	6,853,876 B2	February 8, 2005	B. Wehrung, C. Holden Assigned from Palo Alto Technologies, Inc.	DISTRIBUTED CONTROL SYSTEM ARCHITECTURE AND METHOD FOR A MATERIAL TRANSPORT	Asyst Technologies, Inc.
United States	7100340	September 5, 2006		UNIFIED FRAME FOR SEMICONDUCTOR MATERIAL HANDLING SYSTEM	Asyst Technologies, Inc.

Country	Patent No.	Issue Date	Inventor(s)	Title	Owner
United States	7066707	June 27, 2006		WAFER ENGINE	Asyst Technologies, Inc.
United States	7217076	May 15, 2007		SEMICONDUCTOR MATERIAL HANDLING SYSTEM	Asyst Technologies, Inc.
United States	7042568	May 9, 2007		Pre Aligner	Asyst Technologies, Inc.
United States	7055875	June 6, 2006		ULTRA LOW CONTACT AREA END EFFECTOR	Asyst Technologies, Inc.
United States	4,493,606	01/15/1985		Wafer transfer apparatus	Asyst Technologies, Inc.
United States	4,603,897	08/05/1986		Vacuum pickup apparatus	Asyst Technologies, Inc.
United States	4,674,936	06/23/1987		Short arm manipulator for standard mechanical interface apparatus	Asyst Technologies, Inc.
United States	4,674,939	06/23/1987		Sealed standard interface apparatus	Asyst Technologies, Inc.
United States	4,676,709	06/30/1987		Long arm manipulator for standard mechanical interface apparatus	Asyst Technologies, Inc.
United States	4,682,928	07/28/1987		Wafer transfer apparatus	Asyst Technologies, Inc.
United States	4,699,556	10/31/1987		Object handling apparatus	Asyst Technologies, Inc.
United States	4,746,256	05/24/1988		Apparatus for handling sensitive material such as semiconductor wafers	Asyst Technologies, Inc.
United States	4,765,793	08/23/1988		Apparatus for aligning circular objects	Asyst Technologies, Inc.
United States	6,527,427	03/04/2003		Clutching feature for adjusting device	Asyst Technologies, Inc.
United States	6,614,431	09/02/2003		Method and system for improved per-pixel shading in a computer graphics system	Asyst Technologies, Inc.
United States	5,073,749	12/17/1991		Mobile robot navigating method	Asyst Shinko, Inc.
United States	5,220,263	06/15/1993		Rging control system for moving robot system	Asyst Shinko, Inc.
United States	5,303,482	04/19/1994		Water airtight keeping unit and keeping facility thereof	Asyst Shinko, Inc.
United States	5,320,218	06/14/1994		Closed container to be used in a clean room	Asyst Shinko, Inc.
United States	5,332,013	07/26/1994		Unmanned conveying device in clean room	Asyst Shinko, Inc.
United States	5,363,867	11/15/1994		Article storage house in a clean room	Asyst Shinko, Inc.
United States	5,431,600	07/11/1995		Automatic transferring system using portable closed container	Asyst Shinko, Inc.
United States	5,433,574	07/18/1995		Gas purge unit for a portable container	Asyst Shinko, Inc.
United States	5,433,346	08/22/1995		Wafer conveying system in a clean room	Asyst Shinko, Inc.
United States	5,621,982	04/22/1997		Electronic substrate processing system using portable closed containers and its equipments	Asyst Shinko, Inc.
United States	5,625,559	04/29/1997		Transport management control apparatus and method for unmanned vehicle system	Asyst Shinko, Inc.
United States	5,628,604	05/13/1997		Conveying system	Asyst Shinko, Inc.
United States	5,743,424	04/28/1998		Sealable container	Asyst Shinko, Inc.
United States	5,746,008	05/05/1998		Electronic substrate processing system using portable closed containers	Asyst Shinko, Inc.
United States	5,806,574	09/15/1998		Portable closed container	Asyst Shinko, Inc.
United States	6,019,563	02/01/2000		Automatic guided vehicle	Asyst Shinko, Inc.

Country	Patent No.	Issue Date	Inventor(s)	Title	Owner
United States	6,041,274	03/21/2000		Positional deviation defecting device for a mobile body and position correcting apparatus for a working machine mounted on a mobile body	Asyst Shinko, Inc.
United States	6,092,678	07/25/2000		Overhead hoist transfer	Asyst Shinko, Inc.
United States	6,095,054	08/01/2000		Transport system	Asyst Shinko, Inc.
United States	6,152,669	11/28/2000		Mechanical interface apparatus	Asyst Shinko, Inc.
United States	6,427,824	08/06/2002		Overhead conveying device and overhead conveying vehicle	Asyst Shinko, Inc.
United States	6,443,400	09/03/2002		Automatic transport system	Asyst Shinko, Inc.
United States	6,460,711	10/08/2002		Suspension type hoisting apparatus	Asyst Shinko, Inc.
United States	6,504,144	01/07/2003		Overhead-traveling carrying apparatus	Asyst Shinko, Inc.

b. Other Jurisdictions

Country	Patent No.	Issue Date	Inventor(s)	Title	Owner
Korea	178359 (ABANDONED)			SEALED STANDARD INTERFACE APPARATUS	Asyst Technologies, Inc.
Korea	74560 (ABANDONED)		Assigned from Fluoroware	BAR CODE REMOTE RECOGNITION SYSTEM FOR PROCESS CARRIERS OF WAFER DISKS	Asyst Technologies, Inc.
Korea	178359 (ABANDONED)		G. Maney, A. Bonora, M. Parikh and M. Brain	PROCESSING SYSTEMS WITH INTELLIGENT ARTICLE TRACKING	Asyst Technologies, Inc.
Korea	112084 (same as 9614830 below)		Assigned from Fluoroware	VERY LOW FREQUENCY TRACKING SYSTEM	Asyst Technologies, Inc.
Korea	207045 (ABANDONED)		Assigned from Hine Design	DEVICES AND METHODS FOR READING IDENTIFICATION MARKS ON SEMICONDUCTOR WAFERS	Asyst Technologies, Inc.
Korea	281942		Assigned from Semifab, Inc.	DOCKING AND ENVIRONMENTAL PURGING SYSTEM FOR INTEGRATED CIRCUIT WAFER TRANSPORT	Asyst Technologies, Inc.
Korea	0331514		Assigned from Hine Design	APPARATUS AND METHODS FOR VIEWING IDENTIFICATION MARKS ON SEMICONDUCTOR WAFERS	Asyst Technologies, Inc.
Korea	10-1999-7002146		Assigned from Semifab, Inc.	MOLECULAR CONTAMINATION CONTROL SYSTEM	Asyst Technologies, Inc.
Korea	7009416/1999		W. Fosnight	INTEGRATED INTRABAY BUFFER, DELIVERY, AND STOCKER SYSTEM	Asyst Technologies, Inc.
Korea	7010687/2000		W. Fosnight, A. Bonora, R. Martin and J. Tatro	EVACUATION-DRIVEN SMIF POD PURGE SYSTEM	Asyst Technologies, Inc.
Korea	7006887/2001		W. Fosnight and J. Shenk	PASSIVELY ACTIVATED VALVE FOR CARRIER PURGING	Asyst Technologies, Inc.
Korea	7013917/2001		A. Bonora, E. Cortez, J. DiPaola and R. Netsch	UNIVERSAL TOOL INTERFACE AND/OR WORKPIECE TRANSFER APPARATUS FOR SMIF AND OPEN POD APPLICATIONS	Asyst Technologies, Inc.

Country	Patent No.	Issue Date	Inventor(s)	Title	Owner
Korea	7002235/2000		A. Bonora, E. Cortez, J. Kyffin and M. Ng	TELT AND GO LOAD PORT INTERFACE ALIGNMENT SYSTEMS	Asyst Technologies, Inc.
Korea	7004782/2001		F. Rosenquist, B. Richardson, W. Fosnight and A. Bonora	WAFER MAPPING SYSTEM	Asyst Technologies, Inc.
Korea	7000570/2001		A. Bonora, W. Fosnight and R. Martin	ERGONOMIC, VARIABLE SIZE, BOTTOM OPENING SYSTEM COMPATIBLE WITH A VERTICAL INTERFACE	Asyst Technologies, Inc.
Korea	432380		A. Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	INTEGRATED ROLLER TRANSPORT POD AND ASYNCHRONOUS CONVEYOR	Asyst Technologies, Inc.
Korea	437926		B. Wehrung, C. Holden Assigned from Palo Alto Technologies, Inc.	DISTRIBUTED CONTROL SYSTEM ARCHITECTURE AND METHOD FOR A MATERIAL TRANSPORT	Asyst Technologies, Inc.
Korea	7001603/2001		W. Fosnight and J. Shenk	POD TO PORT DOOR RETENTION AND EVACUATION SYSTEM	Asyst Technologies, Inc.
Korea	443597		A. Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	TRANSPORT SYSTEM WITH INTEGRATED TRANSPORT CARRIERS AND DIRECTOR	Asyst Technologies, Inc.
Korea	7000489/2002 (ABANDONED)		A. Bonora, R. Netsch, P. Sullivan, W. Fosnight, J. Shenk and E. Noma	SMIF-COMPATIBLE OPEN CASSETTE ENCLOSURE	Asyst Technologies, Inc.
Korea	7013757/2002		D. Babbs, T. Ewald, M. Coady and J. Kim	SYSTEM FOR PARALLEL PROCESSING OF WORKPIECES	Asyst Technologies, Inc.
Korea	2001-7007675 (ABANDONED)		A. Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	IN/OUT LOAD PORT TRANSFER MECHANISM	Asyst Technologies, Inc.
Korea	2001-7007674 (ABANDONED)		A. Bonora, R. Gould, M. Brain, D. Adams Assigned from Palo Alto Technologies, Inc.	INTEGRATED INTRA-BAY TRANSFER, STORAGE AND DELIVERY SYSTEM	Asyst Technologies, Inc.
Korea	7010251/2000		S. Abuzeid, X. He and G. Tannous	INTELLIGENT MINIENVIRONMENT	Asyst Technologies, Inc.
Korea	2001-7007697 (ABANDONED)		A. Bonora, R. Could, J. Kerr Assigned from Palo Alto Technologies, Inc.	INTEGRATED LOAD PORT-CONVEYOR TRANSFER SYSTEM	Asyst Technologies, Inc.
Korea	7000511/2001		F. Rosenquist and M. Ng	POD DOOR TO PORT DOOR RETENTION SYSTEM	Asyst Technologies, Inc.
Korea	7013756/2002		D. Babbs, T. Ewald, M. Coady and W. Fosnight	MODULAR SORTER	Asyst Technologies, Inc.
Korea	7007045/2002 (ABANDONED)		A. Bonora, R. Netsch and R. Gould	WAFER TRANSPORT SYSTEM	Asyst Technologies, Inc.
Korea	7002262/2003		R. Martin	SMART LOAD PORT WITH INTEGRATED CARRIER MONITORING AND FAB-WIDE CARRIER MANAGEMENT SYSTEM	Asyst Technologies, Inc.
Korea	7014757/2001		A. Bonora, W. Fosnight and J. Shenk	CASSETTE BUFFERING WITHIN A MINIENVIRONMENT	Asyst Technologies, Inc.

Country	Patent No.	Issue Date	Inventor(s)	Title	Owner
Korea	(ABANDONED)		A. Bonora, R. Hine, M. Krolak, and J. Grilli	WORKPIECE HANDLING ROBOT	Asyst Technologies, Inc.
Korea	7007095/2000		A. Bonora, W. Fosnight and R. Martin	PORT DOOR REMOVAL AND WAFER HANDLING ROBOTIC SYSTEM	Asyst Technologies, Inc.
Korea	616125			OPENING SYSTEM COMPATIBLE WITH A VERTICAL INTERFACE	Asyst Technologies, Inc.
Korea	432380			PROTECTIVE CONTAINER, CONVEYOR AND METHOD FOR TRANSPORTING ARTICLES	Asyst Technologies, Inc.
Korea	575549			PORT DOOR RETENTION AND EVACUATION SYSTEM	Asyst Technologies, Inc.
Korea	10-0570357			APPARATUS FOR PROCESSING OF WORKPIECES	Asyst Technologies, Inc.
Korea	562542			MODULAR SORTER	Asyst Technologies, Inc.
Korea	10-0571589			SMMIF POD DOOR AND PORT DOOR REMOVAL AND RETURN SYSTEM	Asyst Technologies, Inc.
Canada	1,314,986 (ABANDONED)		Assigned from Fluoroware	BAR CODE REMOTE RECOGNITION SYSTEM FOR PROCESS CARRIERS OF WAFER DISKS	Asyst Technologies, Inc.
Canada	2,335,054 (ABANDONED)		Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	INTEGRATED ROLLER TRANSPORT POD AND ASYNCHRONOUS CONVEYOR	Asyst Technologies, Inc.
Canada	2,354,624 (ABANDONED)		B. Wehrung, C. Holden Assigned from Palo Alto Technologies, Inc.	DISTRIBUTED CONTROL SYSTEM ARCHITECTURE AND METHOD FOR A MATERIAL TRANSPORT	Asyst Technologies, Inc.
Canada	2,339,813 (ABANDONED)		Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	TRANSPORT SYSTEM WITH INTEGRATED TRANSPORT CARRIERS AND DIRECTOR	Asyst Technologies, Inc.
Canada	2,355,135 (ABANDONED)		Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	IN/OUT LOAD PORT TRANSFER MECHANISM	Asyst Technologies, Inc.
Canada	2,355,093 (ABANDONED)		Bonora, R. Gould, M. Brain, D. Adams Assigned from Palo Alto Technologies, Inc.	INTEGRATED INTRA-BAY TRANSFER, STORAGE AND DELIVERY SYSTEM	Asyst Technologies, Inc.
Canada	2,355,183 (ABANDONED)		Bonora, R. Gould, J. Kerr Assigned from Palo Alto Technologies, Inc.	INTEGRATED LOAD PORT-CONVEYOR TRANSFER SYSTEM	Asyst Technologies, Inc.
China	99815317.6		W. Fosnight and J. Shenk	PASSIVELY ACTIVATED VALVE FOR CARRIER PURGING	Asyst Technologies, Inc.
China	00808427.0		A. Bonora, E. Cortez, J. DiPaola and R. Netsch	UNIVERSAL TOOL INTERFACE AND/OR WORKPIECE TRANSFER APPARATUS FOR SMIF AND OPEN POD APPLICATIONS	Asyst Technologies, Inc.
China	99807745.3		Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	INTEGRATED ROLLER TRANSPORT POD AND ASYNCHRONOUS CONVEYOR	Asyst Technologies, Inc.

Country	Patent No.	Issue Date	Inventors	Title	Owner
China	99816051.2		B. Wehrung, C. Holden Assigned from Palo Alto Technologies, Inc.	DISTRIBUTED CONTROL SYSTEM ARCHITECTURE AND METHOD FOR A MATERIAL TRANSPORT	Asyst Technologies, Inc.
China	ZL 00801556.2		Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	TRANSPORT SYSTEM WITH INTEGRATED TRANSPORT CARRIERS AND DIRECTOR	Asyst Technologies, Inc.
China	CN00801556.2	October 24, 2001		[This patent is cross listed under ZL 00801556.2 (above)]	Asyst Technologies, Inc.
China	176878 (same as 1171767)		A. Bonora, R. Netsch, P. Sullivan, W. Fosnight, J. Shenk and E. Noma	SMIF-COMPATIBLE OPEN CASSETTE ENCLOSURE	Asyst Technologies, Inc.
China	CN00810160.4	December 11, 2002	Anthony C. Bonora, Robert Netsch, Patrick Sullivan	SMIF-COMPATIBLE OPEN CASSETTE ENCLOSURE [NOTE: May be the same patent as above with different number]	Asyst Technologies, Inc.
China	01803302.4		D. Babbs, T. Ewald, M. Coady and J. Kim	SYSTEM FOR PARALLEL PROCESSING OF WORKPIECES	Asyst Technologies, Inc.
China	01819707.8		F. Rosenquist and P. Peterson	FIMS INTERFACE WITHOUT ALIGNMENT PINS	Asyst Technologies, Inc.
China	ZL99815721.X		Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	IN/OUT LOAD PORT TRANSFER MECHANISM	Asyst Technologies, Inc.
China	CN99815721.X	January 30, 2002		[This patent is cross listed under ZL99815721.X (above)]	Asyst Technologies, Inc.
China	ZL99815727.9		Bonora, R. Gould, M. Brain, D. Adams Assigned from Palo Alto Technologies, Inc.	INTEGRATED INTRA-BAY TRANSFER, STORAGE AND DELIVERY SYSTEM	Asyst Technologies, Inc.
China	CN99815727.9	January 30, 2002		[This patent is cross listed under ZL99815727.9 (above)]	Asyst Technologies, Inc.
China	ZL 99815720.1		Bonora, R. Gould, J. Kerr Assigned from Palo Alto Technologies, Inc.	INTEGRATED LOAD PORT-CONVEYOR TRANSFER SYSTEM	Asyst Technologies, Inc.
China	CN99815720.1	January 20, 2002		[This patent is cross listed under ZL 99815720.1]	Asyst Technologies, Inc.
China	018033181		D. Babbs, T. Ewald, M. Coady and W. Fosnight	MODULAR SORTER	Asyst Technologies, Inc.
China	CN01803318.0	May 7, 2003			Asyst Technologies, Inc.
China	CN 1543663A		F. Rosenquist	SMIF LOAD PORT INTERFACE INCLUDING SMART PORT	Asyst Technologies, Inc.
China	CN02816096.7	November 3, 2004		[This Patent is cross listed under Application No. CN 1543663A (above)]	Asyst Technologies, Inc.
China	Z00816521.1		A. Bonora, R. Netsch and R. Gould	WAFER TRANSPORT SYSTEM	Asyst Technologies, Inc.
China	CN00816521.1	March 12, 2003		[This patent is cross listed under Z00816521.1 (above)]	Asyst Technologies, Inc.
China	01816308.4		R. Martin	SMART LOAD PORT WITH INTEGRATED CARRIER MONITORING AND FAB-WIDE CARRIER MANAGEMENT SYSTEM	Asyst Technologies, Inc.
China	01818061.2		D. Babbs, J. Kim, M. Coady and W. Fosnight	EDGE GRIP ALIGNER WITH BUFFERING CAPABILITIES	Asyst Technologies, Inc.

Country	Patent No.	Issue Date	Inventor(s)	Title	Owner
China	ZL00809546.9	grant date 2/15/2006	A. Bonora, W. Fosnight and J. Shenk	CASSETTE BUFFERING WITHIN A MINIENVIRONMENT	Asyst Technologies, Inc.
China	CN00809546.9	July 17, 2002		[This patent is cross listed under ZL00809546.9 (above)]	Asyst Technologies, Inc.
China	ZL00803652.7		A. Bonora, R. Hine, M. Krolak, and J. Grilli	WORKPIECE HANDLING ROBOT	Asyst Technologies, Inc.
China	CN00803652.7	April 10, 2002		[This patent is cross listed under ZL00803652.7 (above)]	Asyst Technologies, Inc.
China	ZL99815317.6	Mar/28/03		SYSTEM FOR PURGING A CARRIER WITH A GAS SOURCE AND FOR TRANSFERRING AND SUPPORTING A CARRIER	Asyst Technologies, Inc.
China	233972	Nov/02/05		A WORK PIECE TRANSFER ROBOT, AN END EFFECTOR AND A METHOD FOR PROCESSING WORK PIECE	Asyst Technologies, Inc.
China	ZL 99815720.1	Oct/08/03		INTEGRATED LOAD PORT- CONVEYOR TRANSFER SYSTEM	Asyst Technologies, Inc.
China	ZL02819312.1	Dec/06/06		UNIVERSAL MODULAR WFAER TRANSPORT SYSTEM	Asyst Technologies, Inc.
Europe	292236 (ABANDONED)		M. Parikh and A. Bonora	SEALABLE TRANSPORTABLE CONTAINER HAVING A PARTICLE FILTERING SYSTEM	Asyst Technologies, Inc.
Europe	0313693		M. Parikh and A. Bonora	SEALABLE TRANSPORTABLE CONTAINER HAVING A PARTICLE FILTERING SYSTEM	Asyst Technologies, Inc.
Europe	EP0507773	Mar/17/99		PROCESSING SYSTEMS WITH INTELLIGENT ARTICLE TRACKING	Asyst Technologies, Inc.
Europe	1154929	Feb/01/06		PASSIVELY ACTIVATED VALVE FOR CARRIER PURGING	Asyst Technologies, Inc.
Europe	1299780	Nov/23/05		AUTOMATED TOOL MANAGEMENT IN A MULTI-PROTOCOL ENVIRONMENT	Asyst Technologies, Inc.
Europe United Kingdom & Netherlands	0238541		A. Bonora	MANIPULATOR FOR STANDARD MECHANICAL INTERFACE APPARATUS	Asyst Technologies, Inc.
Europe Austria Belgium France Switzerland	0382797 (ABANDONED)		Assigned from Fluoroware	BAR CODE REMOTE RECOGNITION SYSTEM FOR PROCESS CARRIERS OF WAFER DISKS	Asyst Technologies, Inc.
Europe	0292236		M. Parikh	INTELLIGENT WAFER CARRIER (COMPUTER AIDED DISCRETE TRAVELER SYSTEM FOR INTEGRATED CONTROL)	Asyst Technologies, Inc.
Europe	0556193		A. Bonora, G. Guerre and M. Parikh	METHOD AND APPARATUS FOR TRANSFERRING ARTICLES BETWEEN TWO CONTROLLED ENVIRONMENTS	Asyst Technologies, Inc.
Europe	97940617.0		Assigned from Semifab, Inc.	MOLECULAR CONTAMINATION CONTROL SYSTEM	Asyst Technologies, Inc.

Country	Parent No.	Issue Date	Inventors	Title	Owner
Europe	98912061.3 (ABANDONED)		W. Fosnight	INTEGRATED INTRABAY BUFFER, DELIVERY, AND STOCKER SYSTEM	Asyst Technologies, Inc.
Europe	99914037.9 (ABANDONED)		W. Fosnight, A. Bonora, R. Martin and J. Tatro	EVACUATION-DRIVEN SMIF POD PURGE SYSTEM	Asyst Technologies, Inc.
Europe	00928361.5 (ABANDONED)		A. Bonora, E. Cortez, J. DiPaola and R. Netsch	UNIVERSAL TOOL INTERFACE AND/OR WORKPIECE TRANSFER APPARATUS FOR SMIF AND OPEN POD APPLICATIONS	Asyst Technologies, Inc.
Europe	99954634.4		F. Rosenquist, B. Richardson, W. Fosnight and A. Bonora	WAFER MAPPING SYSTEM	Asyst Technologies, Inc.
Europe	99933900.5 (ABANDONED)		A. Bonora, W. Fosnight and R. Martin	ERGONOMIC, VARIABLE SIZE, BOTTOM OPENING SYSTEM COMPATIBLE WITH A VERTICAL INTERFACE	Asyst Technologies, Inc.
Europe	99930726.7 (ABANDONED)		Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	INTEGRATED ROLLER TRANSPORT POD AND ASYNCHRONOUS CONVEYOR	Asyst Technologies, Inc.
Europe	99966241.4		B. Wehrung, C. Holden Assigned from Palo Alto Technologies, Inc.	DISTRIBUTED CONTROL SYSTEM ARCHITECTURE AND METHOD FOR A MATERIAL TRANSPORT	Asyst Technologies, Inc.
Europe	99940889.1 (ABANDONED)		W. Fosnight and J. Shenk	POD TO PORT DOOR RETENTION AND EVACUATION SYSTEM	Asyst Technologies, Inc.
Europe	1124745		Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	TRANSPORT SYSTEM WITH INTEGRATED TRANSPORT CARRIERS AND DIRECTOR	Asyst Technologies, Inc.
Europe	01924934.1 (ABANDONED)		D. Babbs, T. Ewald, M. Coady and J. Kim	SYSTEM FOR PARALLEL PROCESSING OF WORKPIECES	Asyst Technologies, Inc.
Europe	99966152.3		Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	IN/OUT LOAD PORT TRANSFER MECHANISM	Asyst Technologies, Inc.
Europe	99966286.9		Bonora, R. Gould, M. Brain, D. Adams Assigned from Palo Alto Technologies, Inc.	INTEGRATED INTRA-BAY TRANSFER, STORAGE AND DELIVERY SYSTEM	Asyst Technologies, Inc.
Europe	99912462.1 (ABANDONED)		S. Abuzeid, X. He and G. Tannous	INTELLIGENT MINIENVIRONMENT	Asyst Technologies, Inc.
Europe	99966151.5		Bonora, R. Gould, J. Kerr Assigned from Palo Alto Technologies, Inc.	INTEGRATED LOAD PORT-CONVEYOR TRANSFER SYSTEM	Asyst Technologies, Inc.
Europe	999355118		F. Rosenquist and M. Ng	POD DOOR TO PORT DOOR RETENTION SYSTEM	Asyst Technologies, Inc.
Europe	01924933.3		D. Babbs, T. Ewald, M. Coady and W. Fosnight	MODULAR SORTER	Asyst Technologies, Inc.
Europe	00986267.3		A. Bonora, R. Netsch and R. Gould	WAFER TRANSPORT SYSTEM	Asyst Technologies, Inc.
Europe	09033313.3 (ABANDONED)		A. Bonora, R. Martin, W. Fosnight, R. Netsch, J. Oen and T. Mosier	SMIF POD STORAGE, DELIVERY AND RETRIEVAL SYSTEM	Asyst Technologies, Inc.

Country	Patent No.	Issue Date	Inventor(s)	Title	Owner
Europe	01963957.4		R. Martin	SMART LOAD PORT WITH INTEGRATED CARRIER MONITORING AND FAB-WIDE CARRIER MANAGEMENT SYSTEM	Asyst Technologies, Inc.
Europe	10966433.3		D. Babbs, J. Kim, M. Coady and W. Fosnight	EDGE GRIP ALIGNER WITH BUFFERING CAPABILITIES	Asyst Technologies, Inc.
Europe	00932361.9 (ABANDONED)		A. Bonora, W. Fosnight and J. Shenk	CASSETTE BUFFERING WITHIN A MINIENVIRONMENT	Asyst Technologies, Inc.
Europe	00904352.2 (ABANDONED)		A. Bonora, R. Hine, M. Krolak, and J. Grilli	WORKPIECE HANDLING ROBOT	Asyst Technologies, Inc.
Europe	98962091 (ABANDONED)		A. Bonora, W. Fosnight and R. Martin	PORT DOOR REMOVAL AND WAFER HANDLING ROBOTIC SYSTEM	Asyst Technologies, Inc.
Europe (Validated in Great Britain, Switzerland, Netherlands, France, EPC, Germany)	1154929	February 1, 2006	W. Fosnight and J. Shenk	PASSIVELY ACTIVATED VALVE FOR CARRIER PURGING	Asyst Technologies, Inc.
France	9210866		Assigned from Fluoroware	VERY LOW FREQUENCY TRACKING SYSTEM	Asyst Technologies, Inc.
France	34741-826		D. Babbs, T. Ewald, M. Coady and W. Fosnight	MODULAR SORTER	Asyst Technologies, Inc.
France	34741-894		R. Martin	SMART LOAD PORT WITH INTEGRATED CARRIER MONITORING AND FAB-WIDE CARRIER MANAGEMENT SYSTEM	Asyst Technologies, Inc.
France	34741-904		D. Babbs, J. Kim, M. Coady and W. Fosnight	EDGE GRIP ALIGNER WITH BUFFERING CAPABILITIES	Asyst Technologies, Inc.
France	1299780	Nov/23/05		AUTOMATED TOOL MANAGEMENT IN A MULTI-PROTOCOL ENVIRONMENT	Asyst Technologies, Inc.
Germany	P3573367 (ABANDONED)			SEALED STANDARD INTERFACE APPARATUS	Asyst Technologies, Inc.
Germany	3880368 (ABANDONED)		M. Parikh and A. Bonora	SEALABLE TRANSPORTABLE CONTAINER HAVING A PARTICLE FILTERING SYSTEM	Asyst Technologies, Inc.
Germany	3789058.1-08		M. Parikh and A. Bonora	SEALABLE TRANSPORTABLE CONTAINER HAVING A PARTICLE FILTERING SYSTEM	Asyst Technologies, Inc.
Germany	P3686943.0-08 (ABANDONED)		A. Bonora	MANIPULATOR FOR STANDARD MECHANICAL INTERFACE APPARATUS	Asyst Technologies, Inc.
Germany	68926782.7-08 (ABANDONED)		Assigned from Fluoroware	BAR CODE REMOTE RECOGNITION SYSTEM FOR PROCESS CARRIERS OF WAFER DISKS	Asyst Technologies, Inc.
Germany	371 14305 (ABANDONED)		Assigned from Particle Measuring Systems, Inc.	SURFACE ANALYSIS SYSTEM AND METHOD	Asyst Technologies, Inc.
Germany	EP 0507773 B1 (same as 69033008 below)		G. Maney, A. Bonora, M. Parikh and M. Brain	PROCESSING SYSTEMS WITH INTELLIGENT ARTICLE TRACKING	Asyst Technologies, Inc.

Country	Patent No.	Issue Date	Inventor(s)	Title	Owner
Germany	3880368.2-08		M. Parikh	INTELLIGENT WAFER CARRIER (COMPUTER AIDED DISCRETE TRAVELER SYSTEM FOR INTEGRATED CONTROL)	Asyst Technologies, Inc.
Germany	G9218371.9		Assigned from Fluoroware	VERY LOW FREQUENCY TRACKING SYSTEM	Asyst Technologies, Inc.
Germany	96/11500 (ABANDONED)			METHOD AND APPARATUS FOR VERTICAL TRANSFER OF A SEMICONDUCTOR WAFER CASSETTE	Asyst Technologies, Inc.
Germany	DE19882665.6 (ABANDONED)		A. Bonora, E. Cortez, J. Kyffin and M. Ng	TILT AND GO LOAD PORT INTERFACE ALIGNMENT SYSTEMS	Asyst Technologies, Inc.
Germany	34741-822		D. Babbs, T. Ewald, M. Coady and W. Fosnight	MODULAR SORTER	Asyst Technologies, Inc.
Germany	34741-890		R. Martin	SMART LOAD PORT WITH INTEGRATED CARRIER MONITORING AND FAB-WIDE CARRIER MANAGEMENT SYSTEM	Asyst Technologies, Inc.
Germany	34741-900		D. Babbs, J. Kim, M. Coady and W. Fosnight	EDGE GRIP ALIGNER WITH BUFFERING CAPABILITIES	Asyst Technologies, Inc.
Germany	1028905			INTEGRATED INTRABAY BUFFER, DELIVERY, AND STOCKER SYSTEM	Asyst Technologies, Inc.
Germany	P69929714.1			PASSIVELY ACTIVATED VALVE FOR CARRIER PURGING	Asyst Technologies, Inc.
Germany	39180			POD DOOR TO PORT DOOR RETENTION SYSTEM	Asyst Technologies, Inc.
Germany	P4332657A1			AUTOMATION IN CLEANROOM	Asyst Technologies, Inc.
Germany	60115240.9-08			AUTOMATED TOOL MANAGEMENT IN A MULTI-PROTOCOL ENVIRONMENT	Asyst Technologies, Inc.
Germany	G9321267.4		Assigned from Proconics	ACR CLEANROOM	Asyst Technologies, Inc.
Germany	P4332657		Assigned from Proconics	ACR AUTOMATION IN CLEANROOM GMBH	Asyst Technologies, Inc.
Great Britain	EPO191805 (ABANDONED)			SEALED STANDARD INTERFACE APPARATUS	Asyst Technologies, Inc.
Hong Kong	01104614.7 (ABANDONED)		W. Fosnight, A. Bonora, R. Martin and J. Tatro	EVACUATION-DRIVEN SMIF POD PURGE SYSTEM	Asyst Technologies, Inc.
Hong Kong	02101411.7 (ABANDONED)		A. Bonora, W. Fosnight and R. Martin	ERGONOMIC, VARIABLE SIZE, BOTTOM OPENING SYSTEM COMPATIBLE WITH A VERTICAL INTERFACE	Asyst Technologies, Inc.
Hong Kong	02100416.4 (ABANDONED)		W. Fosnight and J. Shenk	POD TO PORT DOOR RETENTION AND EVACUATION SYSTEM	Asyst Technologies, Inc.
Hong Kong	HK1039104 (ABANDONED)		Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	TRANSPORT SYSTEM WITH INTEGRATED TRANSPORT CARRIERS AND DIRECTOR	Asyst Technologies, Inc.
Hong Kong	02105397.6 (ABANDONED)		A. Bonora, R. Netsch, P. Sullivan, W. Fosnight, J. Shenk and E. Noma	SMIF-COMPATIBLE OPEN CASSETTE ENCLOSURE	Asyst Technologies, Inc.
Hong Kong	01104531.7 (ABANDONED)		S. Abuzeid, X. He and G. Tannous	INTELLIGENT MINIENVIRONMENT	Asyst Technologies, Inc.
Hong Kong	01108678.1 (ABANDONED)		F. Rosenquist and M. Ng	POD DOOR TO PORT DOOR RETENTION SYSTEM	Asyst Technologies, Inc.

Country	Patent No.	Issue Date	Inventor(s)	Title	Owner
Hong Kong	03103502.2 (ABANDONED)		D. Babbs, T. Ewald, M. Coady and W. Fosnight	MODULAR SORTER	Asyst Technologies, Inc.
Hong Kong	03103110.6 (ABANDONED)		A. Bonora, R. Netsch and R. Gould	WAFER TRANSPORT SYSTEM	Asyst Technologies, Inc.
Hong Kong	01100987.4 (ABANDONED)		A. Bonora, R. Martin, W. Fosnight, R. Netsch, J. Oen and T. Mosier	SMIF POD STORAGE, DELIVERY AND RETRIEVAL SYSTEM	Asyst Technologies, Inc.
Ireland	1028905			INTEGRATED INTRABAY BUFFER, DELIVERY, AND STOCKER SYSTEM	Asyst Technologies, Inc.
Israel	140195		Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	INTEGRATED ROLLER TRANSPORT POD AND ASYNCHRONOUS CONVEYOR	Asyst Technologies, Inc.
Israel	141386		Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	TRANSPORT SYSTEM WITH INTEGRATED TRANSPORT CARRIERS AND DIRECTOR	Asyst Technologies, Inc.
Italy	0382797 (ABANDONED)		Assigned from Fluoroware	BAR CODE REMOTE RECOGNITION SYSTEM FOR PROCESS CARRIERS OF WAFER DISKS	Asyst Technologies, Inc.
Italy	1,257,093		Assigned from Fluoroware	VERY LOW FREQUENCY TRACKING SYSTEM	Asyst Technologies, Inc.
Italy	021610BE/2006			AUTOMATED TOOL MANAGEMENT IN A MULTI-PROTOCOL ENVIRONMENT	Asyst Technologies, Inc.
Luxembourg	0382797 (ABANDONED)		Assigned from Fluoroware	BAR CODE REMOTE RECOGNITION SYSTEM FOR PROCESS CARRIERS OF WAFER DISKS	Asyst Technologies, Inc.
Netherlands	292236 (ABANDONED)		M. Parikh and A. Bonora	SEALABLE TRANSPORTABLE CONTAINER HAVING A PARTICLE FILTERING SYSTEM	Asyst Technologies, Inc.
Netherlands	313693 (ABANDONED)		M. Parikh and A. Bonora	SEALABLE TRANSPORTABLE CONTAINER HAVING A PARTICLE FILTERING SYSTEM	Asyst Technologies, Inc.
Netherlands	0382797 (ABANDONED)		Assigned from Fluoroware	BAR CODE REMOTE RECOGNITION SYSTEM FOR PROCESS CARRIERS OF WAFER DISKS	Asyst Technologies, Inc.
Netherlands	EP0292236		M. Parikh	INTELLIGENT WAFER CARRIER (COMPUTER AIDED DISCRETE TRAVELER SYSTEM FOR INTEGRATED CONTROL)	Asyst Technologies, Inc.
Netherlands	34741-825		D. Babbs, T. Ewald, M. Coady and W. Fosnight	MODULAR SORTER	Asyst Technologies, Inc.
Netherlands	34741-893		R. Martin	SMART LOAD PORT WITH INTEGRATED CARRIER MONITORING AND FAB- WIDE CARRIER MANAGEMENT SYSTEM	Asyst Technologies, Inc.
Netherlands	34741-903		D. Babbs, J. Kim, M. Coady and W. Fosnight	EDGE GRIP ALIGNER WITH BUFFERING CAPABILITIES	Asyst Technologies, Inc.
PCT	PCT/US99/16649 (ABANDONED)			FILTER CARTRIDGE ASSEMBLY FOR A GAS PURGING SYSTEM	Asyst Technologies, Inc.

Country	Patent No.	Issue Date	Inventor(s)	Title	Owner
PCT	PCT/US01/43760		F. Rosenquist	FIMS INTERFACE WITHOUT ALIGNMENT PINS	Asyst Technologies, Inc.
PCT/WIPO	PCT/US02/21968		F. Rosenquist	SMIF LOAD PORT INTERFACE INCLUDING SMART PORT	Asyst Technologies, Inc.
PCT/WIPO	PCT/US01/44393 (ABANDONED)		R. Hine and G. Hine	SELF TEACHING ROBOT	Asyst Technologies, Inc.
PCT/WIPO	PCT/US02/21828		Michael Krolak	CLEAN METHOD AND APPARATUS FOR VACUUM HOLDING OF SUBSTRATES	Asyst Technologies, Inc.
PCT/WIPO	PCT/US02/03909		W. Fosnight, D. Babbs, R. Gould, M. Krolak, D. Feindel and T. Luong	SYSTEM FOR SAFEGUARDING INTEGRATED INTRABAY POD DELIVERY AND STORAGE SYSTEM	Asyst Technologies, Inc.
PCT/WIPO	PCT/US02/21861 (ABANDONED)		D. Babbs, W. Fosnight, T. Cosentino, M. Sammut, P. Pinna and R. Zemen	WORKPIECE SORTER OPERATING WITH MODULAR BARE WORKPIECE STOCKERS AND/OR CLOSED CONTAINER STOCKERS	Asyst Technologies, Inc.
Singapore	9791464-2 (ABANDONED)		M. Parikh and A. Bonora	SEALABLE TRANSPORTABLE CONTAINER HAVING A PARTICLE FILTERING SYSTEM	Asyst Technologies, Inc.
Singapore	9791467-5 (ABANDONED)		A. Bonora	MANIPULATOR FOR STANDARD MECHANICAL INTERFACE APPARATUS	Asyst Technologies, Inc.
Singapore	9791466-7		M. Parikh	INTELLIGENT WAFER CARRIER (COMPUTER AIDED DISCRETE TRAVELER SYSTEM FOR INTEGRATED CONTROL)	Asyst Technologies, Inc.
Singapore	PCT/*s98/18879 (ABANDONED)		Sold to Entegris	ALIGNER FOR A SUBSTRATE CARRIER	Asyst Technologies, Inc.
Singapore	64193 (ABANDONED)		Assigned from Semifab, Inc.	MOLECULAR CONTAMINATION CONTROL SYSTEM	Asyst Technologies, Inc.
Singapore	77957 (ABANDONED)		Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	INTEGRATED ROLLER TRANSPORT POD AND ASYNCHRONOUS CONVEYOR	Asyst Technologies, Inc.
Singapore	79848 (ABANDONED)		Bonora, R. Gould Assigned from Palo Alto Technologies, Inc.	TRANSPORT SYSTEM WITH INTEGRATED TRANSPORT CARRIERS AND DIRECTOR	Asyst Technologies, Inc.
				AUTOMATED TOOL MANAGEMENT IN A MULTI-PROTOCOL ENVIRONMENT	
Switzerland	34741-824		D. Babbs, T. Ewald, M. Coady and W. Fosnight	MODULAR SORTER	Asyst Technologies, Inc.
Switzerland	34741-892		R. Martin	SMART LOAD PORT WITH INTEGRATED CARRIER MONITORING AND FAB-WIDE CARRIER MANAGEMENT SYSTEM	Asyst Technologies, Inc.
Switzerland	34741-902		D. Babbs, J. Kim, M. Coady and W. Fosnight	EDGE GRIP ALIGNER WITH BUFFERING CAPABILITIES	Asyst Technologies, Inc.
United Kingdom	292236 (ABANDONED)		M. Parikh and A. Bonora	SEALABLE TRANSPORTABLE CONTAINER HAVING A PARTICLE FILTERING SYSTEM	Asyst Technologies, Inc.

Country	Patent No.	Issue Date	Inventor(s)	Title	Owner
United Kingdom	038277 (ABANDONED)		Assigned from Fluoroware	BAR CODE REMOTE RECOGNITION SYSTEM FOR PROCESS CARRIERS OF WAFER DISKS	Asyst Technologies, Inc.
United Kingdom	EP0292236		M. Parikh	INTELLIGENT WAFER CARRIER (COMPUTER AIDED DISCRETE TRAVELER SYSTEM FOR INTEGRATED CONTROL)	Asyst Technologies, Inc.
United Kingdom	34741-823		D. Babbs, T. Ewald, M. Coady and W. Fosnight	MODULAR SORTER	Asyst Technologies, Inc.
United Kingdom	34741-891		R. Martin	SMART LOAD PORT WITH INTEGRATED CARRIER MONITORING AND FAB- WIDE CARRIER MANAGEMENT SYSTEM	Asyst Technologies, Inc.
United Kingdom	34741-901		D. Babbs, J. Kim, M. Coady and W. Fosnight	EDGE GRIP ALIGNER WITH BUFFERING CAPABILITIES	Asyst Technologies, Inc.
United Kingdom	1028905			INTEGRATED INTRABAY BUFFER, DELIVERY, AND STOCKER SYSTEM	Asyst Technologies, Inc.
United Kingdom	1124745			TRANSPORT SYSTEM WITH INTEGRATED TRANSPORT CARRIER AND DIRECTORS	Asyst Technologies, Inc.
United Kingdom	1105605			POD DOOR TO PORT DOOR RETENTION SYSTEM	Asyst Technologies, Inc.
United Kingdom	1252079			WAFER TRANSPORT SYSTEM	Asyst Technologies, Inc.
United Kingdom	1299780			AUTOMATED TOOL MANAGEMENT IN A MULTI-PROTOCOL ENVIRONMENT	Asyst Technologies, Inc.

II. Pending Patent Applications

a. United States

Country	Serial No.	Issue Date	Inventor(s)	Title	Owner
United States	10/087,092	March 1, 2002	A. Bonora, R. Gould, R. Hine, M. Krolak and J. Speasl	SEMICONDUCTOR MATERIAL HANDLING SYSTEM	Asyst Technologies, Inc.
United States	10/087,400	March 1, 2002	A. Bonora, R. Gould, R. Hine, M. Krolak and J. Speasl	WAFER ENGINE	Asyst Technologies, Inc.
United States	11/352,154	February 10, 2006		Unified frame for semiconductor material handling system	Asyst Technologies, Inc.
United States	10/234,640	September 3, 2002	A. Bonora, R. Gould, R. Hine, M. Krolak and J. Speasl	UNIVERSAL MODULAR WAFER TRANSPORT SYSTEM	Asyst Technologies, Inc.
United States	10/087,638	March 1, 2002	A. Bonora, R. Gould, R. Hine, M. Krolak and J. Speasl	UNIFIED FRAME FOR SEMICONDUCTOR MATERIAL HANDLING SYSTEM	Asyst Technologies, Inc.
United States	10/194,702	July 12, 2002	R. Hine, M. Danna and R. Fillippuzzi	INTEGRATED SYSTEM FOR TOOL FRONT END WAFER HANDLING	Asyst Technologies, Inc.
United States	10/438,470	May 15, 2003	M. Mayo	PRE-ALIGNER	Asyst Technologies, Inc.

Country	Serial No.	Invent. Date	Inventor(s)	Title	Owner
United States	10/618,313	July 10, 2003	D. Fritschen and C. Barbazzette	DATA COLLECTION AND DIAGNOSTIC SYSTEM FOR A SEMICONDUCTOR FABRICATION FACILITY	Asyst Technologies, Inc.
United States	10/888,819	July 10, 2004	Anthony C. Bonora and Roger G. Hine	ULTRA LOW CONTACT AREA END EFFECTOR	Asyst Technologies, Inc.
United States	fba	April 17, 2006	Anthony C. Bonora and Roger G. Hine	ULTRA LOW CONTACT AREA END EFFECTOR (CONTINUATION)	Asyst Technologies, Inc.
United States	10/624,133	July 21, 2003	Shawn Hamilton, Mike Mayo, Ted Rogers	ACTIVE EDGE GRIPPER END EFFECTOR	Asyst Technologies, Inc.
United States	09/496,009	February 1, 2000	Raymond W. Ellis, Mark T. Pendleton	APPARATUS AND METHOD FOR WEB-BASED TOOL MANAGEMENT	Asyst Technologies, Inc.
United States	09/899,833	July 5, 2001	Raymond W. Ellis, Mark T. Pendleton, and Charles M. Bayliss	AUTOMATED TOOL MANAGEMENT IN A MULTI-PROTOCOL ENVIRONMENT	Asyst Technologies, Inc.
United States	11/433,980	May 15, 2006		MODULAR TERMINAL FOR HIGH-THROUGHPUT AMHS	Asyst Technologies, Inc.
United States	11/484,218	July 10, 2006		BELT CONVEYER FOR USE WITH SEMICONDUCTOR CONTAINERS	Asyst Technologies, Inc.
United States	11/064,880	February 24, 2005	Anthony C. Bonora, Michael Krolak, and Roger G. Hine	DIRECT TOOL LOADING	Asyst Technologies, Inc.
United States	11/238,030	September 28, 2005		DISCONTINUOUS CONVEYOR SYSTEM	Asyst Technologies, Inc.
United States	11/107,508	April 15, 2005	Evzen Wagner, Ray Ellis, Tim Yoas, Toni Guckert, and Intel Corporation	AUTOMATED JOB MANAGEMENT	Asyst Technologies, Inc.
United States	11/014,401	December 16, 2004	Anthony C. Bonora, Roger Hine	ACTIVE EDGE GRIP REST PAD	Asyst Technologies, Inc.
United States	11/340,101	January 26, 2006	Charles Bayliss, Ray Ellis, Toni Guckert, and Timothy Yoas	US/(EIB) MULTI-PROTOCOL MULTI-CLIENT EQUIPMENT SERVER	Asyst Technologies, Inc.
United States	60/681,389	May 16, 2005	Anthony C. Bonora, and Michael Krolak	INTEGRATED CONVEYOR AND SEMICONDUCTOR PROCESS TOOL LOAD PORT	Asyst Technologies, Inc.
United States	11/177,645	July 8, 2005	Anthony C. Bonora, Michael Krolak, and Roger G. Hine	DIRECT TOOL LOADING	Asyst Technologies, Inc.
United States	60/697,785	July 8, 2005	Anthony C. Bonora, Roger G. Hine, and Michael Krolak	MODULAR TERMINAL FOR HIGH THROUGHPUT AMHS	Asyst Technologies, Inc.
United States	11/178,072	July 8, 2005	Anthony C. Bonora, Roger G. Hine, and Michael Krolak	INTERFACE BETWEEN CONVEYOR AND SEMICONDUCTOR PROCESS TOOL LOAD PORT	Asyst Technologies, Inc.
United States	60/697,528	July 8, 2005	Anthony C. Bonora	END EFFECTOR WAFER SUPPORT AND TRANSFER METHODS	Asyst Technologies, Inc.
United States	60/697,616	July 8, 2005	Anthony C. Bonora, Roger G. Hine, and Michael Krolak	STOCKER AND CONTROLS FOR USE WITH CONVEYOR	Asyst Technologies, Inc.

COUNTRY	Serial No.	Filing Date	Inventor(s)	Title	Owner
United States	60/698,124	July 11, 2005	Anthony C. Bonora, Roger G. Hine, and Michael Krolak	BELT CONVEYOR FOR USE WITH SEMICONDUCTOR CONTAINERS	Asyst Technologies, Inc.
United States	60/730,688	October 27, 2005	Theodore W. Rogers and Norma Riley	HORIZONTAL ARRAY STOCKER	Asyst Technologies, Inc.
United States	11/305,256	December 16, 2005	A. Bonora, R. Gould, R. Hine, M. Krolak and J. Speasl	WAFER ENGINE	Asyst Technologies, Inc.
United States	11/352,154	February 10, 2006	A. Bonora, R. Gould, R. Hine, M. Krolak and J. Speasl	SEMICONDUCTOR PROCESSING TOOL	Asyst Technologies, Inc.
United States	tba	May 15, 2006	Anthony C. Bonora, Roger G. Hine, and Michael Krolak	MODULAR TERMINAL FOR HIGH SPEED AMHS	Asyst Technologies, Inc.
United States	tba	July 7, 2006	Anthony C. Bonora,	END EFFECTOR WAFER SUPPORT AND TRANSFER METHODS	Asyst Technologies, Inc.
United States	10/719069			DISTRIBUTED CONTROL SYSTEM ARCHITECTURE AND METHOD FOR A MATERIAL TRANSPORT SYSTEM	Asyst Technologies, Inc.
United States	60/815,890			METHOD FOR TRANSPORTING, QUEUING, AND LOADING OF LARGE AREA SUBSTRATES IN MULTI-TOOL PROCESSING OPERATIONS	Asyst Technologies
United States	11/449,084	Jun/08/2006		EXTENDED READ RANGE RFID SYSTEM	Asyst Technologies
United States	60/847,630			SERIES IMPEDENCE MATCHED INDUCTIVE POWER PICKUP SYSTEM	Asyst Technologies
United States	60/819,602			VARIABLE LOT SIZE LOAD PORT	Asyst Technologies
United States	11/603,714	Nov/22/2006		VARIABLE PITCH STORAGE SHELVES	Asyst Technologies
United States	11/599,020	Nov/13/2006		LOAD PORT DOOR WITH SIMPLIFIED FOUNDRY DOOR SENSING AND RETAINING MECHANISM	Asyst Technologies
United States	11/482,650	Jul/07/2006		STOCKER	Asyst Technologies
United States	11/483,366	Jul/07/2006		WORKPIECE SUPPORT STRUCTURES AND APPARATUS FOR ACCESSING SAME	Asyst Technologies
United States	11/644,240	Dec/22/2006		LOADER AND BUFFER FOR REDUCED LOT SIZE	Asyst Technologies
United States	60/819,979			VERTICAL WAFER AMHS AND EFEM	Asyst Technologies
United States	60/819,603			BRIDGE LOAD PORT WITH VARIABLE LOT SIZE CAPABILITY	Asyst Technologies
United States	60/873,892			ENVIRONMENTAL ISOLATION SYSTEM FOR FLAT PANEL DISPLAYS	Asyst Technologies
United States	90/008,245	Sep/29/2006		INTELLIGENT WAFER CARRIER	Asyst Technologies
United States	60/906,972			HANDLING, TRANSFERRING AND ISOLATION SYSTEM FOR FLAT PANEL DISPLAYS	Asyst Technologies

Country	Serial No.	Filing Date	Inventor(s)	Title	Owner
United States	10/237078			WAFER ALIGNER	Asyst Japan, Inc.

b. Other Jurisdictions

Country	Serial No.	Filing Date	Inventor(s)	Title	Owner
Korea	7003085/2004		A. Bonora, R. Gould, R. Hine, M. Krolak and J. Speasl	SEMICONDUCTOR MATERIAL HANDLING SYSTEM	Asyst Technologies, Inc.
Korea	7003086/2004		A. Bonora, R. Gould, R. Hine, M. Krolak and J. Speasl	WAFER ENGINE	Asyst Technologies, Inc.
Korea	7003145/2004		A. Bonora, R. Gould, R. Hine, M. Krolak and J. Speasl	UNIVERSAL MODULAR WAFER TRANSPORT SYSTEM	Asyst Technologies, Inc.
Korea	7003050/2004		A. Bonora, R. Gould, R. Hine, M. Krolak and J. Speasl	UNIFIED FRAME FOR SEMICONDUCTOR MATERIAL HANDLING SYSTEM	Asyst Technologies, Inc.
Korea	2002-7003021		Raymond W. Ellis, Mark T. Pendleton, and Charles M. Bayliss	AUTOMATED TOOL MANAGEMENT IN A MULTI-PROTOCOL ENVIRONMENT	Asyst Technologies, Inc.
Korea	2003063398			FIMS INTERFACE WITHOUT ALIGNMENT PINS	Asyst Technologies, Inc.
Korea	112084 (same as 9614830 below)		Assigned from Fluoroware	VERY LOW FREQUENCY TRACKING SYSTEM	Asyst Technologies, Inc.
Korea	9614830 (same as 112084 above)		Assigned from Fluoroware	VERY LOW FREQUENCY TRACKING SYSTEM	Asyst Technologies, Inc.
Canada	2,383,968 (ABANDONED)		Raymond W. Ellis, Mark T. Pendleton, and Charles M. Bayliss	AUTOMATED TOOL MANAGEMENT IN A MULTI-PROTOCOL ENVIRONMENT	Asyst Technologies, Inc.
China	02820488.3		A. Bonora, R. Gould, R. Hine, M. Krolak and J. Speasl	SEMICONDUCTOR MATERIAL HANDLING SYSTEM	Asyst Technologies, Inc.
China	02819331.8		A. Bonora, R. Gould, R. Hine, M. Krolak and J. Speasl	WAFER ENGINE	Asyst Technologies, Inc.
China	02819312.1		A. Bonora, R. Gould, R. Hine, M. Krolak and J. Speasl	UNIVERSAL MODULAR WAFER TRANSPORT SYSTEM	Asyst Technologies, Inc.
China	02819377.6		A. Bonora, R. Gould, R. Hine, M. Krolak and J. Speasl	UNIFIED FRAME FOR SEMICONDUCTOR MATERIAL HANDLING SYSTEM	Asyst Technologies, Inc.
China	01802303.7		Raymond W. Ellis, Mark T. Pendleton, and Charles M. Bayliss	AUTOMATED TOOL MANAGEMENT IN A MULTI-PROTOCOL ENVIRONMENT	Asyst Technologies, Inc.
China	1191039			DOCKING AND ENVIRONMENTAL PURGING SYSTEM FOR INTEGRATED CIRCUIT WAFER TRANSPORT	Asyst Technologies, Inc.

Country	Serial No.	Filing Date	Inventor(s)	Title	Owner
China	176878 (same as 1171767 below)		A. Bonora, R. Netsch, P. Sullivan, W. Fosnight, J. Shenk and E. Noma	SMIF-COMPATIBLE OPEN CASSETTE ENCLOSURE	Asyst Technologies, Inc.
China	1171767 (same as 176878 above)		A. Bonora, R. Netsch, P. Sullivan, W. Fosnight, J. Shenk and E. Noma	SMIF-COMPATIBLE OPEN CASSETTE ENCLOSURE	Asyst Technologies, Inc.
China	2816096.7			SMIF LOAD PORT INTERFACE INCLUDING SMART PORT DOOR	Asyst Technologies, Inc.
China	1818061.2			EDGE GRIP ALIGNER WITH BUFFERING CAPABILITIES	Asyst Technologies, Inc.
China	200710007933.3			UNIFIED FRAME FOR SEMICONDUCTOR MATERIAL HANDLING SYSTEM	Asyst Technologies, Inc.
Europe	99954634.4			WAFER MAPPING SYSTEM	Asyst Technologies, Inc.
France	1299780		Raymond W. Ellis, Mark T. Pendleton, and Charles M. Bayliss	AUTOMATED TOOL MANAGEMENT IN A MULTI-PROTOCOL ENVIRONMENT	Asyst Technologies, Inc.
Europe	1966433.3			EDGE GRIP ALIGNER WITH BUFFERING CAPABILITIES	Asyst Technologies, Inc.
France	1924933.3			MODULAR SORTER	Asyst Technologies, Inc.
Europe	99966241.4			DISTRIBUTED CONTROL SYSTEM ARCHITECTURE AND METHOD FOR A MATERIAL TRANSPORT SYSTEM	Asyst Technologies, Inc.
Europe	99966152.3			IN/OUT LOAD PORT TRANSFER MECHANISM	Asyst Technologies, Inc.
Europe	99966286.9			INTEGRATED INTRA-BAY TRANSFER, STORAGE, AND DELIVERY SYSTEM	Asyst Technologies, Inc.
Europe	99966151.5			INTEGRATED LOAD PORT-CONVEYOR TRANSFER SYSTEM	Asyst Technologies, Inc.
Europe	1963957.4			SMART LOAD PORT WITH INTEGRATED CARRIER MONITORING AND FAB-WIDE CARRIER MANAGEMENT SYSTEM	Asyst Technologies, Inc.
France	1924933.3			MODULAR SORTER	Asyst Technologies, Inc.
Germany	10297169.2		A. Bonora, R. Gould, R. Hine, M. Krolak and J. Speasl	SEMICONDUCTOR MATERIAL HANDLING SYSTEM	Asyst Technologies, Inc.
Germany	10297171.4		A. Bonora, R. Gould, R. Hine, M. Krolak and J. Speasl	WAFER ENGINE	Asyst Technologies, Inc.
Germany	102 97 167.6		A. Bonora, R. Gould, R. Hine, M. Krolak and J. Speasl	UNIVERSAL MODULAR WAFER TRANSPORT SYSTEM	Asyst Technologies, Inc.
Germany	10297170.6		A. Bonora, R. Gould, R. Hine, M. Krolak and J. Speasl	UNIFIED FRAME FOR SEMICONDUCTOR MATERIAL HANDLING SYSTEM	Asyst Technologies, Inc.

Country	Serial No.	Filing Date	Inventor(s)	Title	Owner
Germany	60115240.9-08		Raymond W. Ellis, Mark T. Pendleton, and Charles M. Bayliss	AUTOMATED TOOL MANAGEMENT IN A MULTI-PROTOCOL ENVIRONMENT	Asyst Technologies, Inc.
Germany	EP 0507773 B1 (same as 69033008 below)		G. Maney, A. Bonora, M. Parikh and M. Brain	PROCESSING SYSTEMS WITH INTELLIGENT ARTICLE TRACKING	Asyst Technologies, Inc.
Germany	69033008 (same as EP 0507773 B1 above)		G. Maney, A. Bonora, M. Parikh and M. Brain	PROCESSING SYSTEMS WITH INTELLIGENT ARTICLE TRACKING	Asyst Technologies, Inc.
Germany	1924933.3			MODULAR SORTER	Asyst Technologies, Inc.
Great Britain	1299780		Raymond W. Ellis, Mark T. Pendleton, and Charles M. Bayliss	AUTOMATED TOOL MANAGEMENT IN A MULTI-PROTOCOL ENVIRONMENT	Asyst Technologies, Inc.
Great Britain	1924933.3			MODULAR SORTER	Asyst Technologies, Inc.
Italy	1299780		Raymond W. Ellis, Mark T. Pendleton, and Charles M. Bayliss	AUTOMATED TOOL MANAGEMENT IN A MULTI-PROTOCOL ENVIRONMENT	Asyst Technologies, Inc.
Mexico	PA/a/2002/002445		Raymond W. Ellis, Mark T. Pendleton, and Charles M. Bayliss	AUTOMATED TOOL MANAGEMENT IN A MULTI-PROTOCOL ENVIRONMENT	Asyst Technologies, Inc.
PCT	PCT/US05/45923		Anthony C. Bonora, Roger Hine	ACTIVE EDGE GRIP REST PAD	Asyst Technologies, Inc.
PCT	PCT/US06/03282		Charles Bayliss, Ray Ellis, Toni Guckert, and Timothy Yoas	US/(BIB) MULTI-PROTOCOL MULTI-CLIENT EQUIPMENT SERVER	Asyst Technologies, Inc.
PCT	PCT/US06/06103		Anthony C. Bonora, Michael Krolak, and Roger G. Hine	DIRECT TOOL LOADING	Asyst Technologies, Inc.
PCT/WIPO	PCT/US01/21318		Raymond W. Ellis, Mark T. Pendleton, and Charles M. Bayliss	AUTOMATED TOOL MANAGEMENT IN A MULTI-PROTOCOL ENVIRONMENT	Asyst Technologies, Inc.
Singapore	2002 01132-8		Raymond W. Ellis, Mark T. Pendleton, and Charles M. Bayliss	AUTOMATED TOOL MANAGEMENT IN A MULTI-PROTOCOL ENVIRONMENT	Asyst Technologies, Inc.
United Kingdom	2259631			VERY LOW FREQUENCY TRACKING SYSTEM	Asyst Technologies, Inc.

III. Patent Applications in Preparation

a. United States

Country	Docket No.	Expected Filing Date	Inventor(s)	Title
N/A	N/A	N/A	N/A	N/A

b. Other Jurisdictions

Country	Docket No.	Expected Filing Date	Inventor(s)	Title
N/A	N/A	N/A	N/A	N/A

Item B. Patent Licenses

1. Technology License dated as of April 1, 1998 from Asyst Technologies, Inc., as licensor, to Toshiba Machine Co., Ltd. Granting non-exclusive, non-transferable license to manufacture and distribute pods worldwide, utilizing design and manufacture of pods described in patent nos. 4,815,912; 4,739,882; 5,169,272; 4,674,939; and 4,995430. License term is for ten years.
2. Auto-Kinematic Cassette Technology and Trademark License Agreement dated as of September 1, 1993 between Asyst Technologies, Inc., as licensor, and Fluorware, Inc., as licensee, granting a worldwide, non-exclusive, non-transferable license to Asyst's Cassette Technology and a license under the mark "Auto-Kinematic." Licensed patents include U.S. patent application no. 08/311,954 and all other patents owned or controlled by Asyst relating to the structure of or used in the manufacture of 300mm semiconductor wafer handling cassettes. Term of license is 20 years.
3. Cross License Agreement dated as of October 22, 1996 between Fusion Systems Corporation and Asyst Technologies, Inc. pursuant to which the parties grant to each other non-exclusive, worldwide, non-transferable cross-license rights relating to the design and development of Standard Mechanical InterFace (SMIF) Input/Output (I/O) Systems. Licensed patents include Asyst's U.S. Patents 4,674,939; 4,746,256; 4,895,486 and 4,995,430. Life of this agreement has terminated, but license granted survives until the expiration of the last to expire of the patent claims licensed under the Agreement.
4. Technology License Agreement dated as of March 29, 1991 between Asyst Technologies, Inc. and Shinko Electric Co., Ltd. Pursuant to which Asyst granted to Shinko an exclusive, non-sublicensable license to permit the development, manufacture and sale of SMIF-E(s) products in Japan. The agreement remains in effect until the last to expire of the patents licensed under the agreement.
5. Asyst/Jenoptik License Agreement dated as of October 1, 1994 between Asyst Technologies, Inc. and Jenoptik GmbH, pursuant to which Asyst grants to Jenoptik a non-exclusive, non-transferable license in and to Asyst U.S. patent no. 4,895,486 entitled "Wafer Monitoring Device" for the development of certain SMIF system products. Agreement terminated, but patent license survives until patents expire. Jenoptik has assigned its interest in this agreement to Brooks Automation, Inc.
6. Product Purchase Agreement dated as of June 4, 2003 between Asyst Technologies, Inc. and Electro Mechanical Solutions, Inc., pursuant to which EMS purchased from Asyst certain proprietary technology relating to the 4.5 Vacuum Robotic Arm and the 48V Random Access Vacuum Elevator and granted to Asyst a non-exclusive, non-transferable, worldwide, perpetual license to make certain robotic products and to fulfill certain existing contractual obligations. The term of the Agreement continues until the last to expire of the intellectual property rights in the technology covered by the agreement.
7. Patent Assignment and Cross-License and Trademark License Agreement dated as of February 11, 2003 among Asyst Technologies, Inc., Entegris, Inc. and Entegris Cayman, Ltd., pursuant to which Asyst conveyed to Entegris its rights in and to certain patents relating to wafer and/or reticle containers identified in Exhibit 1 thereto, Asyst also granted to Entegris a worldwide, non-exclusive, non-transferable license under Pod and Carrier Patents, MHS Patents, Environmental Control Patents and other patents to make, use and sell certain sealable transportable containers, and Entegris granted to Asyst a worldwide, non-exclusive, non-transferable license in and to certain Exclusive Rights Patents to make, use and sell products other than certain acquired products.

8. Intellectual Property License Agreement dated as of June 22, 2006, between Shinko and Asyst Technologies, Inc.

**SCHEDULE IV
to Security Agreement**

Item A. Trademarks

I. Registered Trademarks

a. United States

Country	Trademark	Registration No.	Registration Date	Owner
United States	A (design only)	2,233,235	March 23, 1999	Asyst Technologies, Inc.
United States	ADVAN TAG	2,976,541	July 26, 2005	Asyst Technologies, Inc.
United States	ASYST	2,246,968	May 25, 1999	Asyst Technologies, Inc.
United States	ASYST (Stylized)	2,224,970	February 23, 1999	Asyst Technologies, Inc.
United States	FASTRACK	2,740,639	July 22, 2003	Asyst Technologies, Inc.
United States	FLUOROTRAC	1,807,129	November 30, 1993	Asyst Technologies, Inc.
United States	GWGEM	2,686,304	February 11, 2003	Asyst Technologies, Inc.
United States	ISOPORT	2,778,500	October 28, 2003	Asyst Technologies, Inc.
United States	LINK MANAGER	2,641,297	October 22, 2002	Asyst Technologies, Inc.
United States	OBEM XP	2,649,085	November 12, 2002	Asyst Technologies, Inc.
United States	SECSIM	2,686,305	February 11, 2003	Asyst Technologies, Inc.
United States	SECSIM PRO	1,981,046	June 18, 1996	Asyst Technologies, Inc.
United States	SECSMON	2,686,319	February 11, 2003	Asyst Technologies, Inc.
United States	SML	2,680,965	January 28, 2003	Asyst Technologies, Inc.
United States	SPARTAN	3,030,258	December 13, 2005	Asyst Technologies, Inc.
United States	VERSAPORT	2,764,625	September 16, 2003	Asyst Technologies, Inc.
United States	DOMAIN LOGIX	2,564,130		Asyst Technologies, Inc.
United States	ASYST SHINKO (design plus words, letters, and/or numbers)	2,981,421	August 2, 2005	Asyst Shinko, Inc.

b. Other Jurisdictions

Country	Trademark	Registration No.	Registration Date	Owner
Korea	ASYST	429473	November 14, 1998	Asyst Technologies, Inc.
		432900	December 9, 1998	Asyst Technologies, Inc.
		471606	June 12, 2000	Asyst Technologies, Inc.
Korea	ASYST (Stylized)	210,368	March 5, 1991	Asyst Technologies, Inc.
		429474	November 14, 1998	Asyst Technologies, Inc.
		438789	January 21, 1999	Asyst Technologies, Inc.
		471607	June 12, 2000	Asyst Technologies, Inc.
Korea	DOMAIN LOGIX	2027	November 14, 2000	Asyst Technologies, Inc.
Korea	FLUOROTRAC	280094	November 25, 1993	Asyst Technologies, Inc.
Austria	ASYST	128929	August 31, 1989	Asyst Technologies, Inc.
Benelux	ASYST	465,153	October 4, 1999	Asyst Technologies, Inc.
Canada	ASYST	TMA 499,620	August 28, 1998	Asyst Technologies, Inc.
		438,910	February 10, 1995	Asyst Technologies, Inc.
Canada	ASYST (Stylized)	831518	December 10, 1999	Asyst Technologies, Inc.
China	ASYST	1131393	November 28, 1997	Asyst Technologies, Inc.
		1147041	January 28, 1998	Asyst Technologies, Inc.
		1130265	November 28, 1997	Asyst Technologies, Inc.
		1133541	December 7, 1997	Asyst Technologies, Inc.
		1156133	March 7, 1998	Asyst Technologies, Inc.
		1147039	January 28, 1998	Asyst Technologies, Inc.
		1133540	December 7, 1997	Asyst Technologies, Inc.
		1130266	November 28, 1997	Asyst Technologies, Inc.
		113191	November 28, 1997	Asyst Technologies, Inc.
		1156132	March 7, 1998	Asyst Technologies, Inc.
CTM	DOMAIN LOGIX	1426790		Asyst Technologies, Inc.
European Community	ASYST	392589	December 8, 1999	Asyst Technologies, Inc.
European Community	ASYST (Stylized)	393256	December 8, 1999	Asyst Technologies, Inc.
European Community	DOMAIN LOGIX	1,426,790	February 27, 2001	Asyst Technologies, Inc.
France	ASYST	1,547,174	August 21, 1989	Asyst Technologies, Inc.
Germany	ASYST	1,161,743	July 31, 1990	Asyst Technologies, Inc.

Country	Trademark	Registration No.	Registration Date	Owner
Germany	FLUOROTRAC	2,032,398	March 16, 1993	Asyst Technologies, Inc.
Germany	FLUOROTRAC	2032398		Asyst Technologies, Inc.
Italy	ASYST	887091 [prior registration number is 571680 below]		Asyst Technologies, Inc.
Italy	ASYST	571,680 [current registration number is 887091 above]	May 21, 1992	Asyst Technologies, Inc.
Singapore	DOMAIN LOGIX	T99/14614G	June 16, 1999	Asyst Technologies, Inc.
		T99/14615E	June 16, 1999	Asyst Technologies, Inc.
Sweden	ASYST	228169	November 29, 1991	Asyst Technologies, Inc.
Switzerland	ASYST	459 390	October 3, 1996	Asyst Technologies, Inc.
		374,129	January 5, 1990	Asyst Technologies, Inc.
Switzerland	ASYST (Stylized)	459399	October 3, 1996	Asyst Technologies, Inc.
Thailand	ASYST	TM71063	November 6, 1996	Asyst Technologies, Inc.
Thailand	ASYST (Stylized)	Kor69586	November 6, 1996	Asyst Technologies, Inc.

II. Pending Trademark Applications

a. United States

Country	Trademark	Serial No.	Filing Date
USA	ASTG	77153009	

b. Other Jurisdictions

Country	Trademark	Serial No.	Filing Date
India	ASYST	N/A	N/A

III. Trademark Applications in Preparation

Country	Trademark	Docket No.	Expected Filing Date	Product/Services	Owner
	ASYST			<p>Computer software programs for managing, tracking and controlling semiconductor manufacturing processes</p> <p>Computer software programs for equipment automation in semiconductor manufacturing facilities</p> <p>Computer software programs for controlling the transfer and storage of material during the manufacture of semiconductors, reticles, and flat panel displays</p> <p>Consultation in the fields of semiconductor manufacturing, manufacturing automation, and cleanroom engineering</p>	Asyst Technologies, Inc.

Country	Trademark	Docket No.	Expected Filing Date	Product/Services	Owner
				System design for others in the fields of semiconductor manufacturing, manufacturing automation, and cleanroom engineering.	
	SMART-TAG			Microcomputer for receiving, transmitting and storing information during the manufacture of semiconductor wafers, reticles and flat panel displays.	Asyst Technologies, Inc.

Item B. Trademark Licenses

a. United States

Country or Territory	Trademark	Licenser	Licensee	Effective Date	Expiration Date
N/A	N/A	N/A	N/A	N/A	N/A

b. Other Jurisdictions

Country or Territory	Trademark	Licenser	Licensee	Effective Date	Expiration Date
N/A	N/A	N/A	N/A	N/A	N/A

SCHEDULE V
to Security Agreement

Item A. Copyrights/Mask Works

Registered Copyrights/Mask Works

<u>Country</u>	<u>Registration No.</u>	<u>Registration Date</u>	<u>Author(s)</u>	<u>Title</u>
N/A	N/A	N/A	N/A	N/A

Copyright/Mask Work Pending Registration Applications

<u>Country</u>	<u>Serial No.</u>	<u>Filing Date</u>	<u>Author(s)</u>	<u>Title</u>
N/A	N/A	N/A	N/A	N/A

Copyright/Mask Work Registration Applications In Preparation

<u>Country</u>	<u>Docket No.</u>	<u>Expected Filing Date</u>	<u>Author(s)</u>	<u>Title</u>
N/A	N/A	N/A	N/A	N/A

Item B. Copyright/Mask Work Licenses (including an indication of exclusive Licenses for U.S. registered Copyrights)

<u>Country or Territory</u>	<u>Copyright</u>	<u>Licensor</u>	<u>Licensee</u>	<u>Effective Date</u>	<u>Expiration Date</u>
N/A	N/A	N/A	N/A	N/A	N/A

Annex I

SFODMS/6524208.5