

## PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
Mingquan WU	05/29/2008
Hang LIU	05/29/2008
RECEIVING PARTY DATA	
Name:	Thomson Licensing
Street Address:	1-5 rue Jeanne d'Arc
City:	Issy Les Moulineaux
State/Country:	FRANCE
Postal Code:	F-92130
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	12988961
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ATTORNEY DOCKET NUMBER:	PU080044 US PCT
NAME OF SUBMITTER:	Catherine A. Cooper
Signature:	/Catherine A. Cooper, Reg. 40,877/
Date:	06/18/2013
Total Attachments: 2 source=PU080044 US RECORDATION OF ASSIGNMENT#page1.tif source=PU080044_Assignment#page1.tif	

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CUSTOMER NO.: 24498

Docket No.: PU080044 US PCT

FORM PTO-1595  
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1. Name of conveying party(ies): <b>Mingquan WU, Hang LIU</b>		2. Name and address of receiving party(ies): Name: <b>THOMSON LICENSING</b>	
Additional name(s) of conveying party(ies) attached: <input checked="" type="checkbox"/> No		Street Address: <b>1-5 rue Jeanne d'Arc F-92130 ISSY LES MOULINEAUX, FRANCE</b>	
3. Nature of conveyance: <input checked="" type="checkbox"/> Assignment Security Agreement Other _____		Additional name(s) & address(es) attached? <input checked="" type="checkbox"/> No	
Execution Date: <b>5/29/2008; respectively</b>			
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:			
A. Patent Application No.(s): <b>12/988,961</b>		B. Patent No.(s)	
Additional numbers attached? _____		Yes No <input checked="" type="checkbox"/>	
5. Name and address of party to whom correspondence concerning document should be mailed: Name: <b>ROBERT D. SHEDD</b> Internal Address: <b>PATENT OPERATIONS THOMSON LICENSING LLC</b>		6. Total number of applications and patents involved: <u>1</u>	
Street or PO Address: <b>Two Independence Way, Suite No. 200</b>		7. Total Fee (37 CFR 3.41): <b>\$40.00</b> ____ Enclosed <input checked="" type="checkbox"/> Authorized to be charged to deposit account	
City: <b>PRINCETON</b> State: <b>NEW JERSEY</b> Zip: <b>08540-6620</b>		8. Deposit account number: <b>07-0832</b>	

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## 9. 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.*Catherine A. Cooper  
Name of Person Signing/Catherine A. Cooper/  
SignatureJune 18, 2013  
Reg. No. **40,877** DateTotal number of pages including cover sheet, attachments, and document 2  
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PATENT  
REEL: 030635 FRAME: 0938

# **ASSIGNMENT AND AGREEMENT IN AN APPLICATION FOR LETTERS PATENT OF THE UNITED STATES OF AMERICA**

I hereby declare that I am the sole inventor (if only one inventor is named below) or one of 2 joint inventors (if plural inventors are named below) of the inventions relating to METHOD AND APPARATUS FOR MULTICAST TREE MANAGEMENT IN MULTI-HOP RELAY COMMUNICATION SYSTEM

described in an Application for Patent filed on April 22, 2008 under Serial No. PCT/US08/05169 and described in the file associated with Docket No. PU080044, listed above or, if not identified here by filing date and serial number or by the Docket Number listed above, executed by me on even date with my execution of this Assignment/Agreement.

For valuable consideration received, I hereby sell, assign and transfer to Thomson Licensing, a corporation duly organized and existing under the laws of the country of France, its successors, and assigns my entire right, title and interest, for all countries in and to said inventions, and all the rights and privileges under any and all Letters Patent that may be granted therefor, and any divisions, continuations, reissues and extensions thereof.

I agree that, when requested, I will, without charge to said corporation but at its expense, sign all papers, take all rightful oaths, make all rightful declarations and do all acts which may be necessary, desirable or convenient for securing and maintaining patents or other forms of protection for said inventions in any and all countries and for vesting title thereto in said corporation, its successors, assigns or nominees.

I agree that I will communicate to said corporation or its representatives any facts known to me respecting said inventions and when requested by said corporation and at its expense will testify in any legal proceedings, and generally do everything possible to aid said corporation, its successors, assigns and legal representatives or nominees, to obtain or enforce proper protection for said inventions in any and all countries.

I authorize and empower said corporation, its successors, assigns or nominees, to make application for patent or other form of protection for said inventions in its or their own name, or in my/our name, in any and all countries and to invoke and claim for any application for patent or other form of protection for said inventions filed by it or them, the benefit of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it, and to invoke and claim such right of priority without further written or oral authorization from me.

I hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any assignment, consent to file or like document which may be required in any country for any purpose and more particularly in proof of the right of the said corporation or its successors, assigns or nominees to apply for patent or other proper protection for said inventions, and to claim the aforesaid benefits of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it.

I covenant with Thomson Licensing, its successors, assigns, legal representatives, and nominees, that to the best of my knowledge the right, title and interest herein conveyed by me are free and clear of any encumbrance, and that I have full right to convey the same as herein expressed.

Signed at	<u>Mingquan Wu</u>	Date	<u>5/29/08</u>
Inventor (1)	<u>Mingquan WU</u> (Type or Print)		<u>Mingquan Wu</u> (Signature in Full. No initials.)
Post Office Address	<u>10 Stonelea Drive, Princeton, NJ 08550</u>		
1st Witness	<u>Tiffany Conasco</u> (Type or Print)		<u>Tiffany Conasco</u> (Signature in Full. No initials.)
2nd Witness	<u>Curtis M. Moring</u> (Type or Print)		<u>Curtis M. Moring</u> (Signature in Full. No initials.)
Signed at	<u>Hang LIU</u>	Date	<u>5/29/08</u>
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Post Office Address	<u>486 Keating Drive, Yardley, Pennsylvania 19067</u>		
1st Witness	<u>Tiffany Conasco</u> (Type or Print)		<u>Tiffany Conasco</u> (Signature in Full. No initials.)
2nd Witness	<u>Curtis M. Moring</u> (Type or Print)		<u>Curtis M. Moring</u> (Signature in Full. No initials.)
Signed at		Date	
Inventor (3)			
Post Office Address			
1st Witness			
2nd Witness			

After this Assignment has been recorded please RETURN to:

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THOMSON Licensing LLC  
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Princeton, NJ 08543-5312