

## PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
TELUS Communications Company	12/24/2007
RECEIVING PARTY DATA	
Name:	Wi-LAN, Inc.
Street Address:	11 Holland Avenue, Suite 608
City:	Ottawa
State/Country:	CANADA
PROPERTY NUMBERS Total: 1	
Property Type	Number
Patent Number:	5369670
CORRESPONDENCE DATA	
Fax Number:	(619)235-0398
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>	
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Correspondent Name:	Procopio, Cory, Hargreaves & Savitch LLP
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ATTORNEY DOCKET NUMBER:	112174-000000
NAME OF SUBMITTER:	Richard E. Campbell
Total Attachments: 11 source=assign_wilan#page1.tif source=assign_wilan#page2.tif source=assign_wilan#page3.tif source=assign_wilan#page4.tif source=assign_wilan#page5.tif source=assign_wilan#page6.tif	

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## ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, TELUS Communications Company, duly organized and existing under the laws of British Columbia and having an office at 21-3777 Kingsway, Burnaby, British Columbia V5H 3Z7 ("Assignor"), hereby formally transfers and assigns to Wi-LAN Inc., a corporation organized and existing under the laws of Canada and having a principal place of business at 11 Holland Avenue, Suite 608, Ottawa, Ontario ("Assignee"), all of Assignor's right, title and interest in and to the Patent Application and Revisions as defined in the attached "Patent License and Technology Transfer Agreement" dated September 20, 1994, entered into between Wi-LAN Inc., then a body corporate duly incorporated pursuant to the laws of the Province of Alberta, Canada, and TELUS Communications Inc. (formerly AGT Limited), and subsequently assigned by TELUS Communications Inc. to Assignor, to hold the same for its own use and enjoyment and for the use and enjoyment of its successors and assigns, for the full term or terms of all such rights.

Signature: Z Mansourat  
Name: ZOUHEIR MANSOURATI  
Title: VP, TECHNOLOGY STRATEGY  
Date: December 24, 2007

## PATENT LICENSE AND TECHNOLOGY TRANSFER AGREEMENT

This Agreement made the 20 day of September, 1994.

### BETWEEN:

**WI-LAN INC.,**  
a body corporate duly incorporated pursuant  
to the laws of the Province of Alberta, Canada  
("Wi-LAN")

OF THE FIRST PART,

-and-

**AGT LIMITED,**  
a body corporate duly incorporated pursuant  
to the laws of the Province of Alberta, Canada  
("AGT")

OF THE SECOND PART.

### WHEREAS:

- A. AGT is the owner of the application for letters patent described in Schedule "A" including any divisions thereof and supplementary disclosures added thereto;
- B. AGT desires to grant to Wi-LAN the exclusive world-wide license, including the right to sublicense, the frequency-domain applications of a phase estimation patent;
- C. Wi-LAN desires to acquire the same to proceed with the development and commercialization of the frequency-domain applications of the phase estimation patent; and
- D. Upon Wi-LAN satisfying the conditions contained in this Agreement, Wi-LAN desires to acquire all of AGT's right, title and ownership in and to the frequency-domain applications of the phase estimation patent;

NOW THEREFORE, for and in consideration of the covenants and premises contained herein, it is understood and agreed as follows:

### ARTICLE I DEFINITIONS

1.1 In this Agreement the following terms shall have the following meanings:

- (a) "Business Day" means any day other than a Saturday, Sunday or statutory holiday observed in the Province of Alberta;
- (b) "Licensed Products" means the products, created, produced or manufactured by Wi-LAN or third party sub-licensee, embodying the inventions and technology described or claimed in the Patent Application, that are sold, distributed or otherwise put in use in the world by Wi-LAN or an authorized sub-licensee of Wi-LAN;

- (c) "Patent Application" means the application for letters patent described in Schedule "A", together with any patents that may issue out of the Patent Application, including any divisions and continuations thereof and supplementary disclosures added thereto;
- (d) "Revisions" means any and all modifications, enhancements, alterations, improvements, up-dates, revisions, up-grades, rewrites and any other variations of any nature whatever to the claims of the Patent Application.

## ARTICLE II LICENSE GRANT

- 2.1 AGT hereby grants to Wi-LAN, and Wi-LAN hereby accepts, subject to the terms and conditions provided in this Agreement, the exclusive world-wide license (the "License") including the right to sublicense, in accordance with this Agreement, the Patent Application and the exclusive right to sell, distribute and put into use world-wide the Licensed Products
- 2.2 AGT agrees to extend the License Agreement to include any and all Revisions.
- 2.3 The License granted to Wi-LAN includes the right of Wi-LAN to grant sublicenses, of and within the scope of a right and license granted to it in this Agreement, and such sublicense agreement shall require the prior written consent of AGT, such consent not to be unreasonably withheld. AGT shall exercise reasonable efforts to provide its written consent to Wi-LAN within ten (10) Business Days of Wi-LAN's written notice to AGT containing such information as may be required by AGT to assess whether or not it will provide its written consent to the proposed sublicense agreement.
- 2.4 Wi-LAN acknowledges and agrees that the grant of the exclusive license to Wi-LAN by AGT requires notification of the Patent Office pursuant to the *Patent Act* (Canada). Wi-LAN shall, at its cost, notify the Patent Office of this exclusive assignment forthwith upon the execution of this Agreement.

## ARTICLE III ROYALTIES, PAYMENTS AND CHARGES

- 3.1 In consideration of the License granted under this Agreement, and in contemplation of the transfer, sale and assignment of all of AGT's right, title and interest in and to the Patent Application and Revisions upon the satisfaction of the conditions described in this Agreement, Wi-LAN shall pay to AGT the following amounts:
  - (a) one and four tenths percent (1.4%) of the gross revenue generated by Wi-LAN from the sale of Licensed Products;
  - (b) twenty-five percent (25%) of the gross revenue generated by the sublicensing of the Patent Application to third parties; and
  - (c) sixty eight thousand dollars (\$68,000.00) on or before the fifth anniversary of the effective date of this Agreement

until Wi-LAN has paid AGT the amount of one million dollars (\$1,000,000).

- 3.2 In the event royalties or payments are not received by AGT when due, Wi-LAN shall pay to AGT interest on such overdue amount at a rate per annum of ten percent (10%), calculated on a simple interest basis and commencing on the date such royalty or payment was due and ending on the date the royalty or payment is actually received by AGT.
- 3.3 Upon payment of the amount of one million dollars (\$1,000,000) to AGT by Wi-LAN, Wi-LAN shall be entitled to a formal transfer of all of AGT's right, title and interest in and to the Patent Application and Revisions. Wi-LAN shall be responsible for the costs and expenses associated with the transfer of title to the Patent Application and Revisions to Wi-LAN.
- 3.4 Except for the costs for which Wi-LAN is responsible in accordance with Article 3.5, AGT shall be responsible for all patent costs in Canada and the United States in respect of the Patent Application.
- 3.5 Wi-LAN agrees to maintain and enforce the Patent Application in Canada and the United States, as well as future applications in other areas as they apply to the Patent Application, by paying maintenance fees, as applicable.
- 3.6 All monies due to AGT under this Agreement shall be payable in Canadian funds collectible at par in Calgary, Alberta. When Licensed Products are sold for foreign currency other than Canadian Dollars, the earned royalties will first be calculated in the currency of the country in which such Licensed Products were sold and then converted into the equivalent Canadian Dollar amount. The exchange rate will be that established by the Bank of Canada on the last day of the reporting period for the submission of royalty payments to AGT.
- 3.7 Wi-LAN shall be responsible for and pay all applicable sales and use taxes, and other imposts and duties, in respect of the sale of the Licensed Products, whether by itself or sublicensed third parties, imposed by any governmental authority of any country as a result of the existence or operation of this Agreement. None of such sales and use taxes, imposts and duties, shall be deductible from earned royalties due AGT under this Article III. Wi-LAN shall indemnify, hold harmless and defend AGT in respect of any claim, action or demand made by a third party, including damages, costs and expenses (including costs on a solicitor and own client basis) arising from Wi-LAN's acts or omissions in respect of its obligations under this Article.
- 3.8 In the event that any patent or any claim thereof included within the Patent Application shall be held invalid or unenforceable in a final decision by a court of competent jurisdiction and from which no appeal has or can be taken, all obligation to pay royalties based on such patent or claim shall cease as of the date of such final decision.

#### **ARTICLE IV WARRANTIES AND COVENANTS**

##### **AGT Warranties and Covenants**

- 4.1 AGT warrants and covenants that:

- (a) The Patent Application in Canada and the United States has not been previously assigned, sold or encumbered and it shall be free to transfer this right to Wi-LAN upon Wi-LAN satisfying the conditions of this Agreement to such transfer; and
- (b) it shall properly execute and comply with all statutes, rules, orders, ordinances and regulations of all governmental authorities in connection with the Licensee granted under this Agreement.

#### **Wi-LAN Warranties and Covenants**

##### **4.2 Wi-LAN warrants and covenants that:**

- (a) it shall not, during the subsistence of the License raise or cause to be raised any question concerning, or any objection to, the validity of any claim of the Patent Application on any grounds whatsoever;
- (b) it shall agree to use its best efforts to manufacture, sell, distribute and promote the Licensed Products;
- (c) it shall not contest the validity of the Patent Application, under which it is licensed, or the right or title of AGT to it, or to any process, trade or manufacturing secret, and further agrees not to aid others in doing so;
- (d) it shall provide the reasonable cooperation and assistance of Hatim Zaghloul for the prosecution of the Patent Application; and
- (e) it shall properly execute and comply with all statutes, rules, orders, ordinances and regulations of all governmental authorities in connection with the License granted under this Agreement.

**4.3 THIS LICENSE AND THE ASSOCIATED INVENTION ARE PROVIDED WITHOUT WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED. AGT MAKES NO REPRESENTATION OR WARRANTY THAT THE PATENT APPLICATION AND LICENSED PRODUCTS WILL NOT INFRINGE ANY PATENT OR OTHER PROPRIETARY RIGHT. IN NO EVENT WILL AGT BE LIABLE FOR ANY INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE EXERCISE OF THIS LICENSE OR THE USE OF THE INVENTION OR LICENSED PRODUCTS OR THE USE OR THE PRACTICE OF THE LICENSED METHODS AND CLAIMS CONTAINED IN THE PATENT APPLICATION.**

##### **4.4 Nothing in this Agreement shall be construed as:**

- (a) a warranty or a representation by AGT as to the validity or scope of the Patent Application;
- (b) a warranty or representation that anything made, used, sold or otherwise disposed of under any license granted by this Agreement, including Licensed Products, is or will be free from infringements of patents of third parties; or
- (c) an obligation to bring or prosecute actions or suits against third parties for infringement of the claims described in the Patent Application.

## ARTICLE V REVISIONS

- 5.1 All Revisions developed or acquired by Wi-LAN, its agents, subcontractors or sublicensees shall be the sole property of Wi-LAN, including copyright, patent, trade secrets or other rights. It shall be the responsibility of Wi-LAN to secure letters patent covering a Revision in any and all countries in which the claims that are described in the Patent Application is or are practised.

## ARTICLE VI BOOKS AND REPORTS

- 6.1 All royalties and payments required pursuant to Article II shall be made to AGT within thirty (30) days following the end of each year commencing September 20, 1995 and each payment and royalty shall be for the amounts which have accrued during the year immediately preceding. Payments shall be accompanied by a report which shall provide such information as is reasonably required by AGT to permit an accurate determination of the amounts payable. Wi-LAN shall also furnish to AGT quarterly reports commencing October 31, 1994 and during each and every year thereafter during the continuation of this Agreement indicating the number of Licensed Products sold and total dollar sales in respect of such sales by Wi-LAN and its sublicensees.
- 6.2 Wi-LAN shall maintain complete, accurate and separate books and records sufficient to reveal to AGT or its designated auditors or accountants the amounts payable by Wi-LAN to AGT in respect to this Agreement. Wi-LAN shall permit AGT, or its duly authorized auditors or accountants, to review, examine or audit such books and records, upon providing thirty (30) days written notice to Wi-LAN.

## ARTICLE VII INDEMNIFICATION AND PATENT INFRINGEMENT

- 7.1 Wi-LAN agrees to indemnify, hold harmless and defend AGT, its officers, employees, servants and agents from and against any and all liability, claims, suits, losses, damages, costs (including legal fees on a solicitor and own client basis), fees and expenses resulting from or arising out of the exercise of the License granted under this Agreement, including the actions or omissions of Wi-LAN and its sublicensees, and any other party to whom Wi-LAN is responsible at law.
- 7.2 If either party becomes aware of any infringement of any claim under the Patent Application, such party shall immediately notify the other party. Wi-LAN shall have the right and option, but not the obligation, to bring an action for infringement, at its sole expense, against the alleged infringer. Any damages or sums recovered by Wi-LAN in any such action, suit or proceeding, or any settlement thereof, except to the extent that the recovery reflects past-due royalties, shall be retained solely by Wi-LAN. If an action, suit or proceeding has not been commenced by Wi-LAN against an alleged infringer within thirty (30) days of Wi-LAN's notification of AGT, or AGT's notification of Wi-LAN of an infringement of the claim or claims described in the Patent Application, AGT may commence an action against the alleged infringer, at Wi-LAN's expense, and Wi-LAN shall provide to AGT, at Wi-LAN's cost and expense, all reasonable assistance required by AGT. AGT shall only have the right to commence an action pursuant to this Article 7.2 if AGT reasonably believes that monies due to AGT in accordance with Article III or elsewhere in this Agreement may be affected.



## ARTICLE VIII TERM OF AGREEMENT AND TERMINATION

### Term

- 8.1 The term of this Agreement shall be effective as of the 20 day of September, 1994 and shall continue in force until terminated by the agreement of the parties or unless terminated earlier pursuant to the provisions herein.

### Automatic Termination

- 8.2 The License granted to Wi-LAN will automatically cease and terminate upon the occurrence of any one or more of the following events:

- (a) if Wi-LAN is involved in any financial difficulties as evidenced by any of the following:
  - (i) admits in writing its inability to pay its debts generally as they become due;
  - (ii) commits an act of bankruptcy;
  - (iii) is the subject of a petition or assignment in bankruptcy under applicable bankruptcy laws or other similar laws;
  - (iv) files a notice of intention to make a proposal under the Bankruptcy and Insolvency Act (Canada), commences proceedings under the Companies' Creditors Arrangement Act (Canada) or otherwise seeks a reorganization, adjustment or composition under applicable bankruptcy laws or any other similar law or statute of any relevant jurisdiction;
  - (v) if a creditor of Wi-LAN takes any of the action described in Article 8.2(a)(iv) in respect of Wi-LAN;
  - (vi) makes an assignment for the benefit of its creditors;
  - (vii) consents to the appointment of a receiver or receiver manager of itself or of the whole or any substantial part of its property;
  - (viii) enters into an arrangement or composition with or for the general benefit of its creditors

provided that such financial difficulty renders Wi-LAN incapable of performing its obligations under this Agreement; or

- (b) if an order is made by a Court of competent jurisdiction for the winding-up, liquidation or dissolution of Wi-LAN or if Wi-LAN or any other person with proper authority to do so institutes any action required to wind-up, liquidate or dissolve Wi-LAN.

### Termination - Event of Default

- 8.3 In the event Wi-LAN fails to pay to AGT sixty eight thousand dollars (\$68,000), together with any interest payable to AGT in accordance with Article III, within five (5) years of the effective date of this Agreement, AGT may notify Wi-LAN that it intends to cancel this

Agreement and AGT shall be entitled to notify the sublicensees of Wi-LAN that Wi-LAN's License shall be revoked if within thirty (30) days of such written notice this minimum balance has not been paid.

- 8.4 AGT shall also have the right to terminate this License Agreement in the event Wi-LAN commits a material breach of this Agreement (in addition to Article 8.3). AGT shall issue a notice in writing of such default and on failure of Wi-LAN to remedy such default or cause a default to be remedied within sixty (60) days after the issuance of the notice, AGT may, at its option, terminate this Agreement.

#### **Consequences on Termination**

- 8.5 In the event of the termination of this Agreement:
- (a) the rights and obligations under Articles III, VII, VIII and IX.4 shall survive the termination or expiration of this Agreement and shall bind the parties and their successors and assigns;
  - (b) Wi-LAN shall immediately cease any productive use of the technology and inventions associated with the claims contained in the Patent Application;
  - (c) Wi-LAN shall provide details of all sublicense agreements and their status and assign all such sublicense agreements to AGT, at Wi-LAN's cost. In order to ensure that such provision may be enforced by AGT, Wi-LAN hereby grants to AGT Wi-LAN's power-of-attorney to carry out such assignments;
  - (d) Wi-LAN shall return to AGT or destroy all of the elements of the Patent Application within Wi-LAN's possession, custody or control within thirty (30) days following the effective termination date;
  - (e) Wi-LAN shall pay to AGT all sums due to AGT to the effective date of termination within thirty (30) days of such termination; and
  - (f) each party agrees to continue their cooperation and effect an orderly termination of the relationship.
- 8.6 The remedies of AGT pursuant to this Article XIII and elsewhere in this Agreement are neither exclusive or mutually exclusive and AGT shall be entitled to any such remedies, or any other remedy available to AGT at law or in equity, or some or all in any combination, at AGT's discretion.

### **ARTICLE IX GENERAL PROVISIONS**

#### **Notices**

- 9.1 Any notice under this Agreement shall be addressed in writing and shall be addressed as follows:
- (a) Notices to AGT: Attention: Roger Pederson  
Director, Research and Development  
20E, 10020 - 100 Street  
Edmonton, Alberta T5J 0N5  
Facsimile: (403) 493-4277

(b) Notice to Wi-LAN: Attention: Hatim Zaghloul  
#308, 809 Manning Road N.E.  
Calgary, Alberta T2E 7M9  
Facsimile: (403) 273-5100

Any such notice may be served:

- (a) personally by leaving it with the party served at that party's address provided above (in which case such notice shall be deemed received by the addressee when actually delivered);
- (b) by a facsimile, directly to the party being served (in which case such notice shall be deemed to be received by the addressee on the first Business Day following the date of the transmission).

Any party may change its address for service by giving written notice to the other party and sending out its new address for notice.

#### **Force Majeure**

- 9.2 Neither party shall be responsible for any failure to comply with any of the terms or conditions of this Agreement, where any such failure is directly or indirectly caused by or results from events of force majeure beyond the control of either party. These events shall include, but not be limited to, fire, flood, earthquake, accident, civil disturbances, war, rationing, embargoes, strikes or labour problems, delays in transportation, acts of God, or acts of government.

#### **Amendment, Modification or Waiver**

- 9.3 No amendment, modification, termination or waiver of any provision of this Agreement or consent to any departure therefrom, shall in any event be effective unless the same shall be in writing and signed by an authorized representative of AGT or Wi-LAN as the case may require, and then such waiver or consent shall be effective only in the specific instance and for the specific purpose for which given. The failure of either party to exercise a right or option granted herein, or to require the performance of any term of this Agreement, or the waiver by either party of any breach of this Agreement, shall not prevent a subsequent exercise or enforcement of such terms or be deemed a waiver of any subsequent breach of the same or any other term of this Agreement.

#### **Governing Law**

- 9.4 This Agreement shall be governed by and construed in accordance with the laws of the Province of Alberta and each party hereby submits to the jurisdiction of the Alberta Courts.

#### **Assignment**

- 9.5 This Agreement is not assignable to any party without the prior written consent of the other party except that AGT may assign its rights under this Agreement to its parent corporation or to any associated or affiliated corporation or in conjunction with an amalgamation or reorganization of AGT. Any attempt to assign, sell or transfer any of the rights, duties or obligation, including proprietary rights in this Agreement, except as authorized by this Agreement, without the prior written consent of the other party, is void.

### Entire Agreement

- 9.6 This Agreement, including Schedule "A" attached hereto, supersedes and takes the place of all previous agreements, understandings or arrangements, verbal or otherwise, between AGT and Wi-LAN and/or Hatim Zaghloul, Michel ~~de~~ Fattouche or Frederick Rogers in respect of the Patent Application and the licensing or transfer thereof. H2

### Further Assurances

- 9.7 The parties shall with reasonable diligence perform all acts, execute and deliver all documents and instruments, do all such things and provide all such reasonable assurances as may be reasonably necessary or desirable to give effect to the provisions of this Agreement.

### Severability

- 9.8 Should any provision of this Agreement be found to be illegal, unenforceable or invalid, it shall be separate and severable and the remaining provisions shall remain in force and be binding upon the parties hereto as though this provision had never been included.

IN WITNESS WHEREOF the parties have duly executed this Agreement by the respective duly authorized representatives effective the date and year first above written.

AGT Limited

Wi-LAN Inc.



Per: [Signature]  
(signature)  
Name: JOHN S. WEBB  
(type or print)

Per: [Signature]  
(signature)  
Name: HATIM ZAGHLOUL  
(type or print)

## Schedule A

The invention shows that it is possible to relate the amplitude and characteristics of the phase of a radio signal transmitted over a fading channel, and that an estimation of the phase differential may be made from sampling the amplitude of the transmitted signal. The estimated phase differential may be used to modify or demodulate the received signal. The invention has been published in "Estimation of Phase Differential of Signals Transmitted Over Fading Channels", Electronics Letters, Vol. 27, No. 20, 1823-1824, September, 1991.

The invention may be applied to a signal in which the information in the signal is carried in the frequency. It is preferred that, firstly, a frequency transform is taken of the signal to produce an amplitude and a phase, a differential of a function of the amplitude is determined to produce a data record, and then a transform of the differential is taken to produce a signal corresponding to the estimated phase differential of the data record. This produces an estimated phase differential with sign ambiguity which may then be resolved using known techniques and the received signal may then be modified using the estimated phase differential to produce a corrected signal.

Preferably, the differential may be computed by using the logarithm of the amplitude samples, and uses adjacent amplitude samples. The preferred transform is the Hilbert transform, and the phase estimation is computed from

$$\Delta\phi(f) = H [ \Delta \ln(A(f)) ]$$

in which H denotes the Hilbert transform,  $\Delta\phi(f)$  is the estimated phase differential, and A(f) is the amplitude samples.

Alternatively, the phase estimation may be obtained by:

constructing data frames of a number of consecutive amplitude samples of the electromagnetic signal;

selecting segments of the data frames where the amplitude of the electromagnetic signal is at least a predetermined number of dB less than its mean;

for each segment, estimating the phase differential  $\Delta\phi(f)$  from

$$\Delta\phi(f) = -f_0 / (f_0^2 + f'^2)$$

where  $f' = f - f_{\min}$ , f is the time from the beginning of the segment,  $f_{\min}$  is the time in the segment when the absolute value of the signal reaches its minimum, and  $f_0$  is the period of time from the instant the amplitude of the electromagnetic signal reaches its minimum during the segment until the amplitude reaches double its minimum during the segment.

For simplicity, the sign of the phase differential need only be determined for segments with phase differentials greater than a preselected threshold.