

PATENT ASSIGNMENT COVER SHEET

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| CONVEYING PARTY DATA | | |
| | Name | Execution Date |
| | RAMBUS INC. | 03/17/2014 |
| RECEIVING PARTY DATA | | |
| Name: | III HOLDINGS 1, LLC | |
| Street Address: | 2711 CENTERVILLE RD. | |
| Internal Address: | SUITE 400 | |
| City: | WILMINGTON | |
| State/Country: | DELAWARE | |
| Postal Code: | 19808 | |
| PROPERTY NUMBERS Total: 3 | | |
| | Property Type | Number |
| | Patent Number: | 6430216 |
| | Patent Number: | 6788734 |
| | Patent Number: | 6947474 |
| CORRESPONDENCE DATA | | |
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| ATTORNEY DOCKET NUMBER: | 78741US01 | |
| NAME OF SUBMITTER: | PETER J. MCANDREWS | |
| SIGNATURE: | /Peter J. McAndrews/ | |
| DATE SIGNED: | 05/09/2014 | |
| Total Attachments: 18 | | |
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ASSIGNMENT OF PATENT RIGHTS

For good and valuable consideration, the receipt of which is hereby acknowledged, Rambus Inc., a Delaware corporation, with an office at 1050 Enterprise Way, Suite 700, Sunnyvale, CA 94089 ("**Assignor**"), does hereby sell, assign, transfer, and convey unto III Holdings 1, LLC, a Delaware limited liability company with an address at 2711 Centerville Rd, Suite 400, Wilmington, DE 19808 ("**Assignee**"), or its designees, all right, title, and interest that exist today and may exist in the future in and to any and all of the following (collectively, the "**Patent Rights**");

(a) the provisional patent applications, patent applications and patents listed in the table below (the "**Patents**");

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and First Named Inventor</u> |
|----------------------------------|----------------|--------------------|---|
| 7818357 | US | 11/23/2005 | Systems and methods for implementing CORDIC rotations for projectors and related operators Leo Bredehoft |
| 6538336 | US | 11/14/2000 | Wirebond assembly for high-speed integrated circuits David A. Secker |
| 8063481 | US | 02/20/2008 | High-speed memory package Ming Li |
| 6711219 | US | 11/19/2001 | Interference cancellation in a signal John K. Thomas |
| 6856945 | US | 11/19/2001 | Method and apparatus for implementing projections in signal processing applications John K. Thomas |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and First Named Inventor</u> |
|----------------------------------|----------------|--------------------|---|
| 6750818 | US | 06/25/2002 | Method and apparatus to compute the geolocation of a communication device using orthogonal projections John K. Thomas |
| 7158559 | US | 09/20/2002 | Serial cancellation receiver design for a coded signal processing engine Eric S. Olson |
| IN207819 | IN | 10/01/2002 | INTERFERENCE CANCELLATION IN A SIGNAL John Thomas |
| EP02776047.9 | EP | 10/01/2002 | INTERFERENCE CANCELLATION IN A SIGNAL John Thomas |
| CNZL02823495.2 | CN | 10/01/2002 | INTERFERENCE CANCELLATION IN A SIGNAL John Thomas |
| JP4173100 | JP | 10/01/2002 | INTERFERENCE CANCELLATION IN A SIGNAL John Thomas |

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|----------------------------------|----------------|--------------------|--|
| CNZL02822547.3 | CN | 11/15/2002 | Construction of an interference matrix for a coded signal processing engine Eric S. Olson |
| 7200183 | US | 11/15/2002 | Construction of an interference matrix for a coded signal processing engine Eric S. Olson |
| IN224984 | IN | 11/15/2002 | A METHOD AND APPARATUS FOR GENERATING AN INTERFERENCE MATRIX Eric S. Olson |
| JP4295112 | JP | 11/15/2002 | CONSTRUCTION OF AN INTERFERENCE MATRIX FOR A CODED SIGNAL PROCESSING ENGINE Eric S. Olson |
| IN235516 | IN | 11/21/2002 | METHOD AND APPARATUS FOR DETERMINING GEOLOCATION OF A MOBILE TRANSMITTER John K. Thomas |
| IN254401 | IN | 01/13/2003 | A SERIAL RECEIVER FOR A WIRELESS COMMUNICATION SYSTEM Eric S. Olson |
| 7787518 | US | 09/23/2003 | Method and apparatus for selectively applying interference cancellation in spread spectrum systems Anand P. Narayan |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and First Named Inventor</u> |
|----------------------------------|----------------|--------------------|--|
| DE60342546.1 | DE | 09/23/2003 | Method and Apparatus for Selectively Applying Interference Cancellation in Spread Spectrum Systems Anand P. Narayan |
| FR1550233 | FR | 09/23/2003 | Method and Apparatus for Selectively Applying Interference Cancellation in Spread Spectrum Systems Anand P. Narayan |
| GB1550233 | GB | 09/23/2003 | Method and Apparatus for Selectively Applying Interference Cancellation in Spread Spectrum Systems Anand P. Narayan |
| IN212722 | IN | 09/23/2003 | METHOD AND APPARATUS FOR SELECTIVELY ENABLING SIGNAL INTERFERENCE CANCELLATION Anand P. Narayan |
| CNZL03825202.3 | CN | 09/23/2003 | Method and apparatus for selectively applying interference cancellation in spread spectrum systems Anand P. Narayan |
| KR10-1011942 | KR | 09/23/2003 | Method and Apparatus for Selectively Applying Interference Cancellation in Spread Spectrum Systems Anand P. Narayan |

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|----------------------------------|----------------|--------------------|--|
| JP4444832 | JP | 09/23/2003 | Method and Apparatus for Selectively Applying Interference Cancellation in Spread Spectrum Systems Anand P. Narayan |
| CNZL200380105881.3 | CN | 10/15/2003 | Chip level phase adjustment Anand P. Narayan |
| FR1579591 | FR | 10/15/2003 | METHOD AND APPARATUS FOR CHANNEL AMPLITUDE ESTIMATION AND INTERFERENCE VECTOR CONSTRUCTION Anand P. Narayan |
| IN240171 | IN | 10/15/2003 | A METHOD FOR DETECTING VALID CHANNELS IN A COMMUNICATION SYSTEM EMPLOYING A PLURALITY OF WALSH CODE LENGTHS; A METHOD FOR CALCULATING INTERFERENCE CALCULATION VALUES FOR CANCELLING INTERFERENCE IN A RECEIVED COMMUNICATIONS SIGNAL; AN APPARATUS AND RECEIVER DEVICE THEREFOR Anand P. Narayan |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and First Named Inventor</u> |
|----------------------------------|----------------|--------------------|---|
| DE60341175.4 | DE | 10/15/2003 | METHOD AND APPARATUS FOR CHANNEL AMPLITUDE ESTIMATION AND INTERFERENCE VECTOR CONSTRUCTION Anand P. Narayan |
| 7580448 | US | 10/15/2003 | Method and apparatus for channel amplitude estimation and interference vector construction Anand P. Narayan |
| 7430253 | US | 10/15/2003 | Method and apparatus for interference suppression with efficient matrix inversion in a DS-CDMA system Eric S.Olson |
| JP4210649 | JP | 10/15/2003 | METHOD AND APPARATUS FOR CHANNEL AMPLITUDE ESTIMATION AND INTERFERENCE VECTOR CONSTRUCTION Anand P. Narayan |
| 7068706 | US | 10/15/2003 | System and method for adjusting phase Anand P. Narayan |
| 7039136 | US | 01/23/2004 | Interference cancellation in a signal Eric S.Olson |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and First Named Inventor</u> |
|----------------------------------|----------------|--------------------|---|
| 7394879 | US | 02/06/2004 | Systems and methods for parallel signal cancellation Eric S. Olson |
| 7577186 | US | 09/07/2004 | Interference matrix construction John K. Thomas |
| 7474690 | US | 09/07/2004 | Systems and methods for parallel signal cancellation Anand P. Narayan |
| 7260506 | US | 10/06/2004 | Orthogonalization and directional filtering John K. Thomas |
| 7477710 | US | 12/07/2004 | Systems and methods for analog to digital conversion with a signal cancellation system of a receiver Anand P. Narayan |
| 7359465 | US | 04/11/2005 | Serial cancellation receiver design for a coded signal processing engine Eric S. Olson |
| 7463609 | US | 07/29/2005 | Interference cancellation within wireless transceivers Louis L. Scharf |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and First Named Inventor</u> |
|----------------------------------|----------------|--------------------|--|
| 7787572 | US | 08/15/2005 | Advanced signal processors for interference cancellation in baseband receivers Louis L. Scharf |
| 11/233636 | US | 09/23/2005 | Optimal feedback weighting for soft-decision cancellers John K. Thomas |
| 7876810 | US | 11/04/2005 | Soft weighted interference cancellation for CDMA systems Michael L. Mccloud |
| 7808937 | US | 11/10/2005 | Variable interference cancellation technology for CDMA systems Michael L. Mccloud |
| IN2629/KOLNP/2007 | IN | 12/08/2005 | GAIN CONTROL FOR INTERFERENCE CANCELLATION Anand Narayan |
| 7697595 | US | 05/11/2006 | INTERFERENCE CANCELLATION IN VARIABLE CODELENGTH SYSTEMS FOR MULTI-ACCESS COMMUNICATION Vijay Nagarajan |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and First Named Inventor</u> |
|----------------------------------|----------------|--------------------|---|
| 7991088 | US | 06/13/2006 | Iterative interference cancellation using mixed feedback weights and stabilizing step sizes Tommy Guess |
| 7702048 | US | 06/13/2006 | Iterative interference cancellation using mixed feedback weights and stabilizing step sizes Tommy Guess |
| 7711075 | US | 06/13/2006 | Iterative interference cancellation using mixed feedback weights and stabilizing step sizes Tommy Guess |
| 7715508 | US | 06/13/2006 | Iterative interference cancellation using mixed feedback weights and stabilizing step sizes Tommy Guess |
| 7733941 | US | 06/29/2006 | Inter-symbol interference cancellation for wireless multiple access Michael L. Mccloud |
| 7826516 | US | 07/24/2006 | Iterative interference canceller for wireless multiple-access systems with multiple receive antennas Tommy Guess |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and First Named Inventor</u> |
|----------------------------------|----------------|--------------------|---|
| 7623602 | US | 08/25/2006 | Iterative interference canceller for wireless multiple-access systems employing closed loop transmit diversity Tommy Guess |
| 8005128 | US | 08/17/2007 | METHODS FOR ESTIMATION AND INTERFERENCE CANCELLATION FOR SIGNAL PROCESSING Gagandeep Singh Lamba |
| 8085889 | US | 09/19/2007 | METHODS FOR MANAGING ALIGNMENT AND LATENCY IN INTERFERENCE CANCELLATION Anand P. Narayan |
| 8179946 | US | 11/20/2008 | SYSTEMS AND METHODS FOR CONTROL OF ADVANCED RECEIVERS Brian Lee Roberts |
| 8218697 | US | 02/17/2010 | ITERATIVE INTERFERENCE CANCELLATION FOR MIMO-OFDM RECEIVERS Tommy Guess |

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|----------------------------------|----------------|--------------------|---|
| 8064498 | US | 03/19/2010 | INTERFERENCE CANCELLATION IN VARIABLE CODELENGTH SYSTEMS FOR MULTI-ACCESS COMMUNICATION Vijay Nagarajan |
| 8300745 | US | 03/25/2010 | ITERATIVE INTERFERENCE CANCELLATION USING MIXED FEEDBACK WEIGHTS AND STABILIZING STEP SIZES Tommy Guess |
| 8218602 | US | 08/30/2010 | Method and apparatus for selectively applying interference cancellation in spread spectrum systems Anand Narayan |
| 12/871776 | US | 08/30/2010 | Advanced Signal Processors for Interference Cancellation in Baseband Receivers Louis L. Scharf |
| 8654689 | US | 09/28/2010 | Advanced signal processors for interference cancellation in baseband receivers Michael L. Mccloud |
| 8391338 | US | 10/29/2010 | Methods for Estimation and Interference Cancellation for signal processing Gagandeep Singh Lamba |

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|----------------------------------|----------------|--------------------|---|
| 8121176 | US | 10/29/2010 | Iterative interference canceler for wireless multiple-access systems with multiple receive antennas Tommy Guess |
| 8090006 | US | 10/29/2010 | Systems and methods for serial cancellation Anand P. Narayan |
| 8121177 | US | 11/17/2010 | Method and apparatus for interference suppression with efficient matrix inversion in a DS-CDMA system Anand P. Narayan |
| 12/966931 | US | 12/13/2010 | Systems and Methods for Parallel Signal Cancellation Anand P. Narayan, John K. Thomas, Eric S. Olson |
| 12/966953 | US | 12/13/2010 | Interference Suppression for CDMA Systems Michael L. Mccloud |
| 8374299 | US | 03/30/2011 | Serial cancellation receiver design for a coded signal processing engine Eric S. Olson |
| 8462901 | US | 04/27/2011 | Iterative Interference Suppression Using Mixed Feedback Weights and Stabilizing Step Sizes Tommy Guess |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and First Named Inventor</u> |
|----------------------------------|----------------|--------------------|--|
| 8457262 | US | 06/28/2011 | Iterative Interference Suppression Using Mixed Feedback Weights and Stabilizing Step Sizes Tommy Guess |
| 8457263 | US | 08/08/2011 | Methods for estimation and interference suppression for signal processing Gagandeep Singh Lamba |
| 8588349 | US | 10/05/2011 | Interference cancellation in variable codelength systems for multi-access communication Vijay Nagarajan |
| 13/314787 | US | 12/08/2011 | Methods for managing alignment and latency in interference suppression Anand P. Narayan |
| 8446975 | US | 02/13/2012 | Iterative Interference Suppressor for Wireless Multiple-Access Systems with Multiple Receive Antennas Tommy Guess |
| 8514910 | US | 05/02/2012 | Systems and methods for control of receivers Brian Lee Roberts |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and First Named Inventor</u> |
|----------------------------------|----------------|--------------------|--|
| 13/896952 | US | 05/17/2013 | Iterative interference suppressor for wireless multiple-access systems with multiple receive antennas Tommy Guess |
| 13/908264 | US | 06/03/2013 | Iterative interference suppression using mixed feedback weights and stabilizing step sizes Tommy Guess |
| 13/908286 | US | 06/03/2013 | Methods for estimation and interference suppression for signal processing Gagandeep Singh Lamba |
| 13/913225 | US | 06/07/2013 | Iterative interference suppression using mixed feedback weights and stabilizing step sizes Tommy Guess |
| 13/970517 | US | 8/19/2013 | SYSTEMS AND METHODS FOR CONTROL OF RECEIVERS Brian Lee Roberts |
| GB2331436 | GB | 08/22/1997 | Rake receiver for spread spectrum signal demodulation Wolfgang Kober |
| 6430216 | US | 07/07/2000 | Rake receiver for spread spectrum signal demodulation Wolfgang Kober |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and First Named Inventor</u> |
|----------------------------------|----------------|--------------------|--|
| 6947474 | US | 01/18/2001 | Rake receiver for spread spectrum signal demodulation Wolfgang Kober |
| 6788734 | US | 05/08/2002 | Rake receiver for spread spectrum signal demodulation Wolfgang Kober |
| 14/082,089 | US | 11/15/2013 | Interference Cancellation in Variable Codelength Systems for Multi-Access Communication Vijay Nagarajan |
| IN250195 | IN | 9/25/2002 | METHOD AND APPARATUS FOR IMPLEMENTING PROJECTIONS IN SIGNAL PROCESSING APPLICATIONS – John K. Thomas |
| 14/108,333 | US | 12/16/2013 | ADVANCED SIGNAL PROCESSORS FOR INTERFERENCE CANCELLATION IN BASEBAND RECEIVERS Michael L. McCloud |

(b) all patents and patent applications (i) to which any of the Patents directly or indirectly claims priority, and/or (ii) for which any of the Patents directly or indirectly forms a basis for priority; provided, however, that this subsection (b) does not apply to the following patents and patent applications (the “*Excluded Assets*”): 60/024525, 60/056228, 60/056455, 60/087036, PCT/US1997/014783, AU43280/97, SG64001, 08/916884, PCT/US1998/017278, GB2343801, SG70795, 60/245792, GB2331436, 6252535, 6430216, 6362760, 6380879, 6947474, 6549151, or 6788734;

(c) all reissues, reexaminations, extensions, continuations, continuations in part, continuing prosecution applications, requests for continuing examinations, divisions, registrations of any item in any of the foregoing categories (a) and (b); provided, however, that this subsection (c) does not apply to the Excluded Assets;

(d) all foreign patents, patent applications, and counterparts relating to any item in any of the foregoing categories (a) through (c), including, without limitation, certificates of invention, utility models, industrial design protection, design patent protection, and other governmental grants or issuances; provided, however, that this subsection (d) does not apply to the Excluded Assets;

(e) patentable inventions and invention disclosures, in each case of one or more of the named inventors, the initial disclosure in a patent application having occurred in any of the Patents and/or any item in the foregoing categories (b) through (d) which are subject matter capable of being reduced to a valid patent claim, such that Purchaser is hereby granted the right to apply for and all right, title and interest in any and all of the following: (i) future reissues, results of any reexamination, or any other post issuance review of the Patents and/or any item in the foregoing categories (b) through (d), (ii) future claims resulting from any post grant proceedings on the Patents and/or any item in the foregoing categories (b) through (d), and/or (iii) future patent applications and patents in any or all jurisdictions that lawfully claim priority to any of the Patents and/or any item in the foregoing categories (b) through (d);

(f) all rights to apply in any or all countries of the world for patents, certificates of invention, utility models, industrial design protections, design patent protections, or other governmental grants or issuances of any type related to any item in any of the foregoing categories (a) through (e), including, without limitation, under the Paris Convention for the Protection of Industrial Property, the International Patent Cooperation Treaty, or any other convention, treaty, agreement, or understanding;

(g) all causes of action (whether known or unknown or whether currently pending, filed, or otherwise) and other enforcement rights under, or on account of, any of the Patents and/or any item in any of the foregoing categories (b) through (f), including, without limitation, all causes of action and other enforcement rights for

- (1) damages,
- (2) injunctive relief, and
- (3) any other remedies of any kind

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(h) all rights to collect royalties and other payments under or on account of any of the Patents and/or any item in any of the foregoing categories (b) through (g), except for royalties or other payments under or on account of the Patents which Assignor has the right to collect pursuant to licenses existing on the date hereof.

Assignor hereby authorizes the respective patent office or governmental agency in each jurisdiction to issue any and all patents, certificates of invention, utility models or other governmental grants or issuances that may be granted upon any of the Patent Rights in the name of Assignee, as the assignee to the entire interest therein.

Assignor will, at the reasonable request of Assignee, do all things necessary, proper, or advisable, including without limitation, the execution, acknowledgment, and recordation of specific assignments, oaths, declarations, and other documents on a country-by-country basis, to assist Assignee in obtaining, perfecting, sustaining, and/or enforcing the Patent Rights.

The terms and conditions of this Assignment of Patent Rights will inure to the benefit of Assignee, its successors, assigns, and other legal representatives and will be binding upon Assignor, its successors, assigns, and other legal representatives.

IN WITNESS WHEREOF this Assignment of Patent Rights is executed at Sunnyvale, California on March 17, 2014.

ASSIGNOR:

Rambus Inc.

By: 

Name: Laura Stark

Title: Senior Vice President

(Signature MUST be attested)

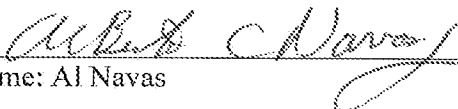
ATTESTATION OF SIGNATURE PURSUANT TO 28 U.S.C. § 1746

The undersigned witnessed the signature of Laura Stark to the above Assignment of Patent Rights on behalf of Rambus Inc. and makes the following statements:

1. I am over the age of 18 and competent to testify as to the facts in this Attestation block if called upon to do so.
2. Laura Stark is personally known to me (or proved to me on the basis of satisfactory evidence) and appeared before me on March 17, 2014 to execute the above Assignment of Patent Rights on behalf of Rambus Inc.
3. Laura Stark subscribed to the above Assignment of Patent Rights on behalf of Rambus Inc.

I declare under penalty of perjury under the laws of the United States of America that the statements made in the three (3) numbered paragraphs immediately above are true and correct.

EXECUTED on March 17, 2014


Print Name: Al Navas