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Form PTO-1595  
(Rev. 03/01)  
OMB No. 0651-0027 (exp. 5/31/2002)

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U.S. DEPARTMENT OF COMMERCE  
U.S. Patent and Trademark Office

10/18/04

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof

## 1. Name of conveying party(ies):

Sujian J. Huang (July 16, 2004)  
Peter T. Cariveau (July 26, 2004)Additional name(s) of conveying party(ies)  
attached?☐ Yes ☒ No

## 3. Nature of Conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other

Execution Date: in parenthesis above

## 2. Name and address of receiving party(ies)

Name: Smith International, Inc.

Internal Address:

Street Address:

16740 Hardy Street

City: Houston

State: Texas

Zip: 77032

Additional name(s) &  
address(es) attached:☐ 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 new application is:

A. Patent Application No.(s):

10/888,358

B. Patent No.(s):

Additional numbers attached? ☐ Yes ☒ No5. Name and address of party to whom correspondence  
concerning document should be mailed:Name: Jonathan P. Osha  
OSHA & MAY L.L.P.

Internal Address: Atty. Dkt.: 05516/192001

Street Address:

1221 McKinney St., Suite 2800

City:  
Houston

State: TX Zip: 77010

6. Total number of applications and  
patents involved:

1

## 7. Total fee (37 CFR 3.41)

\$ 40.00

☐ Enclosed☐ Authorized to be charged to deposit account☒ Authorized to be charged to credit card  
(Form 2038 enclosed)

## 8. Deposit account number:

(Attach duplicate copy of this page if paying by deposit account)

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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.

T. Chyau Liang, 48,885

Name of Person Signing

Signature

Date

Total number of pages including cover sheet, attachments, and documents: 4

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV535683051US,  
in an envelope addressed to: MS Assignment Recordation Services, Director of the US Patent and Trademark Office, P.O. Box 1450,  
Alexandria, VA 22313-1450, on the date shown below.

Dated: October 18, 2004

Signature: Ava R. Brown (Ava R. Brown)

## **ASSIGNMENT – U.S. RIGHTS ONLY**

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned individual(s) (referred to herein as the "INVENTOR(S)") hereby assign, transfer, and set over to:

**SMITH INTERNATIONAL, INC.**

having the following address:

**16740 Hardy Street, Houston, Texas 77032**

(referred to herein as "COMPANY"), its successors, and assigns, the entire right, title, and interest for the United States of America (including without limitation its territories and possessions) in and to the invention known by the following title:

### **METHODS FOR MODELING, DISPLAYING, DESIGNING, AND OPTIMIZING FIXED CUTTER BITS**

for which the undersigned has/have executed an application for patent in the United States of America on or about this same day, together with said patent application, all divisions, continuations, continuations-in-part, reissues, and extensions thereof, and all United States Letters Patent which may be granted therefor. Such interest represents the entire ownership of said applications and Letters Patent when granted and is to be owned by COMPANY, its successors, and assigns, or their legal representatives, for the full and entire term for which such Letters Patent may be granted or extended, as fully and entirely as the same would have been enjoyed by the INVENTOR(S) if this assignment had not been made.

In addition, the undersigned INVENTOR(S) each hereby agrees:

1. To sign and execute any further documents which may be necessary or desirable, lawful, and proper in connection with the prosecution of all applications for patent(s) on the INVENTION in the United States, including without limitation said application and all divisions, continuations, continuations-in-part, amendments thereof, and all interference proceedings associated therewith, or otherwise necessary or desirable to secure the title thereto to COMPANY;
2. To execute all papers and documents and to perform all lawful acts which may be necessary in connection with claims to priority or otherwise under the International Convention for the Protection of Industrial Property or similar treaties or agreements;
3. To perform all lawful affirmative acts which may be necessary to obtain the grant of a valid and enforceable patent to COMPANY.

The undersigned INVENTOR(S) each hereby authorizes and requests the Commissioner of Patents and Trademarks in the United States to issue any and all Letters Patent resulting from said application, including without limitation any division, continuation, continuation-in-part, or reissue thereof to COMPANY.

The undersigned INVENTOR(S) each hereby grants to the firm of OSHA & MAY L.L.P. the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for the recordation of this document.

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**OSHA & MAY L.L.P.**

**PATENT  
REEL: 015909 FRAME: 0446**

IN WITNESS WHEREOF, this Assignment has been executed by each of the undersigned individuals on the date appearing by such individual's signature:

<u>7/16/04</u> Date	1 <sup>st</sup> Inventor Signature: <u>[Signature]</u> Print or Type Name: <u>Sujian HUANG</u>
 Date	Witness <u>Robin Chen</u> 2 <sup>nd</sup> Inventor Signature: _____ Print or Type Name: <u>Peter T. CARIVEAU</u>
 Date	3 <sup>rd</sup> Inventor Signature: _____ Print or Type Name: _____
 Date	4 <sup>th</sup> Inventor Signature: _____ Print or Type Name: _____

70936\_1

This Assignment may be signed before either:  
(a) a Notary Public for one of the States of the United States, or (b) two witnesses who sign below:

<b>NOTARY PUBLIC</b>	State of _____	
	County of _____	
	Before me personally appeared:	
	_____ 1 <sup>st</sup> Inventor	_____ 2 <sup>nd</sup> Inventor
	_____ 3 <sup>rd</sup> Inventor	_____ 4 <sup>th</sup> Inventor
	each of whom acknowledged the foregoing instrument to be a free act and deed and also represented that he/she is authorized to execute this Assignment.	
	Dated: _____	Notary Public My commission expires: _____

When this Assignment is not filed concurrently with the patent application, the following identifying information may be added after execution:

U.S. Application Serial No.: 10/888,358  
Filing Date: July 9, 2004

IN WITNESS WHEREOF, this Assignment has been executed by each of the undersigned individuals on the date appearing by such individual's signature:

_____	1 <sup>st</sup> Inventor Signature: _____
Date	Print or Type Name: <u>Sujian HUANG</u>
<u>7-26-04</u>	2 <sup>nd</sup> Inventor Signature: <u><i>Peter T. Cariveau</i></u>
Date	Print or Type Name: <u>Peter T. CARIVEAU</u>
_____	3 <sup>rd</sup> Inventor Signature: _____
Date	Print or Type Name: _____
_____	4 <sup>th</sup> Inventor Signature: _____
Date	Print or Type Name: _____

70936\_1

This Assignment may be signed before either:  
(a) a Notary Public for one of the States of the United States, or (b) two witnesses who sign below:

NOTARY PUBLIC

State of Texas  
County of Harris

Before me personally appeared:

1<sup>st</sup> Inventor

2<sup>nd</sup> Inventor

3<sup>rd</sup> Inventor

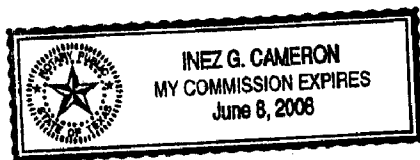
4<sup>th</sup> Inventor

each of whom acknowledged the foregoing instrument to be a free act and deed and also represented that he/she is authorized to execute this Assignment.

Dated: 7/26/04

*Inez G. Cameron*  
Notary Public

My commission expires: 6-8-08



When this Assignment is not filed concurrently with the patent application, the following identifying information may be added after execution:

U.S. Application Serial No.: 10/888,358  
Filing Date: July 9, 2004

ASSIGNMENT - U.S. RIGHTS ONLY

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RECORDED: 10/18/2004

PATENT  
REEL: 015909 FRAME: 0448