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U.S. DEPARTMENT OF COMMERCE
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# ATION FORM COVER SHEET

PATENTS ONLY To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below. 1. Name of conveying party(ies) 2. Name and address of receiving party(ies) Jian Huang Name: Morgan Stanley Internal Address: Additional name(s) of conveying party(ies) attached? \_\_\_Yes ✓ No 3. Nature of conveyance/Execution Date(s): Street Address: 1585 Broadway Execution Date(s) November 6, 2007 ✓ Assignment Merger City: New York J Security Agreement Change of Name \_ Joint Research Agreement State: New York Government Interest Assignment Country: USA Zip: 10036 Executive Order 9424, Confirmatory License Other Additional name(s) & address(es) attached? Wes Wo 4. Application or patent number(s): This document is being filed together with a new application. A. Patent Application No.(s) B. Patent No.(s) 11/983156 Yes ✓ No Additional numbers attached? 5. Name and address to whom correspondence 6. Total number of applications and patents concerning document should be mailed: involved: 1 Name: Mark G. Knedeisen, Esq. 7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00 Internal Address: Kirkpatrick & Lockhart Preston Gates Authorized to be charged by credit card Ellis LLP Authorized to be charged to deposit account **✓** Enclosed Street Address: Henry W. Oliver Building None required (government interest not affecting title): 535 Smithfield Street 8. Payment Information City: Pittsburgh a. Credit Card Last 4 Numbers Zip:15222-2312 State: PA Expiration Date Phone Number: (412) 355-6342 b. Deposit Account Number 11-1110 Fax Number: (412) 355-6501 Authorized User Name Mark G. Knedeisen -Email Address: 9. Signature: November 7, 2007 Date Total number of pages including cover Mark G. Knedeisen sheet, attachments, and documents: Name of Person Signing

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# ASSIGNMENT OF APPLICATION FOR PATENT

### WHEREAS:

Jian Huang, residing at 973 Columbus Avenue, Apt. 1A, New York, New York 10025, a citizen of the P.R. of China

(hereinafter referred to as ASSIGNOR), has made an invention or discovery entitled:

# **BOND OPTION MODELING**

for which application for Letters Patent of the United States is attached hereto, and

### WHEREAS:

Morgan Stanley, a Delaware corporation with an office at 1585 Broadway, New York, New York 10036 (hereinafter referred to as ASSIGNEE), is desirous of acquiring the entire right, title and interest in, to and under said invention or discovery, and in, to and under said United States application, and in, to and under Letters Patent or similar legal protection to be granted thereon in the United States and in any and all foreign countries, and of confirming the same or any part thereof heretofore acquired by ASSIGNEE.

## NOW, THEREFORE:

In consideration of the payment by ASSIGNEE to ASSIGNOR of the sum of One Dollar (\$1.00) and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, ASSIGNOR hereby sells, assigns, transfers to and confirms in ASSIGNEE, its successors, legal representatives and assigns, the full and exclusive right, title and interest to said invention or discovery in the United States and its territorial possessions and in all foreign countries; and to said United States application and any and all other applications on said invention or discovery in whatsoever countries, including any continuations, divisions, substitutes or renewals; and to all Letters Patent, and all reissues, re-examinations, and extensions thereof, or similar legal protection in the United States and its territorial possessions and in any and all foreign countries to be obtained for said invention or discovery or upon said applications or any legal equivalent thereof in a foreign country for the full term or terms for which the same may be granted; and every priority right that is or may be predicated upon or arise from said invention or discovery, said applications and said Letters Patent,

- I, SAID ASSIGNOR, hereby authorize and request the Director of the United States Patent and Trademark Office, the Commissioner for Patents of the United States of America, any other United States Official, and/or any Official of any country or countries foreign to the United States of America whose duty it is to issue Letters Patent on applications as aforesaid, to issue or transfer all such Letters Patent for said invention or discovery to the ASSIGNEE, as assignee of the entire right, title and interest in, to and under the same, for the sole use and behalf of the ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.
- I, SAID ASSIGNOR, hereby covenant that I have full right to convey the entire right, title and interest herein sold, assigned, transferred, set over and confirmed, and that I have not executed and will not execute any agreement in conflict herewith:
- AND I, SAID ASSIGNOR, hereby further covenant and agree that the ASSIGNEE, its successors, legal representatives, or assigns, may apply for Letters Patent in any or all countries on said invention or discovery in my name or in the name of ASSIGNEE or otherwise as ASSIGNEE may deem advisable, and may claim the benefits of the International Convention or otherwise claim priority rights;
- AND I, SAID ASSIGNOR, hereby further covenant that I will, at any time when called upon to do so by the ASSIGNEE, its successors, legal representatives, or assigns: communicate to the ASSIGNEE, its successors, legal representatives, or assigns, as the case may be, any facts known to me respecting said invention or discovery or the

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PATENT REEL: 020149 FRAME: 0631 history thereof, including without limitation the furnishing of any and all documents, photographs, models, samples and other physical exhibits in my control which may be useful for establishing the facts of my conception, disclosures, and reduction to practice of said invention or discovery; execute and deliver to the ASSIGNEE, its successors, legal representatives, or assigns, as the case may be, any and all lawful papers that may be necessary or desirable to perfect the title to the said invention or discovery, the said applications and the said Letters Patent in the ASSIGNEE, its successors, legal representatives and assigns; if reissues, re-examinations, or other like proceedings involving the said Letters Patent or disclaimers relating thereto, or divisions, continuations, or refilings of the said applications, or any thereof, shall hereafter be desired by the ASSIGNEE, its successors, legal representatives, or assigns, I will sign all lawful papers, make all rightful oaths, execute and deliver all such disclaimers and all divisional, continuation, re-examination and reissue applications so desired, and do all lawful acts requisite for the application for such reissues, re-examinations and the procuring thereof and for the filing of such disclaimers and such applications; and generally do everything possible, including testifying in any legal proceedings, signing all lawful papers and making all rightful oaths, to aid the ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said invention or discovery in all countries, and without further compensation but at the expense of the ASSIGNEE, its successors, legal representatives and assigns.

IN WITNESS WHEREOF, I have hereunto affixed my signature on the date and year opposite my signature.

Assignor's Sign	ature:	-	Name /	7	November 6. 2	
Assignor's Type	ed	Jian			Huang	
			irst Name	Middle Initial	Last Name	
Citizenship: P.	R. Chin	a				
STATE OF	)					
COUNTY OF	\$\$.: )					
On this day of November appeared Tran Huana described in and who executed the foregoing Assignment, the same as his/her-own voluntary act and deed.				, before me, the undersigned authority, personally, known and known to me to be the individual who is and who duly acknowledged to me that he/she executed		
Notary Public	7		t and uccu.			

ZUHAUR NASHUER

Notary Public - State of New York No. 101NA6170404 Qualified in Queens County Commission Expires July 9, 2011

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RECORDED: 11/07/2007