

PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table border="1"><thead><tr><th>Name</th><th>Execution Date</th></tr></thead><tbody><tr><td>Frank J. Bis</td><td>01/08/2008</td></tr><tr><td>Richard W. Givens</td><td>01/10/2008</td></tr><tr><td>James J. Reuther</td><td>01/08/2008</td></tr><tr><td>Walter G. VanCleave</td><td>01/10/2008</td></tr></tbody></table>	Name	Execution Date	Frank J. Bis	01/08/2008	Richard W. Givens	01/10/2008	James J. Reuther	01/08/2008	Walter G. VanCleave	01/10/2008	
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Frank J. Bis	01/08/2008										
Richard W. Givens	01/10/2008										
James J. Reuther	01/08/2008										
Walter G. VanCleave	01/10/2008										
RECEIVING PARTY DATA											
Name:	Battelle Memorial Institute										
Street Address:	505 King Avenue										
City:	Columbus										
State/Country:	OHIO										
Postal Code:	43201-2693										
PROPERTY NUMBERS Total: 1											
<table border="1"><thead><tr><th>Property Type</th><th>Number</th></tr></thead><tbody><tr><td>PCT Number:</td><td>US0717973</td></tr></tbody></table>	Property Type	Number	PCT Number:	US0717973							
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PCT Number:	US0717973										
CORRESPONDENCE DATA											
Fax Number:	(614)424-3864										
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>											
Phone:	(614) 424-3298										
Email:	kooneb@battelle.org										
Correspondent Name:	Brenda Block Koone										
Address Line 1:	505 King Avenue										
Address Line 2:	Battelle Memorial Institute										
Address Line 4:	Columbus, OHIO 43201-2693										
ATTORNEY DOCKET NUMBER:	15292PCT										
NAME OF SUBMITTER:	Brenda Block Koone										
Total Attachments: 3											

OP \$40.00 US0717973

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PATENT
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Frank J. Bis
Richard W. Givens
James J. Reuther
Walter G. VanCleave
to
Battelle Memorial Institute

WHEREAS we, Frank J. Bis, of Dublin, in the County of Franklin, and State of Ohio, Richard W. Givens, of Columbus, in the County of Franklin, and State of Ohio, James J. Reuther, of Worthington, in the County of Franklin, and State of Ohio, and Walter G. VanCleave, of Pickerington, in the County of Fairfield, and State of Ohio, have made certain inventions in **MINER COMMUNICATION AND LOCATION SYSTEM**, for which an International Application designating the United States was filed on **14 August 2007** and was allocated International Application No. **PCT/US07/17973**; and

WHEREAS, Battelle Memorial Institute, a corporation of Ohio, having a place of business at 505 King Avenue, Columbus, Ohio, herein called "ASSIGNEE", is desirous of acquiring our entire right, title, and interest in said invention and application therefor, and in any patent or patents to be obtained therefor;

NOW, THEREFORE, To All Whom It May Concern, be it known that, for and in consideration of the sum of One Dollar (\$1.00), and other good and valuable considerations, the receipt of which is hereby acknowledged, we have sold, assigned, and transferred, and by these presents do sell, assign, and transfer unto the said Assignee, our entire right, title, and interest in and to the invention shown, described, or claimed therein, and the full and exclusive right and title to the said application executed by us, preparatory to obtaining Letters Patent of the United States therefor; and in and to any extensions, reissues, divisions, or renewals thereof; and we do hereby authorize and request the Commissioner of Patents or other proper Officer, to issue such Letters Patent, or any of them, to the said Assignee, as the assignee of our entire right, title, and interest in and to the same for the sole use and behoof of the said Assignee, and its successors or assigns.

And we further covenant and agree that we will, at the request and expense of the said Assignee, execute such other and further assurances of title as may be necessary or proper to fully convey the interest herein sought to be conveyed; that we will, at the request and expense of the said Assignee, execute such application papers as may be desired by the said Assignee for the filing of any division or renewal of the application herein conveyed, or for the reissues or extensions of any Letters Patent that may be granted upon said application, and will execute such Supplemental Oaths and Preliminary Statements, or other papers as desired by the said Assignee.

And we further assign unto the said Assignee our whole right, title, and interest to the invention disclosed in the application throughout all countries foreign to the United States, and do hereby authorize the said Assignee to apply for patents therefor in its own name in countries where such procedure is proper and to claim the benefit of the International Convention and do agree to execute applications for the said invention in the several countries where it is necessary that the same be executed by the inventors, and to execute assignments of such applications and the patents to be obtained therefor to the said assignee, as well as all other necessary papers.

Frank J. Bis
Richard W. Givens
James J. Reuther
Walter G. VanCleave
to
Battelle Memorial Institute

IN TESTIMONY WHEREOF I have hereunto set my hand and affixed my seal at Columbus, Ohio this
8 day of JANUARY, 2008.


Frank J. Bis

STATE OF OHIO)
:SS
COUNTY OF FRANKLIN)


This 8th day of Jan., 2008 before me, a Notary Public in and for the County aforesaid, personally appeared Frank J. Bis, personally known to me and known to be the person described in and who executed the foregoing assignment and acknowledged the same to be his voluntary act and deed, and that he executed the same for the uses and purposes therein set forth.



BRENDA BLOCK KOONE
NOTARY PUBLIC, STATE OF OHIO
MY COMMISSION EXPIRES MAY 18, 2008

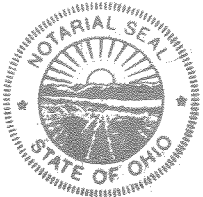

Notary Public

IN TESTIMONY WHEREOF I have hereunto set my hand and affixed my seal at Columbus, Ohio this
10th day of JAN, 2008.



Richard W. Givens

STATE OF OHIO)
:SS
COUNTY OF FRANKLIN)

This 10th day of Jan., 2008, before me, a Notary Public in and for the County aforesaid, personally appeared Richard W. Givens, personally known to me and known to be the person described in and who executed the foregoing assignment and acknowledged the same to be his voluntary act and deed, and that he executed the same for the uses and purposes therein set forth.



BRENDA BLOCK KOONE
NOTARY PUBLIC, STATE OF OHIO
MY COMMISSION EXPIRES MAY 18, 2008


Notary Public

ASSIGNMENT

15292PCT

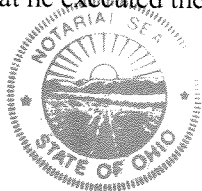
Frank J. Bis
Richard W. Givens
James J. Reuther
Walter G. VanCleave
to
Battelle Memorial Institute

IN TESTIMONY WHEREOF I have hereunto set my hand and affixed my seal at Columbus, Ohio this
8th day of January, 2008.

James J. Reuther
James J. Reuther

STATE OF OHIO)
:SS
COUNTY OF FRANKLIN)

This 8th day of Jan., 2008, before me, a Notary Public in and for the County aforesaid,
personally appeared James J. Reuther, personally known to me and known to be the person described in and
who executed the foregoing assignment and acknowledged the same to be his voluntary act and deed, and
that he executed the same for the uses and purposes therein set forth.



BRENDA BLOCK KOONE
NOTARY PUBLIC, STATE OF OHIO
MY COMMISSION EXPIRES MAY 18, 2008

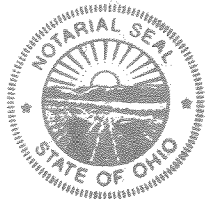
Brenda Block Koone
Notary Public

IN TESTIMONY WHEREOF I have hereunto set my hand and affixed my seal at Columbus, Ohio this
10 day of January, 2008.

Walter G. VanCleave
Walter G. VanCleave

STATE OF OHIO)
:SS
COUNTY OF FRANKLIN)

This 10th day of Jan., 2008, before me, a Notary Public in and for the County aforesaid,
personally appeared Walter G. VanCleave, personally known to me and known to be the person described in
and who executed the foregoing assignment and acknowledged the same to be his voluntary act and deed,
and that he executed the same for the uses and purposes therein set forth.



BRENDA BLOCK KOONE
NOTARY PUBLIC, STATE OF OHIO
MY COMMISSION EXPIRES MAY 18, 2008

Brenda Block Koone
Notary Public