

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Siavash Alamouti</td> <td>09/21/1998</td> </tr> <tr> <td>Patrick Poon</td> <td>03/24/1999</td> </tr> <tr> <td>Vahid Tarokh</td> <td>09/25/1998</td> </tr> </tbody> </table>		Name	Execution Date	Siavash Alamouti	09/21/1998	Patrick Poon	03/24/1999	Vahid Tarokh	09/25/1998		
Name	Execution Date										
Siavash Alamouti	09/21/1998										
Patrick Poon	03/24/1999										
Vahid Tarokh	09/25/1998										
RECEIVING PARTY DATA											
<table border="1"> <tr> <td>Name:</td> <td>AT&T Wireless Services, Inc.</td> </tr> <tr> <td>Street Address:</td> <td>5000 Carillon Point</td> </tr> <tr> <td>City:</td> <td>Kirkland</td> </tr> <tr> <td>State/Country:</td> <td>WASHINGTON</td> </tr> <tr> <td>Postal Code:</td> <td>98033</td> </tr> </table>		Name:	AT&T Wireless Services, Inc.	Street Address:	5000 Carillon Point	City:	Kirkland	State/Country:	WASHINGTON	Postal Code:	98033
Name:	AT&T Wireless Services, Inc.										
Street Address:	5000 Carillon Point										
City:	Kirkland										
State/Country:	WASHINGTON										
Postal Code:	98033										
PROPERTY NUMBERS Total: 1											
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13691505</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13691505						
Property Type	Number										
Application Number:	13691505										
CORRESPONDENCE DATA											
<p>Fax Number: 5123386301 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: 5123386300 Email: kbrown@ip-counsel.com Correspondent Name: Mark Zagorin Address Line 1: ZAGORIN O'BRIEN GRAHAM LLP Address Line 2: 7600B N. Capital of TX Hwy, Ste 350 Address Line 4: Austin, TEXAS 78731</p>											
ATTORNEY DOCKET NUMBER:	037-0073-5										
NAME OF SUBMITTER:	Kimberly Brown										
<p>Total Attachments: 6 source=037-0073-5_Assignment#page1.tif</p>											

OP \$40.00 13691505

source=037-0073-5_Assignment#page2.tif
source=037-0073-5_Assignment#page3.tif
source=037-0073-5_Assignment#page4.tif
source=037-0073-5_Assignment#page5.tif
source=037-0073-5_Assignment#page6.tif

ASSIGNMENT AND AGREEMENT

For value received, we, Siavash Alamouti, of Kirkland in the County of King and State of Washington, Patrick Poon, of Redmond in the County of King and State of Washington, and Vahid Tarokh, of Madison in the County of Morris and State of New Jersey, hereby sell, assign and transfer to AT&T Wireless Services, Inc., a corporation of the State of Delaware, having an office at 5000 Carillon Point, Kirkland, Washington 98033, U.S.A., and its successors, assigns and legal representatives, the entire right, title and interest, for the United States of America, in and to certain inventions related to **Low Complexity Maximum Likelihood Detection Of Concatenated Space Codes For Wireless Applications** described in an application for Letters Patent of the United States, executed by us of even date herewith, and based on our prior provisional application, Serial No. 60/063794, filed October 31, 1997, and all the rights and privileges in said application and under any and all Letters Patent that may be granted in the United States for said inventions; and we also concurrently hereby sell, assign and transfer to AT&T Wireless Services, Inc. the entire right, title and interest in and to said inventions for all countries foreign to the United States, including all rights of priority arising from the application aforesaid, and all the rights and privileges under any and all forms of protection, including Letters Patent, that may be granted in said countries foreign to the United States for said inventions.

We authorize AT&T Wireless Services, Inc. to make application for such protection in its own name and maintain such protection in any and all countries foreign to the United States, and to invoke and claim for any application for patent or other form of protection for said inventions, without further authorization from us, any and all benefits, including the right of priority provided by any and all treaties, conventions, or agreements.

We hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any document which may be required in any country in proof of the right of AT&T Wireless Services, Inc. to apply for patent or other form of protection for said inventions and to claim the aforesaid benefit of the right of priority.

We request that any and all patents for said inventions be issued to AT&T Wireless Services, Inc. in the United States and in all countries foreign to the United States, or to such nominees as AT&T Wireless Services, Inc. may designate.

S. Alamouti 9-3-4

We agree that, when requested, we shall, without charge to AT&T Wireless Services, Inc. but at its expense, sign all papers, and do all acts which may be necessary, desirable or convenient in connection with said applications, patents, or other forms of protection.



Siavash Alamouti

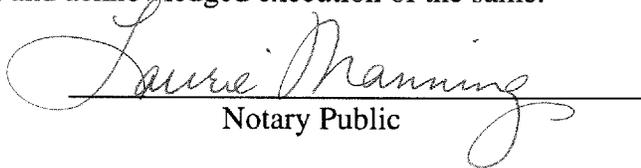
Date: 9/21/98

United States of America)

State of Washington) ss.:

County of King)

On this 21st day of September, 19 98, before me personally came Siavash Alamouti, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.


Notary Public



ASSIGNMENT AND AGREEMENT

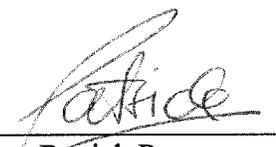
For value received, I, Patrick Poon, of Lamtin, Hong Kong, hereby sell, assign and transfer to AT&T Wireless Services, Inc., a corporation of the State of Delaware, having an office at 5000 Carillon Point, Kirkland, Washington 98033, U.S.A., and its successors, assigns and legal representatives, the entire right, title and interest, for the United States of America, in and to certain inventions related to **Low Complexity Maximum Likelihood Detection Of Concatenated Space Codes For Wireless Applications** described in an application for Letters Patent of the United States, Serial No. 09/167,422, filed October 6, 1998, based on the prior provisional application, Serial No. 60/063,794 filed October 31, 1997, and all the rights and privileges in said applications and under any and all Letters Patent that may be granted in the United States for said inventions; and I also concurrently hereby sell, assign and transfer to AT&T Wireless Services, Inc. the entire right, title and interest in and to said inventions for all countries foreign to the United States, including all rights of priority arising from the applications aforesaid, and all the rights and privileges under any and all forms of protection, including Letters Patent, that may be granted in said countries foreign to the United States for said inventions.

I authorize AT&T Wireless Services, Inc. to make application for such protection in its own name and maintain such protection in any and all countries foreign to the United States, and to invoke and claim for any application for patent or other form of protection for said inventions, without further authorization from me, any and all benefits, including the right of priority provided by any and all treaties, conventions, or agreements.

I hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any document which may be required in any country in proof of the right of AT&T Wireless Services, Inc. to apply for patent or other form of protection for said inventions and to claim the aforesaid benefit of the right of priority.

I request that any and all patents for said inventions be issued to AT&T Wireless Services, Inc. in the United States and in all countries foreign to the United States, or to such nominees as AT&T Wireless Services, Inc. may designate.

I agree that, when requested, I shall, without charge to AT&T Wireless Services, Inc. but at its expense, sign all papers, and do all acts which may be necessary, desirable or convenient in connection with said applications, patents, or other forms of protection.



Patrick Poon

Date: 24 MARCH 99

~~United States of America~~)
~~State of~~)SS:
~~County of~~)

Consulate General of the
United States of America } SS:
at Hong Kong

On this 24th day of March, 1999, before me personally came Patrick Poon, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.



Notary Public

Alan Bruce Ammerman
American Consul



ASSIGNMENT AND AGREEMENT

For value received, we, Siavash Alamouti, of Kirkland in the County of King and State of Washington, Patrick Poon, of Redmond in the County of King and State of Washington, and Vahid Tarokh, of Madison in the County of Morris and State of New Jersey, hereby sell, assign and transfer to AT&T Wireless Services, Inc., a corporation of the State of Delaware, having an office at 5000 Carillon Point, Kirkland, Washington 98033, U.S.A., and its successors, assigns and legal representatives, the entire right, title and interest, for the United States of America, in and to certain inventions related to **Low Complexity Maximum Likelihood Detection Of Concatenated Space Codes For Wireless Applications** described in an application for Letters Patent of the United States, executed by us of even date herewith, and based on our prior provisional application, Serial No. 60/063794, filed October 31, 1997, and all the rights and privileges in said application and under any and all Letters Patent that may be granted in the United States for said inventions; and we also concurrently hereby sell, assign and transfer to AT&T Wireless Services, Inc. the entire right, title and interest in and to said inventions for all countries foreign to the United States, including all rights of priority arising from the application aforesaid, and all the rights and privileges under any and all forms of protection, including Letters Patent, that may be granted in said countries foreign to the United States for said inventions.

We authorize AT&T Wireless Services, Inc. to make application for such protection in its own name and maintain such protection in any and all countries foreign to the United States, and to invoke and claim for any application for patent or other form of protection for said inventions, without further authorization from us, any and all benefits, including the right of priority provided by any and all treaties, conventions, or agreements.

We hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any document which may be required in any country in proof of the right of AT&T Wireless Services, Inc. to apply for patent or other form of protection for said inventions and to claim the aforesaid benefit of the right of priority.

We request that any and all patents for said inventions be issued to AT&T Wireless Services, Inc. in the United States and in all countries foreign to the United States, or to such nominees as AT&T Wireless Services, Inc. may designate.

S. Alamouti 9-3-4

Vahid Tarokh
Vahid Tarokh

Date: 9/25/98

United States of America)

State of) ss.:

County of)

On this _____ day of SEP 25 1998, 19____, before me personally came Vahid Tarokh, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.

MARGO SAKER
Notary Public

MARGO SAKER
NOTARY PUBLIC OF NEW JERSEY
Commission Expires 3/10/2003

AT&T Wireless Services, Inc.
P. O. Box 4110
Middletown, New Jersey 07748