

# PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
Norman C. Beaulieu	11/07/2008
Yunfei Chen	11/10/2008
RECEIVING PARTY DATA	
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PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	12282119
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NAME OF SUBMITTER:	A. Blair Hughes
<p>Total Attachments: 4</p> <p>source=08-1056 Assignment#page1.tif</p>	

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**PATENT**  
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## ASSIGNMENT

WHEREAS, we, NORMAN. C. BEAULIEU and YUNFEI CHEN, citizens of Canada and China, respectively, residing at, respectively, 507 Hunters Way, Edmonton, Alberta, T6R 2W1, Canada and 2-46-162, Nanjing Refinery Factory, Nanjing, Jiangsu, 210033, China (hereinafter referred to as the "Assignors"), have made certain inventions and discoveries disclosed in United States Patent Application Serial No. 12/282,119, entitled NON-DATA-AIDED CHANNEL ESTIMATORS FOR MULTIPATH AND MULTIPLE ANTENNA WIRELESS SYSTEMS, filed on September 8, 2008, which is a national phase entry of PCT International Patent Application Serial No. PCT/CA2007/000356 filed March 7, 2007, which claims priority from United States Provisional Patent Application Serial No. 60/779,415 filed March 7, 2006 (hereinafter referred to as the "Application");

AND WHEREAS, THE GOVERNORS OF THE UNIVERSITY OF ALBERTA, whose full post office address is TEC Edmonton, 4th Floor, Enterprise Square, 10230 - Jasper Avenue, Edmonton, Alberta, T5J 4P6, Canada (hereinafter referred to as the "Assignee"), is desirous of acquiring the entire right, title, and interest in and to said inventions and discoveries, and in and to the Application inclusive of any and all priority rights derived therefrom for any and all countries in the world, and in and to any and all Letters Patent issuing in any and all countries in the world, to be granted for said inventions and discoveries based on said Application or on patent applications filed in any country claiming priority from said Application;

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we the Assignors, do hereby sell, assign, transfer, and set over unto the Assignee, its successors and assigns, our entire right, title, and interest in and to the inventions and discoveries disclosed in the Application, and in and to the Application and any continuations or divisions thereof and all priority rights derived therefrom, and in and to any and all patent applications and any continuations or divisions thereof filed in any country claiming priority from the Application, and in and to all Letters Patent which may be granted upon the Application or upon patent applications filed in any and all countries in the world including the United States of America, claiming priority from the Application, and in and to any and all reissues, substitutions, or prolongations thereof; the same to be held and enjoyed by the Assignee for its own use and behoof, and for the use and behoof of its successors and assigns, to the full end of the term or terms for which said Letters Patent, or reissues, substitutions, or prolongations thereof may be granted, as fully and entirely as the same would have been held and enjoyed by us had this assignment and sale not been made;

AND we hereby agree that, upon request, and without further consideration, but at the expense of the Assignee, we will communicate to the Assignee or its representatives or nominees any facts known to us respecting said inventions and discoveries and testify in any legal proceedings, sign all lawful papers, execute all divisional, continuing, and reissue applications, make all rightful oaths and generally aid the Assignee, its successors, assigns, and nominees to obtain and enforce proper patent protection for said inventions and discoveries in all countries, and we further agree to execute any and all further papers which may be necessary or desirable to vest or perfect the title of the Assignee, its successors and assigns, in and to said inventions and discoveries, and in and to any and all Letters Patent or reissues thereof which may be granted upon application in any and all countries in the world.

AND we hereby authorize and request any official whose duty it is to issue patents to issue each and every Letters Patent to be granted upon the aforesaid Application in any and all countries, and each and every reissue of said Letters Patent, to the Assignee, its successors and assigns, as the assignee of our entire right, title and interest therein, in accordance with this assignment.

THIS assignment made effective as of March 7, 2007.

SIGNED this 7<sup>th</sup> day of November, 2008.

Suzanne Cunningham  
WITNESS  
Suzanne Cunningham

Norman C. Beaulieu  
NORMAN C. BEAULIEU

SIGNED this \_\_\_\_\_ day of \_\_\_\_\_, 2008.

\_\_\_\_\_  
WITNESS

\_\_\_\_\_  
YUNFEI CHEN

AND we hereby agree that, upon request, and without further consideration, but at the expense of the Assignee, we will communicate to the Assignee or its representatives or nominees any facts known to us respecting said inventions and discoveries and testify in any legal proceedings, sign all lawful papers, execute all divisional, continuing, and reissue applications, make all rightful oaths and generally aid the Assignee, its successors, assigns, and nominees to obtain and enforce proper patent protection for said inventions and discoveries in all countries, and we further agree to execute any and all further papers which may be necessary or desirable to vest or perfect the title of the Assignee, its successors and assigns, in and to said inventions and discoveries, and in and to any and all Letters Patent or reissues thereof which may be granted upon application in any and all countries in the world.

AND we hereby authorize and request any official whose duty it is to issue patents to issue each and every Letters Patent to be granted upon the aforesaid Application in any and all countries, and each and every reissue of said Letters Patent, to the Assignee, its successors and assigns, as the assignee of our entire right, title and interest therein, in accordance with this assignment.

THIS assignment made effective as of March 7, 2007.

SIGNED this 7<sup>th</sup> day of November, 2008.

Suzanne Cunningham  
WITNESS

Norman C. Beaulieu  
NORMAN C. BEAULIEU

SIGNED this 10 day of November, 2008.

RC Stanton  
WITNESS

chen  
YUNFEI CHEN

