

PATENT ASSIGNMENT

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | RELEASE BY SECURED PARTY |

CONVEYING PARTY DATA

| Name | Execution Date |
|--|----------------|
| BANK OF AMERICA, N.A., AS ADMINISTRATIVE AGENT | 07/27/2007 |

RECEIVING PARTY DATA

| | |
|-----------------|--------------------------|
| Name: | ASYST TECHNOLOGIES, INC. |
| Street Address: | 48761 KATO ROAD |
| City: | FREMONT |
| State/Country: | CALIFORNIA |
| Postal Code: | 94538 |

| | |
|-------------------|-----------------------------|
| Name: | ASYST JAPAN, INC. |
| Street Address: | KOHOKU-KU, YOKOHAMA-SHI |
| Internal Address: | 6-23, SHIN YOKOHAMA 2-CHOME |
| City: | KANAGAWA-KEN |
| State/Country: | JAPAN |

PROPERTY NUMBERS Total: 131

| Property Type | Number |
|----------------|---------|
| Patent Number: | 4700321 |
| Patent Number: | 4724874 |
| Patent Number: | 4735548 |
| Patent Number: | 4749330 |
| Patent Number: | 4770600 |
| Patent Number: | 4778331 |
| Patent Number: | 4802809 |
| Patent Number: | 4827110 |
| Patent Number: | 4833306 |
| Patent Number: | 4859137 |

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| Patent Number: | 4880348 |
| Patent Number: | 4888473 |
| Patent Number: | 4892455 |
| Patent Number: | 4893932 |
| Patent Number: | 4895486 |
| Patent Number: | 4974166 |
| Patent Number: | 4977688 |
| Patent Number: | 4983093 |
| Patent Number: | 4986729 |
| Patent Number: | 5054991 |
| Patent Number: | 5059079 |
| Patent Number: | 5097421 |
| Patent Number: | 5102291 |
| Patent Number: | 5115576 |
| Patent Number: | 5125790 |
| Patent Number: | 5166884 |
| Patent Number: | 5169272 |
| Patent Number: | 5315766 |
| Patent Number: | 5339074 |
| Patent Number: | 5365672 |
| Patent Number: | 5370491 |
| Patent Number: | 5386481 |
| Patent Number: | 5493123 |
| Patent Number: | 5547328 |
| Patent Number: | 5570990 |
| Patent Number: | 5586585 |
| Patent Number: | 5653565 |
| Patent Number: | 5664926 |
| Patent Number: | 5674123 |
| Patent Number: | 5788458 |
| Patent Number: | 5803979 |
| Patent Number: | 5815637 |
| Patent Number: | 5831738 |
| Patent Number: | 5846338 |
| Patent Number: | 5848933 |

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| Patent Number: | 5853214 |
| Patent Number: | 5879458 |
| Patent Number: | 5895191 |
| Patent Number: | 5931631 |
| Patent Number: | 5944475 |
| Patent Number: | 5980183 |
| Patent Number: | 5984610 |
| Patent Number: | 5988233 |
| Patent Number: | 6056026 |
| Patent Number: | 6077026 |
| Patent Number: | 6082949 |
| Patent Number: | 6086323 |
| Patent Number: | 6120371 |
| Patent Number: | 6135698 |
| Patent Number: | 6138721 |
| Patent Number: | 6164664 |
| Patent Number: | 6168085 |
| Patent Number: | 6187182 |
| Patent Number: | 6188323 |
| Patent Number: | 6220808 |
| Patent Number: | 6223886 |
| Patent Number: | 6234738 |
| Patent Number: | 6240335 |
| Patent Number: | 6261044 |
| Patent Number: | 6298280 |
| Patent Number: | 6308818 |
| Patent Number: | 6318953 |
| Patent Number: | 6326755 |
| Patent Number: | 6364595 |
| Patent Number: | 6419438 |
| Patent Number: | 6430877 |
| Patent Number: | 6435330 |
| Patent Number: | 6468021 |
| Patent Number: | 6470227 |
| Patent Number: | 6473668 |

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| Patent Number: | 6478532 |
| Patent Number: | 6481558 |
| Patent Number: | 6494308 |
| Patent Number: | 6502869 |
| Patent Number: | 6520727 |
| Patent Number: | 6530736 |
| Patent Number: | 6533101 |
| Patent Number: | 6575687 |
| Patent Number: | 6579052 |
| Patent Number: | 6591160 |
| Patent Number: | 6591162 |
| Patent Number: | 6591960 |
| Patent Number: | 6592317 |
| Patent Number: | 6592679 |
| Patent Number: | 6612797 |
| Patent Number: | 6634851 |
| Patent Number: | 6704998 |
| Patent Number: | 6709225 |
| Patent Number: | 6810294 |
| Patent Number: | 6677690 |
| Patent Number: | 6729462 |
| Patent Number: | 6848876 |
| Patent Number: | 6853876 |
| Application Number: | 10087092 |
| Application Number: | 10087400 |
| Application Number: | 10234640 |
| Application Number: | 10087638 |
| Application Number: | 10194702 |
| Application Number: | 10438470 |
| Application Number: | 10618313 |
| Application Number: | 10888819 |
| Application Number: | 10624133 |
| Application Number: | 09496009 |
| Application Number: | 09899833 |
| Application Number: | 11064880 |

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| Application Number: | 11238030 |
| Application Number: | 11107508 |
| Application Number: | 11014401 |
| Application Number: | 11340101 |
| Application Number: | 60681389 |
| Application Number: | 11177645 |
| Application Number: | 60697785 |
| Application Number: | 11178072 |
| Application Number: | 60697528 |
| Application Number: | 60697616 |
| Application Number: | 60698124 |
| Application Number: | 60730688 |
| Application Number: | 11305256 |
| Application Number: | 11352154 |
| Application Number: | 10719069 |
| Application Number: | 10237078 |

CORRESPONDENCE DATA

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Address Line 4: Chicago, ILLINOIS 60606-4637

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|--------------------|------------------|
| NAME OF SUBMITTER: | Christopher Dore |
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Total Attachments: 16
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RELEASE OF PATENT SECURITY AGREEMENT

THIS RELEASE dated as of July 27, 2007 (this "Release") is made by Bank of America, N.A., acting in its capacity as administrative agent (in such capacity, the "Agent") under certain security agreements and recorded in the records of the United States Patent and Trademark Office (as amended, supplemented or modified and in effect from time to time, the "Security Agreements"), among Asyst Technologies, Inc. and Asyst Japan, Inc. (collectively, the "Debtors") and the Agent;

W I T N E S S E T H:

WHEREAS, pursuant to the Security Agreements which were recorded in the records of the United States Patent and Trademark Office on September 27, 2006 at reel 018303, frame 0969, the Debtors granted to the Agent a continuing security interest in all of the Debtors' right, title and interest throughout the world (except Japan and Taiwan), whether then owned or thereafter acquired in patents, including those set forth on the attached schedule (the "Patent Collateral");

WHEREAS, the Agent wishes to: (i) terminate the Security Agreements against the Patent Collateral including those identified in the attached schedule hereto, recorded with the United States Patent and Trademark Office; (ii) release all of its security interests covering the Patent Collateral including those listed in the attached schedule; (iii) restore all right, title and interest in and to the Patent Collateral including those listed in the attached schedule to Debtors; and (iv) to dissolve any and all liens and encumbrances respecting the Patent Collateral including those listed in the attached schedules.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the Agent does hereby release its security interests in the Patent Collateral


including those set forth on the attached schedule hereto, and discharges, quit claims and relinquishes unto the Debtors (in each case without recourse and without any representation or warranty) any and all rights, title and interest it has in and the security interests granted to Agent in the Patent Collateral including those listed in the attached schedule.

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IN WITNESS WHEREOF, the Agent has caused this Release to be duly executed and delivered by its officer thereunto duly authorized as of the day and year first above written.

Bank of America, N.A.,
as Agent

By:



Name:

Title:

Ken Puro
Vice President

SCHEDULE OF PATENTS

40173217 06006984

PATENT
REEL: 019733 FRAME: 0976

SCHEDULE OF PATENTS

Item A. Patents

1. Issued Patents – 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. |
| United States | 4,895,486 | January 23, 1990 | Assigned from Roboptek | 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. |

| Country | Patent No. | Issue Date | Inventor(s) | Title | Owner |
|---------------|------------|-------------------|--|--|--------------------------|
| 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. |
| 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. |

| Country | Patent No. | Issue Date | Inventor(s) | Title | Owner |
|---------------|------------|--------------------|--|---|--------------------------|
| 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. Kedarnath 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. |
| 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. |

| Country | Patent No. | Issue Date | Inventor(s) | Title | Owner |
|---------------|--------------|--------------------|--|---|--------------------------|
| 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. |
| 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 | M. 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. |

| Country | Patent No. | Issue Date | Inventor(s) | Title | Owner |
|---------------|------------|-------------------|---|---|--------------------------|
| 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 | M. Bonora, R Gould Assigned from Palo Alto Technologies, Inc. | POD DOOR ALIGNMENT DEVICE | Asyst Technologies, Inc. |
| United States | 6,435,330 | August 20, 2002 | M. 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 | M. 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. Pitchaikani | 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 | M. 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 | M. 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 | M. Bonora, R. Gould Assigned from Palo Alto Technologies, Inc. | INTEGRATED TRANSPORT CARRIER AND CONVEYOR SYSTEM | Asyst Technologies, Inc. |
| 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. |

| Country | Patent No. | Issue Date | Inventor(s) | Title | Owner |
|---------------|--------------|--------------------|---|--|--------------------------|
| 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 | 5365672 | November 22, 1994 | | WAFER POSITIONING APPARATUS | Asyst Japan, Inc. |
| United States | 5054991 | October 8, 1991 | | WAFER POSITIONING APPARATUS | Asyst Japan, Inc. |
| United States | 4735548 | April 5, 1988 | | CARRIER SYSTEM FOR CLEAN ROOM | Asyst Japan, Inc. |
| United States | 4770600 | September 13, 1988 | | APPARATUS FOR POSITIONING SILICON WAFER | Asyst Japan, Inc. |
| United States | 4778331 | October 18, 1988 | | CARRIER SYSTEM FOR SILICON WAFER | Asyst Japan, Inc. |

II. Pending Patent Applications – United States

| Country | Serial No. | Filing 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 | 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. |
| 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 | tba | 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 | 11/064,880 | 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. |

| Country | Serial No. | Filing Date | Inventor(s) | Title | Owner |
|---------------|------------|-------------------------------|---|--|--------------------------|
| 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. |
| 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 | Must be Filed by May 15, 2006 | Anthony C. Bonora, Roger G. Hine, and Michael Krolak | MODULAR TERMINAL FOR HIGH SPEED AMHS | Asyst Technologies, Inc. |
| United States | tba | Must be Filed by July 8, 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 | 10/237078 | | | WAFER ALIGNER | Asyst Japan, Inc. |

III. Patent Applications in Preparation – United States

| 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 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 4,995,430. 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. Term of the agreement is for two years, but license granted survive 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 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. The term of the Agreement is for the life of the licensed patent.
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 between Asyst Technologies, Inc. and 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.

Item C. Invention Disclosures

1. Automated Transfer of Material from Vertical Carousel Storage
2. Vacuum Assisted Wafer Edge Grip
3. Material Routing and Speed Control System and Method for Use in a Material Transport System
4. One Hand Placement RSP
5. Vertical Foup Transporter
6. Arm Link Design
7. Auto-Teaching by Contact with Electrically Grounded Objects
8. Orifice Controlled Batch Transfer End-Effector
9. Application of Piezo-Electronics in the Vibration Damping of an End Effector Used in the Transport of a Semiconductor Substrate
10. Pod Door Particle Control
11. Open Cassette Enclosure with Ergonomic Tilt
12. Open Cassette Exchange Device
13. Humidity Control Using an Electronically Actuated Hot Gas Bypass Valve
14. Active Reticle Retainer
15. Method for Locating and Positioning Material on a Conveyor System
16. Control System and Method for Improving Purge Efficiency in Standard Pods/Foups
17. Fast Swap
18. Manufacturing Low Cost Photovoltaic Cell and IC Substrates
19. Electronic, Automatically Readable Equipment Identity Tag
20. Simplified System for Reading Semiconductor Wafer Identification Marks and Aligning Semiconductor Wafers
21. 300MM SMIF Port Mountable Wafer Protrusion System
22. Isolation Based Storage and Handling Systems for Semiconductor Products
23. Inter-Tool Wafer Transfer for 300MM Wafers
24. Nitrogen/Clean Dry Air (CDA) Curtain for Purging Tool Front Ends
25. Multi-Tool Server for Semiconductor Manufacturing
26. System for Ultra-Clean Automated Reticle Handling
27. Spartan Integrated RGV
28. Random Access Conveyor Buffer
29. Vacuum Foup Holddown
30. Low Cost Active Pod Hold Down Mechanism (APHD)
31. Clean Wafer Gripping System Using Venturi
32. Wafer Server Automated Material Handling System
33. Virtual Cluster Tool Implemented by AMHS and Cell Control Architecture
34. Automated Maintenance System (Spare Parts and Consumables)
35. System and Method for Controlling Moisture and Molecular Level Contamination in Containers Used for Material Transport, Storage, Tool Loading, and Shipping
36. System for Ultra-Clean Automated Reticle Handling
37. System Level Contamination in Containers for Controlling Moisture and Molecular Level Contamination in Container Used for Material Transport, Storage, Tool Loading, and Shipping
38. System for Ultra-Clean Automated Reticle Handling

39. Extended Read Range Radio Frequency Automated Identification (RFID) through the Use of a Passive Transformer
40. Series Impedance Matched Inductive Power Pickup System
41. Adjustable Loadport for Variable Foup Sizes
42. 300MM Variable Lot Size Loadport Adaptable to Standard FIMS Loadport
43. Acoustic Presence Sensor