Atty. Docket No. I-2-0383.1US					
FORM PTO-1619A Expires 06/30/99 OMB 0681-0027	U.S. Department of Commerce Patent and Trademark Office PATENT				
RECORDATION FORM COVER SHEET					
PATENTS ONLY TO: The Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy(les).					
Submission Type	Conveyance Type				
X New	X Assignment Security Agreement				
Resubmission (Non-Recordation) Document ID#	License Change of Name				
Correction of PTO Error Reel # Frame #	Merger U.S. Government				
Corrective Document	(For Use ONLY by U.S. Government Agencies) Departmental File Secret File				
Reel # Frame #	Mark if additional names of conveying parties attached Execution Date				
Conveying Party(ies)	Month Day Year 03212003				
Name (line 1) PAUL MARINIER					
Name (line 2) Second Party	Execution Date Month Day Year				
Name (line 1) VINCENT ROY	03212003				
Name (line 2)					
Receiving Party	Mark if additional names of receiving parties attached				
Name (line 1) INTERDIGITAL TECHNOLOGY CORPORATION If document to be recorded is an assignment and the receiving party is not					
Name (line 2) domiciled in the United States, an appointment					
Address (line 1) 300 DELAWARE AVENUE, SUITE 527 of a domestic representative is attached. (Designation must be a					
Address (line 2)	separate document from Assignment.)				
Address (line 3) WILMINGTON	DE				
Domestic Representative Name and	Address Enter for the first Receiving Party only.				
Name					
Address (line 1)					
Address (line 2)					
Address (line 3)					
Address (line 4)					
	FOR OFFICE USE ONLY				

Public burden reporting for this collection of information is estimated to average approximately 30 minutes per Cover Sheet to be recorded, including time for reviewing the document and gathering the data needed to complete the Cover Sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Chief Information Officer, Washington, D.C. 20231 and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Paperwork Reduction Project (0651-0027), Washington, D.C. 20503. See OMB Information Collection Budget Package 0651-0027, Patent and Trademark Assignment Practice. DO NOT SEND REQUESTS TO RECORD ASSIGNMENT DOCUMENTS TO THIS ADDRESS.

Mail documents to be recorded with required cover sheet(s) information to:

Commissioner of Patents and Trademarks, Box Assignments , Washington, D.C. 20231

Name GERALD B. HALT, JR. Address (line 1) VOLPE AND KOENIG, P.C. Address (line 2) UNITED PLAZA, SUITE 1600 Address (line 3) 30 SOUTH 17TH STREET Address (line 4) PHILADELPHIA, PA 19103 Pages Enter the total number of pages of the attached conveyance document including any attachments. Application Number(s) or Patent Number(s) Mark if additional numbers attached Enter either the Patent Application Number or the Patent Number (PO NOT ENTER BOTH numbers for the same property). Patent Application Number(s) Patent Number (PO NOT ENTER BOTH numbers for the same property). Patent Application Number(s) Patent Application, enter the date the patent application was signed by the first named executing inventor. Patent Cooperation Treaty (PCT) Enter PCT application number only if a U.S. Application Number PCT PCT PCT PCT				
Address (line 2) UNITED PLAZA, SUITE 1600 Address (line 3) 30 SOUTH 17TH STREET Address (line 4) PHILADELPHIA, PA 19103 Pages Enter the total number of pages of the attached conveyance document # 3 including any attachments. Application Number(s) or Patent Number(s) Mark if additional numbers attached Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property). Patent Application Number(s) Patent Number(s) 10334459 Patent Number(s) If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor. Patent Cooperation Treaty (PCT) Enter PCT application number				
Address (line 2) UNITED PLAZA, SUITE 1600 Address (line 3) 30 SOUTH 17TH STREET Address (line 4) PHILADELPHIA, PA 19103 Pages Enter the total number of pages of the attached conveyance document # 3 including any attachments. Application Number(s) or Patent Number(s) Mark if additional numbers attached Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property). Patent Application Number(s) Patent Number(s) 10334459 Patent Number(s) If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor. Patent Cooperation Treaty (PCT) Enter PCT application number				
Address (line 3) 30 SOUTH 17TH STREET Address (line 4) PHILADELPHIA, PA 19103 Pages Enter the total number of pages of the attached conveyance document including any attachments. Application Number(s) or Patent Number(s) Mark if additional numbers attached Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property). Patent Application Number(s) Patent Number(s) 10334459 If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor. Patent Cooperation Treaty (PCT) Enter PCT application number				
Pages Enter the total number of pages of the attached conveyance document including any attachments. Application Number(s) or Patent Number(s)	l			
Pages Enter the total number of pages of the attached conveyance document including any attachments. Application Number(s) or Patent Number(s)	<u>_</u>			
Including any attachments. Application Number(s) or Patent Number(s) Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property). Patent Application Number(s) Patent Number(s) 10334459 If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor. Patent Cooperation Treaty (PCT) Enter PCT application number				
Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property). Patent Application Number(s) Patent Number(s) If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor. Patent Cooperation Treaty (PCT) Enter PCT application number				
Patent Application Number(s) 10334459 If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor. Patent Cooperation Treaty (PCT) Enter PCT application number				
If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor. Patent Cooperation Treaty (PCT) Enter PCT application number				
If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor. Patent Cooperation Treaty (PCT) Enter PCT application number	_			
signed by the first named executing inventor. Patent Cooperation Treaty (PCT) Enter PCT application number				
signed by the first named executing inventor. Patent Cooperation Treaty (PCT) Enter PCT application number				
signed by the first named executing inventor. Patent Cooperation Treaty (PCT) Enter PCT application number				
signed by the first named executing inventor. Patent Cooperation Treaty (PCT) Enter PCT application number	Year			
Enter PCT application number				
Enter PCT application number				
only if a U.S. Application Number PCT PCT PCT				
has not been assigned.				
Number of Properties Enter the total number of properties involved. # 1				
Fee Amount for Properties Listed (37 CFR 3.41): \$ 40.00]			
Method of Payment: Enclosed Deposit Account X Deposit Account				
(Enter for payment by deposit account or if additional fees can be charged to the account.) InterDigital Communications Corporation's Deposit Account Number: # 09-0435]			
Authorization to charge additional fees: Yes X No				
Statement and Signature				
To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Charges to deposit account are authorized, as				
indicated herein.				
GERALD B. HALT, JR. 4/3/63				
Name of Person Signing Signature Date Reg. No. 37,633				

PATENT REEL: 013535 FRAME: 0552

ASSIGNMENT

Paul Marinier, residing at 1805 Stravinski, Brossard, Quebec J4X 2J7, a citizen of Canada; and Vincent Roy, residing at 6254 De La Roche, Montreal, Quebec H2S 2E1, a citizen of Canada, (hereafter jointly and severally referred to as the undersigned), are the inventors of

MAXIMIZING ALLOWABLE FLEXIBLE SLOT-TO CELL

ALLOCATION BY USING ADAPTIVE ANTENNAS IN A TDD SYSTEM for which the undersigned have executed an application for United States Letters Patent, U.S. Patent Application No. 10/334,459, filed December 30, 2002.

The undersigned hereby authorize assignee or assignee's representative to insert the Application Number and the filing date of this application if they are unknown at the time of execution of this assignment.

InterDigital Technology Corporation, a Delaware corporation, having a place of business at 300 Delaware Avenue, Suite 527, Wilmington, DE 19801, (hereafter referred to as the assignee), is desirous of acquiring the entire right, title and interest in said invention, all applications for and all letters patent issued on said invention.

For good and valuable consideration, the receipt and sufficiency of which is acknowledged, the undersigned, intending to be legally bound, do hereby sell, assign and transfer to the assignee and assignee's successors, assigns and legal representatives the entire right, title and interest in said invention and all patent applications thereon, including, but not limited to, the application for United States Letters Patent entitled as above, and all divisions and continuations thereof, and in all letters patent, including all reissues and reexaminations thereof, throughout the world, including the right to claim priority under the Paris Convention or other treaty.

It is agreed that the undersigned shall be legally bound, upon request of the assignee, to supply all information and evidence relating to the making and practice of said invention, to testify in any legal proceeding relating thereto, to execute all instruments proper to patent the invention throughout the world for the benefit of

PATENT REEL: 013535 FRAME: 0553 the assignee, and to execute all instruments proper to carry out the intent of this instrument. The undersigned warrant that the rights and property herein conveyed are free and clear of any encumbrance. EXECUTED under seal on this 2 15th day of _______, 200\$3 C.A. Montreel (Place) Witness: (L.S.) Paul Marinier State of SS. County of On this 21st day of harch, 2002 before me personally appeared Paul Marinier, to me known to be the person described herein and who executed the foregoing instrument, and acknowledged that he executed the same knowingly and willingly and for the purposes therein contained. Witness my hand and Notarial seal the day and year immediately above written. Notary Public My Commission Expires:

> PATENT REEL: 013535 FRAME: 0554

NOVEMBER 2005

EXECUTED under seal on this <u>21</u>	day of _ March	, 200ध्र
at	•	
(Place)		
Witness:		
- Caeline Audet	Vincent Roy	(L.S.)
State of		٠.
County of		·
On this <u>arth</u> day of <u>Harch</u>	, 2002 before me personal	ly appeared
Vincent Roy, to me known to be the person foregoing instrument, and acknowledged	on described herein and who contains the executed the same known	owingly and
willingly and for the purposes therein con-	tained.	
Witness my hand and Notarial se	eal the day and year immed	iately above
written.	Septiment & 17	Base/mentellog
	Notary Public 79	ABOALON 089
My Commission Expires:	Notary Public 79 (<i>§</i> /

PATENT REEL: 013535 FRAME: 0555

G.A.

3 of 3

RECORDED: 04/02/2003

NOVEHBER 2005