


PTO-1595		RECORDATION FORM COVER SHEET		U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office	
PATENTS ONLY					
To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.					
1	Name of conveying party(ies): Paul Shelley executed on 06-25-2008 Greg Werner executed on 06-25-2008	2	Name and address of receiving party(ies): THE BOEING COMPANY 100 N RIVERSIDE CHICAGO, IL 60606-1596		
3	Nature of conveyance: <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other: Execution Date: <u>06-25-2008</u>	Additional name(s) & address(es) attached 9 Yes : No			
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: <u>06-28-2008</u>				
	A. Patent Application No(s). <u>12/164025</u>		B. Patent No(s)		
Additional numbers attached? 9 Yes : No					
5	Name and address of party to whom correspondence concerning document should be mailed: RANDY W. TUNG Tung & Associates 838 W. Long Lake Road Suite 120 Bloomfield Hills, Michigan 48302	6	Total number of applications and patents involved: <u>1</u>		
		7	Total fee (37 CFR 3.41) \$40.00		
			9 Enclosed : Authorized to charge credit card (w/filing fee)		
		8	Deposit Account Number: (Attach duplicate copy of this page if paying by deposit account)		
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9	Statement and signature. <i>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.</i> Randy W. Tung Name of Person Signing Registration No. 31,311				
	 Signature		<u>6/28/08</u> Date		
Total number of pages including cover sheet, attachments, and document :					

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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PATENT
REEL: 021168 FRAME: 0175

OP \$40.00 12164025

Please direct all correspondence to: 55749

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ASSIGNMENT

WHEREAS, Paul Shelley, residing at 8914 Butte Terrace Southwest, Lakewood, Washington 98498-3696, Greg Werner, residing at 16009 136th Avenue East, Puyallup, Washington 98374, FN LN, residing at , FN LN, residing at , have invented certain new and useful Inventions and improvements (hereinafter "Invention") described in the United States patent application entitled: **Sample Preparation Methods and Device for Portable IR Spectroscopy Measurements of UV and Thermal Effect** , for which Assigner is making or has made application for LETTERS PATENT OF THE UNITED STATES, which application has been duly executed by Assigner concurrently herewith; or filed on _____ as Application No. _____;

WHEREAS, the Boeing Company, a corporation organized and existing under the laws of the State of Delaware, USA, having a place of business at 100 N. Riverside, Chicago, Illinois 60606-1596, USA (hereinafter called "the Assignee"), is desirous of acquiring the entire right, title and interest in and to the Invention within the United States of America and its territorial possessions and all foreign countries, and in and to any United States or foreign LETTERS PATENT that may be granted therefore;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, Assigner has assigned, sold and transferred, and does assign, sell and transfer to the Assignee, its successors and assigns, the entire right, title and interest in and to the Invention within the United States of America and its territorial possessions and all foreign countries, and in and to any LETTERS PATENT of the United States and foreign countries, including utility models, inventor's certificates and like government grants that may be granted for any and all portions thereof, and in and to the patent application identified above and applications for patent filed for the Invention in all foreign countries and all provisional, divisional, reissue, continuation, continuation-in-part applications and extensions of any of the applications or patents or LETTERS PATENT identified herein, and the right to apply for LETTERS PATENT in foreign countries with full benefit of such priorities as may now or hereafter be granted to Assignor by local laws or by treaty, including any international convention, for the protection of industrial property, together with the right to extend the protection of the United States LETTERS PATENT to the various territorial possession now owed or which may be hereafter acquired by the United States of America. Assignee will hold all rights for its own use and benefit and for the use and benefit of its successors or assigns to the full end of the term for which the LETTERS PATENT may be granted, as fully and entirely as the same would have been held and enjoyed by Assignor if this assignment and sale had not been made. Assignor requests and authorizes the Commissioner of the U.S. Patent and Trademark Office, and foreign counterparts officials of foreign patent offices, to issue respective LETTERS PATENT in the United States and foreign countries when granted, in accordance with this assignment.



Assignor further covenants and agrees with the Assignee that Assignor has a full and unencumbered title to the Invention, which the Assignor warrants to the Assignee.

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Assignor further agrees that Assignor will, without demanding and further consideration therefore, at the request and expense of the Assignee, do all lawful and just acts, including the execution and acknowledgment of instruments, that may be or become necessary for obtaining, sustaining, extending, reissuing or reexamining United States and foreign LETTERS PATENT or the like for the Invention, and for maintaining and perfecting the Assignee's right to the Invention and LETTERS PATENT particularly in cases of interference conflict, opposition and litigation.

IN TESTIMONY WHEREOF, I/We have signed this Assignment on the date specified below:

	Date	<u>June 25, 2008</u>
Paul Shelley		
	Date	<u>June 25, 2008</u>
Greg Werner		

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ABSTRACT

A method of non-destructively determining the physical property of a material surface, the method including irradiating a surface with infrared energy over a spectrum of wavelengths; detecting said infrared energy reflected from said surface over said spectrum of wavelengths; performing multivariate calibration of said reflected infrared energy at a plurality of selected wavelengths including said spectrum of wavelengths; using results of said multivariate calibration to predict one or more physical properties of said model material; and, determining said one or more physical properties of said surface. Details are included for the case where uni-directional fiber CFRP materials are to be calibrated and predicted because special care must be taken for that material to insure the incident light from the spectrometer is at the proper orientation for calibration and for prediction of samples in question.