

## PATENT ASSIGNMENT COVER SHEET

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| <b>SUBMISSION TYPE:</b>   | NEW ASSIGNMENT                      |                       |
| <b>NATURE OF CONVEYANCE:</b>  | ASSIGNMENT                          |                       |
| <b>CONVEYING PARTY DATA</b>   |                                     |                       |
|   | <b>Name</b>                         | <b>Execution Date</b> |
|   | ESILICON CORPORATION                | 01/17/2020            |
| <b>RECEIVING PARTY DATA</b>   |                                     |                       |
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| <b>PROPERTY NUMBERS Total: 1</b>  |                                     |                       |
|   | <b>Property Type</b>                | <b>Number</b>         |
|   | Application Number:                 | 09912028              |
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| <b>NAME OF SUBMITTER:</b>   | KYLE G. ROUTEN                      |                       |
| <b>SIGNATURE:</b>   | /Kyle G. Routen/                    |                       |
| <b>DATE SIGNED:</b>   | 01/20/2020                          |                       |
| <b>Total Attachments: 6</b>   |                                     |                       |
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## ASSIGNMENT OF PATENT APPLICATION

WHEREAS, ESILICON CORPORATION hereinafter referred to as "ASSIGNOR," is an assignee by assignment recorded in the U.S. Patent and Trademark Office of the inventions described and set forth in the Applications for United States Letters Patent and United States Letters Patent identified in the Appendix attached hereto;

WHEREAS, Richard T. Ogawa, Director, and authorized representative at ESILICON CORPORATION, having authority to sell, assign, and transfer to a third party the below-identified Applications for United States Letters Patent and United States Letters Patent in the Appendix attached hereto.

WHEREAS, Richard T. Ogawa, General Counsel of INPHI CORPORATION hereinafter referred to as "ASSIGNEE," is desirous of acquiring an entirety of ASSIGNOR'S interest in the said inventions and applications and in any U.S. Letters Patent which may be granted on the same;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for good and valuable consideration, receipt of which is hereby acknowledged by Assignor, Assignor has sold, assigned and transferred, and by these presents does sell, assign, and transfer unto the said Assignee, and Assignee's successors and assigns, 100% of their right, title, and interest in and to the said inventions, application, and U.S. Letters Patent including any corresponding foreign application, and in and to any Letters Patent which may hereafter be granted on the same in the United States and any corresponding foreign application, the said interest to be held and enjoyed by said Assignee as fully and exclusively as it would have been held and enjoyed by said Assignor had this Assignment and transfer not been made, to the full end and term of any Letters Patent which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignor further agree that they will, without charge to Assignee, but at Assignee's expense, cooperate with Assignee in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as Assignee lawfully may request, to obtain or maintain Letters Patent for said invention and improvement, and to vest title thereto in Assignee, or Assignee's successors and assigns.

IN TESTIMONY WHEREOF, Assignor has signed this Assignment on the date indicated.

Date:

1/17/2020

Name: Richard T. Ogawa

Title: Director

**APPENDIX**

| <b>Title of Invention</b>  | <b>Application Number</b> | <b>Filing Date</b> | <b>Patent Number</b> | <b>Issue Date</b> |
|--|---------------------------|--------------------|----------------------|-------------------|
| SYSTEMS AND METHODS FOR DESIGNING INTEGRATED CIRCUITS  | 60/247,579                | 11/9/2000          |                      |                   |
| ADAPTIVE REAL-TIME WORK-IN-PROGRESS TRACKING, PREDICTION, AND OPTIMIZATION SYSTEM FOR A SEMICONDUCTOR SUPPLY CHAIN         | 09/912,028                | 7/23/2001          | 6748287              | 6/8/2004          |
| CROSSBAR SWITCH WITH GROUPED INPUTS AND OUTPUTS  | 12/069,037                | 2/6/2008           | 7603509              | 10/13/2009        |
| PREDICTION BASED OPTIMIZATION OF A SEMICONDUCTOR SUPPLY CHAIN USING AN ADAPTIVE REAL TIME WORK-IN-PROGRESS TRACKING SYSTEM | 09/912,030                | 7/23/2001          | 7218980              | 5/15/2007         |
| SYSTEM AND METHOD FOR AUTOMATING INTEGRATION OF SEMICONDUCTOR WORK IN PROCESS UPDATES                                      | 10/619,738                | 7/14/2003          | 7474933              | 1/6/2009          |
| SYSTEM AND METHOD FOR AUTOMATING INTEGRATION OF SEMICONDUCTOR WORK IN PROCESS UPDATES                                      | 12/346,651                | 12/30/2008         | 7756598              | 7/13/2010         |
| METHOD AND ARRANGEMENT FOR MANAGING PACKET QUEUES IN SWITCHES  | 09/560,105                | 4/28/2000          | 6977940              | 12/20/2005        |
| DEVICE FOR DATASTREAM DECODING   | 09/738,720                | 12/15/2000         | 7002983              | 2/21/2006         |
| DEVICE FOR DATASTREAM DECODING   | 11/255,759                | 10/21/2005         | 7158529              | 1/2/2007          |
| APPARATUS AND METHOD FOR CONVERTING DATA IN SERIAL FORMAT TO PARALLEL FORMAT AND VICE VERSA                                | 09/469,979                | 12/21/1999         | 7016346              | 3/21/2006         |

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| METHOD FOR FLOW CONTROL IN A SWITCH AND A SWITCH CONTROLLED THEREBY                  | 09/697,708 | 10/25/2000 | 7061868 | 6/13/2006  |
| METHOD AND APPARATUS FOR DISTRIBUTION OF BANDWIDTH IN A SWITCH                       | 09/546,494 | 4/10/2000  | 7215678 | 5/8/2007   |
| ARRANGEMENT AND METHOD FOR SELF-SYNCHRONIZATION DATA TO A LOCAL CLOCK                | 09/394,376 | 9/10/1999  | 6604203 | 8/5/2003   |
| MULTICASTING METHOD AND ARRANGEMENT  | 09/420,909 | 10/20/1999 | 6625151 | 9/23/2003  |
| QUEUE MANAGEMENT SYSTEM HAVING ONE READ AND ONE WRITE PER CYCLE BY USING FREE QUEUES | 09/428,285 | 10/27/1999 | 6754742 | 6/22/2004  |
| SCHEDULER METHOD AND DEVICE IN A SWITCH  | 09/804,591 | 3/12/2001  | 6944171 | 9/13/2005  |
| MIXED-SIZED PILLARS THAT ARE PROBEABLE AND ROUTABLE                                  | 61/825,984 | 5/21/2013  |         |            |
| PARALLEL SIGNAL VIA STRUCTURE  | 61/825,986 | 5/21/2013  |         |            |
| TESTING OF THRU-SILICON VIAS SLAVE DLL CALIBRATION                                   | 61/825,987 | 5/21/2013  |         |            |
| SLAVE DLL CALIBRATION  | 61/887,583 | 10/7/2013  |         |            |
| MEMORY OPTIMIZATION IN VLSI DESIGN USING GENERIC MEMORY MODELS                       | 14/628,105 | 2/20/2015  | 9852250 | 12/26/2017 |
| INTEGRATED CIRCUIT DESIGN OPTIMIZATION   | 14/677,206 | 4/2/2015   | 9454636 | 9/27/2016  |
| ELONGATED PAD STRUCTURE  | 62/089,095 | 12/8/2014  |         |            |
| WIRELESS PROBES  | 62/089,099 | 12/8/2014  |         |            |
| COMMUNICATION INTERFACE ARCHITECTURE USING SERIALIZER/DESERIALIZER                   | 62/029,759 | 7/28/2014  |         |            |

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| A VARIABILITY-AWARE SCHEME FOR ASYNCHRONOUS CIRCUIT INITIALIZATION   | 12/265,571 | 11/5/2008 | 7701255 | 4/20/2010  |
| AN ASYNCHRONOUS SCHEME FOR CLOCK DOMAIN CROSSING   | 12/711,909 | 2/24/2010 | 8433875 | 4/30/2013  |
| NETWORK OF TIGHTLY COUPLED PERFORMANCE MONITORS FOR DETERMINING THE FREQUENCY OF OPERATION OF A SEMICONDUCTOR IC | 13/181,362 | 7/12/2011 | 8446224 | 5/21/2013  |
| VARIABILITY-AWARE SCHEME FOR HIGH PERFORMANCE ASYNCHRONOUS CIRCUIT VOLTAGE REGULATION                            | 12/265,585 | 11/5/2008 | 8572539 | 10/29/2013 |
| GENERATING SPECIFIC MEMORY MODELS USING GENERIC MEMORY MODELS FOR DESIGNING MEMORIES IN VLSI DESIGN              | 14/628,668 | 2/23/2015 | 9727681 | 8/8/2017   |
| DESIGNING MEMORIES IN VLSI DESIGN USING SPECIFIC MEMORY MODELS GENERATED FROM GENERIC MEMORY MODELS              | 14/628,676 | 2/23/2015 | 9727682 | 8/8/2017   |
| SCALING LOGIC COMPONENTS OF INTEGRATED CIRCUIT DESIGN  | 14/678,697 | 4/3/2015  | 9460254 | 10/4/2016  |
| SCALING MEMORY COMPONENTS OF INTEGRATED CIRCUIT DESIGN   | 14/678,702 | 4/3/2015  | 9454628 | 9/27/2016  |
| SCALING OF INTEGRATED CIRCUIT DESIGN INCLUDING LOGIC AND MEMORY COMPONENTS                                       | 14/678,708 | 4/3/2015  | 9460255 | 10/4/2016  |
| INTEGRATED CIRCUIT DESIGN SCALING FOR RECOMMENDING DESIGN POINT  | 14/678,711 | 4/3/2015  | 9460256 | 10/4/2016  |

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| SCALING OF INTEGRATED CIRCUIT DESIGN INCLUDING HIGH-LEVEL LOGIC COMPONENTS                            | 14/678,715 | 4/3/2015   | 9460257  | 10/4/2016 |
| COMMUNICATION INTERFACE ARCHITECTURE USING SERIALIZER/DESERIALIZER                                    | 14/810,261 | 7/27/2015  | 9984997  | 5/29/2018 |
| ELONGATED PAD STRUCTURE   | 14/963,081 | 12/8/2015  | 10050003 | 8/14/2018 |
| WIRELESS PROBES   | 14/963,076 | 12/8/2015  | 10018670 | 7/10/2018 |
| SCALING OF INTEGRATED CIRCUIT DESIGN INCLUDING HIGH-LEVEL LOGIC COMPONENTS                            | 15/250,885 | 8/29/2016  |          |           |
| BANDGAP CIRCUITS WITH VOLTAGE CALIBRATION   | 16/222,929 | 12/17/2018 |          |           |
| BAUD-RATE TIME ERROR DETECTOR   | 16/358,687 | 3/19/2019  |          |           |
| TRANS-IMPEDANCE AMPLIFIER (TIA) WITH A T-COIL FEEDBACK LOOP   | 16/298,945 | 3/11/2019  |          |           |
| SUCCESSIVE APPROXIMATION REGISTER (SAR) ANALOG TO DIGITAL CONVERTER (AD) WITH PARTIAL LOOP-UNROLLING  | 16/239,415 | 1/3/2019   |          |           |
| SUCCESSIVE APPROXIMATION REGISTER (SAR) ANALOG TO DIGITAL CONVERTER (ADC) WITH PARTIAL LOOP-UNROLLING | 16/239,421 | 1/3/2019   |          |           |
| INDUCTOR DESIGN FOR ELECTROMAGNETIC COUPLING REDUCTION  | 16/229,825 | 12/21/2018 |          |           |
| TUNABLE VOLTAGE CONTROLLED OSCILLATORS  | 16/273,047 | 2/11/2019  |          |           |
| BASELINE WANDER COMPENSATION IN SERDES TRANSCEIVERS   | 16/270,512 | 2/7/2019   |          |           |
| HIGH DENSITY LOW POWER  | 62/913,322 | 10/10/2019 |          |           |

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| INTERCONNECT USING 3D<br>DIE STACKING |  |  |  |  |
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