

Based on FORM PTO-1595 (Rev. 08/05)  
as modified by Blakely, Sokoloff, Taylor & Zafman (wlr) 11/30/2005

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

Recordation Form Cover Sheet  
**PATENTS ONLY**

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies): <b>Iospan Wireless, Inc.</b>	2. Name and address of receiving party(ies): Name: <b>Intel Corporation</b>
Additional name(s) of conveying party(ies) attached? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	Internal Address: _____
3. Nature of Conveyance: <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other _____	Street Address: <b>2200 Mission College Boulevard</b>
Execution Date: <b>9/18/2002</b>	City: <b>Santa Clara</b> State: <b>CA</b> Zip: <b>95052</b>
	Country: <b>United States</b>
	Additional name(s) & address(es) attached? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes

4. Application number(s) or patent number(s): ☐ This document is being filed together with a new application.

A. Patent Application No.(s)

**10/929,015**

B. Patent No.(s)

Additional numbers attached? ☒ No ☐ Yes

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: **Blakely, Sokoloff, Taylor & Zafman LLP**

Internal Address: \_\_\_\_\_

Street Address: **12400 Wilshire Boulevard**  
**7th Floor**

City: **Los Angeles** State: **CA** ZIP: **90025**

Phone Number: **(503) 439-8778**

Fax Number: **(503) 439-6073**

E-mail Address: **mark\_van\_ess@bstz.com**

6. Total number of applications and patents involved: **1**

7. Total Fee (37 CFR 3.41).....\$ \_\_\_\_\_

☐ Enclosed

☒ Authorized to be charged to deposit account

8. Deposit Account Number:

**02-2666**

(Attach duplicate copy of this page if paying by deposit account)

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9. Statement and signature.

*To the best of my knowledge and belief, the foregoing is true and correct and any attached copy is a true copy of the original document.*

**Mark C. Van Ness #39865**

Name of Person Signing



Signature

**November 30, 2006**

Date

Total number of pages including cover sheet, attachments, and document: **9**

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:  
Mail Stop Assignment Recordation Services  
Director of the US Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

Docket No. 42P15395XDC

700299708

**PATENT**  
**REEL: 018587 FRAME: 0279**

09-07-2004

FORM PTO-1595

(Rev. 10/02)

OMD No. 0651-0011 (exp. 6/30/2005)

Record



102830686

DEPARTMENT OF COMMERCE  
Patent and Trademark OfficeU.S. PTO  
10/929015

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

## 1. Name of conveying party(ies):

Peroor K. Sebastian; Robert W. Heath, Jr.; Arogyaswami  
J. Paulraj

## 2. Name and address of receiving party(ies):

Name: Intel Corporation

Additional name(s) of conveying party(ies) attached?

☒ No ☐ Yes

Internal Address: \_\_\_\_\_

Street Address: 2200 Mission College Boulevard

## 3. Nature of Conveyance:

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Other

City: Santa Clara State: CA Zip: 95052Country: USAExecution Date: 9/18/2002Additional name(s) & address(es) attached? ☒ No ☐ Yes

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

8/26/2004

A. Patent Application No.(s)

B. Patent No.(s)

Additional numbers attached? ☒ No ☐ Yes

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Blakely, Sokoloff, Taylor & Zafman LLP

Internal Address: \_\_\_\_\_

Street Address: 12400 Wilshire Boulevard  
7th FloorCity: Los Angeles State: CA ZIP: 900256. Total number of applications and patents involved: 17. Total Fee (37 CFR 3.41).....\$ 40.00

- ☒ Enclosed  
☐ Authorized to be charged to deposit account

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02-2666

(Attach duplicate copy of this page if paying by deposit account)

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*To the best of my knowledge and belief, the foregoing is true and correct and any attached copy is a true copy of the original document.*

09/01/2004 MBIZUNES 00000043 10929015

04 FC:8021

40.00 OP

Gregory D. Caldwell

Name of Person Signing

Signature

August 26, 2004

Date

Total number of pages including cover sheet, attachments, and document: 1

Mail documents to be recorded with required cover sheet information to:

Mail Stop Assignment Recordation Services  
 Director of the US Patent and Trademark Office  
 P.O. Box 1450  
 Alexandria, VA 22313-1450

Docket No. 42P15395XDC

**PATENT**  
**REEL: 018587 FRAME: 0280**

## U.S. PATENT APPLICATION ASSIGNMENT

This U.S. Patent Application Assignment (this "Assignment") is made as of September 18, 2002 by **Iospan Wireless, Inc.**, a Delaware corporation ("Assignor"), to **Intel Corporation**, a Delaware corporation ("Assignee").

### RECITALS

A. Assignor and Assignee have entered into an Asset Purchase Agreement dated as of September 18, 2002 (the "Purchase Agreement"). All capitalized terms used herein but not otherwise defined shall have the meanings set forth in the Purchase Agreement.

B. Pursuant to the Purchase Agreement, Assignor desires to assign to Assignee all of Assignor's right, title and interest in and to patent applications filed with the United States Patent and Trademark Office and set forth on Exhibit A hereto (the "Patent Applications").

### AGREEMENT

NOW, THEREFORE, in consideration of the foregoing premises, the mutual covenants and agreements contained in the Purchase Agreement and the covenants and agreements in this Assignment and to induce Assignee to consummate the transactions contemplated by the Purchase Agreement, Assignor agrees as follows:

1. Assignor does hereby sell, transfer, convey, assign and deliver to Assignee all of Assignor's right, title and interest in and to the Patent Applications and any patents that may issue therefrom, including any foreign counterparts, divisions, continuations, or reissues of such patents, the same to be held by Assignee for Assignee's own use and enjoyment, and for the use and enjoyment of Assignee's successors, assigns and other legal representatives, as fully and entirely as the same would have been held and enjoyed by Assignor if this Assignment and sale had not been made; together with all claims for Damages by reason of past infringements of the Patent Applications, along with the right to sue for and collect such Damages for the use and benefit of Assignee and its successors, assigns and other legal representatives.

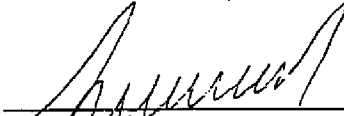
2. Assignor hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any officer of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of intellectual property protection or applications as aforesaid, to issue the same to Assignee and its successors, assigns and other legal representatives in accordance with the terms of this instrument.

3. Assignor hereby covenants with Assignee and the successors and permitted assigns of Assignee that, from time to time after the date hereof, Assignor will promptly execute and deliver to Assignee or shall promptly procure the execution and delivery of any and all such instruments of sale, transfer, conveyance, assignment and delivery, consents, assurances, powers of attorney and other instruments as may reasonably be requested by Assignee in order to vest in

Assignee all of Assignor's right, title and interest in and to the Patents and carry out the purpose and intent of this Assignment and the Purchase Agreement.

IN WITNESS WHEREOF, Assignor has executed this Assignment on the date first above written.

IOSPAN WIRELESS, INC.

By: 

Name: Levent Gun

Title: President and Chief Executive Officer

**EXHIBIT A**

<u>Title</u>	<u>Filing Date</u>	<u>Serial No.</u>
Data Routing For Spatial Multiplexing In A Cellular Network	7/30/99	09/518,500
Subscriber Unit Incorporating Spatial Multiplexing	4/7/00	09/545,434
Subscriber Unit In A Hybrid Link Incorporating Spatial Multiplexing	4/7/00	09/564,770
A Cellular Wireless Re-Use Structure That Allows Spatial Multiplexing And Diversity Communication	6/9/00	09/591,015
Method And System For Mode Adaptation In Wireless Communication Systems	6/30/00	09/609,591
Spatial Separation And Multi-Polarization Of Antennas In A Wireless Cellular Network	7/21/00	09/621,119
Wireless Communications System That Supports Multiple Modes Of Operation	9/1/00	09/653,060
An Apparatus And Method For Optimizing Data Transfer Capacity Of A Multiple Base Transceiver Station Cellular Wireless Network System	9/28/00	09/678,179
Method And System For Adapting A Wireless Link In Response To Measured Error Rates	9/29/00	09/676,410
Mode Selection For Data Transmission In Wireless Communication Channels Based On Statistical Parameters	9/19/00	09/665,149
Interference Mitigation In Wireless Communications	10/13/00	09/687,965

By Training Of Interfering Signals		
A System And Method For Data Transmission From Multiple Wireless Base Transceiver Stations To A Subscriber Unit	11/8/00	09/708,170
A System And Method For Synchronizing Data Transmission From Multiple Wireless Base Transceiver Stations To A Subscriber Unit	12/4/00	09/729,886
Mode Lookup Tables For Data Transmission In Wireless Communication Channels Based On Statistical Parameters	12/1/00	09/730,687
Method And System For Evaluating A Wireless Link	12/22/00	09/745,767
A Method And System For Controlling The Flow Of Data In A Base Transceiver Station	2/1/01	09/775,860
Adaptive Channel Allocation Technique For Wireless Communications Systems	2/6/01	09/778,323
A Method, System And Apparatus For Displaying The Quality Of Data Transmissions In A Wireless Communication System	3/6/01	09/813,656
A Method And System For Scheduling The Transmission Of Wireless Data	3/23/01	09/816,652
Management And Scheduling Of Data That Is Wirelessly Transmitted Between A Base Transceiver Station And Subscriber Units	3/27/01	09/819,947
Method And Wireless	6/6/01	09/876,896

Communications Systems For Interference Mitigation (Continuation of GWI-101)		
Wireless Communication Systems With Adaptive Channelization And Link Adaptation	6/5/01	09/875,806
Channel Interpolation Filters In OFDM Systems	6/11/01	09/880,574
Spatial Multiplexing Using Co-Located Antennae With Multiple Polarizations Suitable For Mobile Applications	6/4/01	09/873,449
A Wireless System Contention Management Procedure	5/31/01	09/870,706
A Method And System For Adapting A Wireless Link To Achieve A Desired Channel Quality	6/28/01	09/894,448
A System And Method For Error Correction Coding Wirelessly Transmitted Information In A Multiple Antennae Communication System	7/5/01	09/900,110
A System And Method Of Classifying Remote Users According To Link Quality, And Scheduling Wireless Transmission Of Information To The Users Based Upon The Classifications	7/24/01	09/912,814
A System And Method For Circulant Transmit Diversity	7/24/01	09/912,800
A System And Method For Simulating A MIMO Transmission Channel	8/28/01	09/942,838
Transmit Signal Preprocessing Based On Transmit Antennae Correlations For Multiple	9/5/01	09/948,204



Antennae Systems		
A System And Method For Providing Automatic Re-Transmission Of Wirelessly Transmitted Information	10/9/01	09/975,128
A System And Method For Transmit Diversity Based Upon Transmission Channel Delay Spread	11/27/01	09/999,438
A System And Method For Multiple Signal Carrier Time Domain Channel Estimation	12/14/01	10/23,632
A System And Method Of Dynamically Optimizing A Transmission Mode Of Wirelessly Transmitted Information	2/5/02	10/072,359
A Multiple Channel Wireless Receiver	3/25/02	10/107,124
A Robust Multiple Chain Receiver	3/25/02	10/107,237
A Method And System For Multiple Chain Wireless Receiver And Transmitter Phase And Amplitude Correction	5/29/02	10/158,734
A Method And System Of Biasing A Timing Phase Estimate Of Data Segments Of A Received Signal	6/19/02	10/176,300
A Method And System For Adjusting A Power Level Of A Transmission Signal Based Upon A Peak To Average Ratio	7/2/02	10/189,755
A Method And System Of Frequency And Time Synchronization Of A Transceiver To Signals Received By The Transceiver	9/16/02	

## Acknowledgment by Notary Public

State of California  
County of Santa Clara

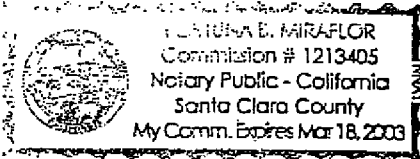
On this 17<sup>th</sup> day of Sept, 2002 before me, the undersigned Notary Public, personally appeared Levent G. Can, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he or she executed the same.

Seal:

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Notary Public





RECEIVED

MAR 14 2005

## UNITED STATES PATENT AND TRADEMARK OFFICE

~~BLANKELY, GOKOLOFF TAYLOR & ZAFMAN LLP~~  
~~LOS ANGELES~~

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND  
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

MARCH 08, 2005

PTAS

BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP  
GREGORY D. CALDWELL  
12400 WILSHIRE BOULEVARD, 7TH FLOOR  
LOS ANGELES, CA 90025



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DOCUMENT ID NO. : 102830686

THE ENCLOSED DOCUMENT HAS BEEN EXAMINED AND FOUND NON-RECORDABLE BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. THE REASON(S) FOR NON-RECORDATION ARE STATED BELOW. DOCUMENTS BEING RESUBMITTED FOR RECORDATION MUST BE ACCOMPANIED BY A NEW COVER SHEET REFLECTING THE CORRECT INFORMATION TO BE RECORDED AND THE DOCUMENT ID NUMBER REFERENCED ABOVE.

THE ORIGINAL DATE OF FILING OF THIS ASSIGNMENT DOCUMENT WILL BE MAINTAINED IF RESUBMITTED WITH THE APPROPRIATE CORRECTION(S) WITHIN 30 DAYS FROM THE DATE OF THIS NOTICE AS OUTLINED UNDER 37 CFR 3.51. THE RESUBMITTED DOCUMENT MUST INCLUDE A STAMP WITH THE OFFICIAL DATE OF RECEIPT UNDER 37 CFR 3. APPLICANTS MAY USE THE CERTIFIED PROCEDURES UNDER 37 CFR 1.8 OR 1.10 FOR RESUBMISSION OF THE RETURNED PAPERS, IF THEY DESIRE TO HAVE THE BENEFIT OF THE DATE OF DEPOSIT IN THE UNITED STATES POSTAL SERVICE.

SEND DOCUMENTS TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT  
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MARCUS KIRK, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

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MAR 17 2005

# BEAVERTON

Date 4/7/2005 Client: Intel Corporation  
Docket Initials bw 42390.P15395xdc  
Deck. Sup. Initials \_\_\_\_\_  
Atty Initials \_\_\_\_\_ EHT GDC (MAP)

Pat/Ser/Reg 929015

**Description:**

62 x

**Deadline to resubmit the corrected assignment papers.**

**ENTERED**

MAR 16 2005

**INTO DATABASE**

3/15/2005

Katie Ngo

388281

## PATENT

## U.S. PATENT APPLICATION ASSIGNMENT

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2. Assignor hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any officer of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of intellectual property protection or applications as aforesaid, to issue the same to Assignee and its successors, assigns and other legal representatives in accordance with the terms of this instrument.

3. Assignor hereby covenants with Assignee and the successors and permitted assigns of Assignee that, from time to time after the date hereof, Assignor will promptly execute and deliver to Assignee or shall promptly procure the execution and delivery of any and all such instruments of sale, transfer, conveyance, assignment and delivery, consents, assurances, powers of attorney and other instruments as may reasonably be requested by Assignee in order to vest in

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By: 

Name: Levent Gun

Title: President and Chief Executive Officer

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A Method And System Of Frequency And Time Synchronization Of A Transceiver To Signals Received By The Transceiver	9/16/02	

## Acknowledgment by Notary Public

State of California  
County of Santa Clara

On this 17<sup>th</sup> day of Sept, 2002 before me, the undersigned Notary Public, personally appeared Levent Can, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he or she executed the same.

Seal:

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Notary Public

