

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT2889046

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
MARK DRAPER	06/02/2014
JEFFREY EGGERS	05/27/2014
SMART INFORMATION FLOW TECHNOLOGIES	06/04/2014
JOSHUA HAMELL	06/02/2014
ROBERT SHAW	05/28/2014
JXT APPLICATIONS, INC.	05/18/2014
HEATH RUFF	06/06/2014
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	Government of the United States as Represented by the Secretary of the Air Force
<b>Street Address:</b>	2240 B. Street
<b>Internal Address:</b>	Building 11, Area B
<b>City:</b>	Wright-Patterson AFB
<b>State/Country:</b>	OHIO
<b>Postal Code:</b>	45433-7109
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	14298992
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(937)255-3733
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Email:</b>	pamela.kuns@us.af.mil
<b>Correspondent Name:</b>	PAMELA KUNS
<b>Address Line 1:</b>	2240 B. STREET
<b>Address Line 2:</b>	BUILDING 11, AREA B
<b>Address Line 4:</b>	WRIGHT-PATTERSON AFB, OHIO 45433-7109
<b>ATTORNEY DOCKET NUMBER:</b>	AFD 1339
<b>NAME OF SUBMITTER:</b>	JASON SOPKO
<b>SIGNATURE:</b>	/Jason Sopko/

<b>DATE SIGNED:</b>	06/09/2014
	This document serves as an Oath/Declaration (37 CFR 1.63).
<b>Total Attachments: 8</b> source=Draper_Dec_Assign_Signed#page1.tif source=Eggers_Dec_Assign_Signed#page1.tif source=Hamell_Dec_Assign_Signed#page1.tif source=Hamell_Dec_Assign_Signed#page2.tif source=Hamell_Dec_Assign_Signed#page3.tif source=Ruff_Dec_Assign_Signed_EMPLOYEE_ONLY#page1.tif source=Shaw_Dec_Assign_Signed#page1.tif source=Shaw_Dec_Assign_Signed#page2.tif	

**DECLARATION / ASSIGNMENT**  
**(Inventor with Co-Inventors)**

**WHEREAS**, I, **Mark Draper**, while employed by the Government of the United States, jointly made an invention with **Heath Ruff, Jeffrey Eggers, Joshua Hamell, Michael Patzek, and Robert Shaw** described in invention disclosure AFD 1339 entitled "Mechanism for Path Specification, Visualization, and Control", to be filed as an application for Letters Patent of the United States (Application serial number 14/298992, filed 9 June 2014), and I hereby authorize and request AFMCLO/JAZ to insert here in the above parentheses (Application number, filed) the filing date and application number of said application when known;

**WHEREAS**, The above-identified application for Letters Patent was made or authorized to be made by me;

**WHEREAS**, I believe that I am an original joint inventor of a claimed invention in the application;

**WHEREAS**, I hereby acknowledge that any willful false statement made in this Declaration/Assignment is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both;

**WHEREAS**, the conditions under which said invention was made are such as to entitle the Government of the United States under Paragraph 1(a) of Executive Order 10096, to the entire right, title and interest therein, including foreign rights; and

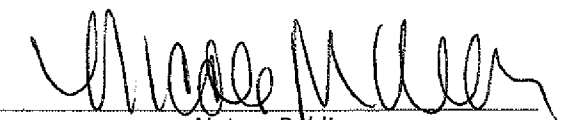
**NOW, THEREFORE**, to all whom it may concern, be it known that for and in consideration of the premises and other valuable considerations, I, **Mark Draper**, have sold, assigned, and transferred, and by these presents do sell, assign, and transfer unto the Government of the United States, as represented by the Secretary of the Air Force, my entire right, title and interest throughout the world in and to the aforesaid invention described in the aforesaid application for Letters Patent of the United States and all Letters Patent issuing thereon and any continuations, continuations-in-part, divisions, and reissues or extensions thereof; and all priority resulting from the filing of the aforesaid application for patent in the United States; I hereby authorize and request any official whose duty it is to issue patents to issue any patent thereon to the Government of the United States, as represented by the Secretary of the Air Force, and his successors, as assignee of my entire right, title and interest in and to the same, for the sole use for the full term or terms for which said patents and any continuations, continuations-in-part, divisions and reissues or extensions thereof are, or may be, granted as fully and entirely as the same would have been held by me had this Assignment not been made; and I do hereby also grant to the Government of the United States, as represented by the Secretary of the Air Force, the option to take the entire right, title and interest in the invention or all applications for Letters Patent thereon in all countries foreign to the United States in which the Government of the United States may file, or cause to be filed, applications for Letters Patent, without payment to me of any further consideration; provided, however, that this grant of an option to take foreign rights in the invention must be exercised by written notice to me within eight months of the filing date of any application for United States Letters Patent covering the invention, or within eight months from the declassification of the invention, whichever is later, and that all foreign rights not exercised under the option are left to me subject to a nonexclusive, irrevocable, royalty-free license to the Government of the United States in any patent which may issue on said invention in any foreign country, including the power to issue sublicenses for use on behalf of the Government of the United States and/or in furtherance of the foreign policies of the United States of America; and I hereby agree to execute any and all applications for Letters Patent, and to furnish all data and documents and to execute any papers which may be necessary or convenient for the preparation, filing, or prosecution of such applications, except it is understood that I shall not be subject to any out-of-pocket expense relative to such action.

  
\_\_\_\_\_  
Mark Draper

SUBSCRIBED AND ACKNOWLEDGED before me by **Mark Draper** this 2 day of June 2014, at the city of Fairborn in the County of Greene and State of Ohio.



Nicole M. Weaver  
Notary Public, State of Ohio  
My Commission Expires 10-31-2017

  
\_\_\_\_\_  
Notary Public

**DECLARATION / ASSIGNMENT**  
**(Inventor with Co-Inventors)**

WHEREAS, I, **Jeffrey Eggers**, while employed by the Government of the United States, jointly made an invention with **Heath Ruff, Mark Draper, Joshua Hamell, Michael Patzek, and Robert Shaw** described in invention disclosure AFD 1339 entitled "Mechanism for Path Specification, Visualization, and Control", to be filed as an application for Letters Patent of the United States (Application serial number 14/298992, filed 6 June 2014), and I hereby authorize and request AFMCLO/JAZ to insert here in the above parentheses (Application number, filed) the filing date and application number of said application when known;

WHEREAS, The above-identified application for Letters Patent was made or authorized to be made by me;

WHEREAS, I believe that I am an original joint inventor of a claimed invention in the application;

WHEREAS, I hereby acknowledge that any willful false statement made in this Declaration/Assignment is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both;

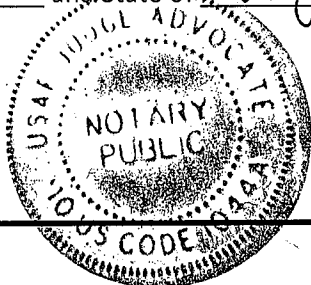
WHEREAS, the conditions under which said invention was made are such as to entitle the Government of the United States under Paragraph 1(a) of Executive Order 10096, to the entire right, title and interest therein, including foreign rights; and

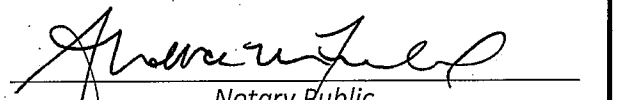
NOW, THEREFORE, to all whom it may concern, be it known that for and in consideration of the premises and other valuable considerations, I, **Jeffrey Eggers**, have sold, assigned, and transferred, and by these presents do sell, assign, and transfer unto the Government of the United States, as represented by the Secretary of the Air Force, my entire right, title and interest throughout the world in and to the aforesaid invention described in the aforesaid application for Letters Patent of the United States and all Letters Patent issuing thereon and any continuations, continuations-in-part, divisions, and reissues or extensions thereof; and all priority resulting from the filing of the aforesaid application for patent in the United States; I hereby authorize and request any official whose duty it is to issue patents to issue any patent thereon to the Government of the United States, as represented by the Secretary of the Air Force, and his successors, as assignee of my entire right, title and interest in and to the same, for the sole use for the full term or terms for which said patents and any continuations, continuations-in-part, divisions and reissues or extensions thereof are, or may be, granted as fully and entirely as the same would have been held by me had this Assignment not been made; and I do hereby also grant to the Government of the United States, as represented by the Secretary of the Air Force, the option to take the entire right, title and interest in the invention or all applications for Letters Patent thereon in all countries foreign to the United States in which the Government of the United States may file, or cause to be filed, applications for Letters Patent, without payment to me of any further consideration; provided, however, that this grant of an option to take foreign rights in the invention must be exercised by written notice to me within eight months of the filing date of any application for United States Letters Patent covering the invention, or within eight months from the declassification of the invention, whichever is later, and that all foreign rights not exercised under the option are left to me subject to a nonexclusive, irrevocable, royalty-free license to the Government of the United States in any patent which may issue on said invention in any foreign country, including the power to issue sublicenses for use on behalf of the Government of the United States and/or in furtherance of the foreign policies of the United States of America; and I hereby agree to execute any and all applications for Letters Patent, and to furnish all data and documents and to execute any papers which may be necessary or convenient for the preparation, filing, or prosecution of such applications, except it is understood that I shall not be subject to any out-of-pocket expense relative to such action.

  
Jeffrey Eggers

SUBSCRIBED AND ACKNOWLEDGED before me by Jeffrey Eggers this 27<sup>th</sup> day of

May 2014, at the city of Arlington in the County of Arlington and State of Virginia.



  
Notary Public  
**Andrea M. Freeland, MSgt, USAF**  
Military **PATENT**

**REEL: 033054 FRAME: 0052**

**DECLARATION / ASSIGNMENT**  
**(Inventor with Co-inventors)**

**WHEREAS**, I, **Joshua Hamell**, while employed by **Smart Information Flow Technologies** ("Contractor"), jointly made an invention with **Jeffrey Eggers, Mark Draper, Robert Shaw, Michael Patzek, and Heath Ruff** under contract/subcontract number **FA8650-08-D-6801** described in invention disclosure AFD 1339 entitled "Mechanism for Path Specification, Visualization, and Control", to be filed as an application for Letters Patent of the United States (Application serial number 14/298992, filed 6 June 2014), and I hereby authorize and request AFMCLO/JAZ to insert here in the above parentheses (Application serial number, filed) the filing date and application number of said application when known;

**WHEREAS**, The above-identified application for Letters Patent was made or authorized to be made by me;

**WHEREAS**, I believe that I am an original joint inventor of a claimed invention in the application;

**WHEREAS**, I hereby acknowledge that any willful false statement made in this Declaration/Assignment is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both; and

**NOW, THEREFORE**, to all whom it may concern, I, **Joshua Hamell**, in recognition of my obligation as an employee of the Contractor to assign inventions to the Contractor, and pursuant to the obligations of the Contractor to the Government of the United States under the above contract and by agreement, hereby assign to the Government of the United States, as represented by the Secretary of the Air Force, my entire right, title, and interest throughout the world in and to each invention disclosed and claimed in the above application for Letters Patent, made jointly with **Jeffrey Eggers, Mark Draper, Robert Shaw, Michael Patzek, and Heath Ruff**, employee(s) of the Government and Contractor, and all Letters Patent issuing thereon and any continuations, continuations-in-part, divisions, and reissues or extensions thereof, subject to the reservation to the Contractor of any license to which the Contractor may be entitled under the above contract.

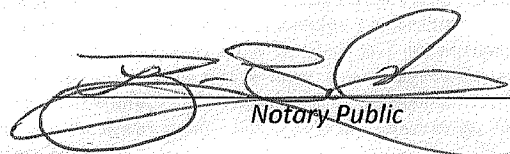
I agree to assist the Contractor and the Government of the United States, upon request, by furnishing any available information and documents, performing all acts, and doing all things which may be reasonably necessary to timely prepare, file and prosecute such applications, and make this assignment effective.

The Contractor joins in and agrees to this assignment and, except for the reservation of any license under the above contract, relinquishes and assigns to the Government of the United States, as represented by the Secretary of the Air Force their entire right, title, and interest throughout the world in and to such inventions, and further agrees to furnish to the Government of the United States, upon request, any available information and documents necessary for the timely preparation, filing, and prosecution of such applications, for Letters Patent.

  
Joshua Hamell

SUBSCRIBED AND ACKNOWLEDGED before me by **Joshua Hamell** this 2<sup>nd</sup> day of

June 2014, at the city of San Marcos in the County of  
San Diego and State of California.

  
Notary Public

# CALIFORNIA ALL-PURPOSE CERTIFICATE OF ACKNOWLEDGMENT

State of California

County of San Diego

On June 2, 2014 before me, Ryan S. Collo Notary Public  
(Here insert name and title of the officer)

personally appeared Joshua David Hamell

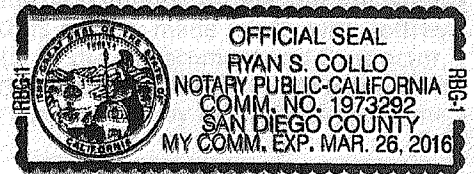
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary Public

(Notary Seal)



## ADDITIONAL OPTIONAL INFORMATION

### DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages \_\_\_\_\_ Document Date \_\_\_\_\_

(Additional information)

### CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)  
☐ Corporate Officer

(Title)

- ☐ Partner(s)  
☐ Attorney-in-Fact  
☐ Trustee(s)  
☐ Other \_\_\_\_\_

### INSTRUCTIONS FOR COMPLETING THIS FORM

Any acknowledgment completed in California must contain verbiage exactly as appears above in the notary section or a separate acknowledgment form must be properly completed and attached to that document. The only exception is if a document is to be recorded outside of California. In such instances, any alternative acknowledgment verbiage as may be printed on such a document so long as the verbiage does not require the notary to do something that is illegal for a notary in California (i.e. certifying the authorized capacity of the signer). Please check the document carefully for proper notarial wording and attach this form if required.

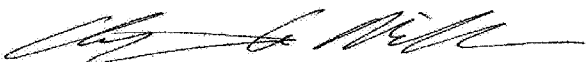
- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he/she/they~~, is /are ) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - ❖ Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - ❖ Indicate title or type of attached document, number of pages and date.
  - ❖ Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document

PATENT

REEL: 033054 FRAME: 0054

**CONTRACTOR CERTIFICATION:**

I certify that I am an officer or agent of the Contractor herein; and that **Joshua Hamell** who signed this assignment on behalf of the Contractor was then an employee of said Contractor at the time of invention. The Contractor further herein assigns their rights as the employer of **Joshua Hamell** to the Government of the United States consistent with our rights and obligations under contract and statute, subject to the reservation to the Contractor of any license to which the Contractor may be entitled under the above contract or statute. This assignment is duly signed below by Contractor's Officer or Agent for and on behalf of said Contractor by authority of its governing body, and is within the scope of the Officer's or Agent's corporate powers.

**FOR THE CONTRACTOR**Contractor: Smart Information Flow TechnologiesBy:   
(Signature of officer or agent)Date: 4 June, 2014Printed Name: Christopher A. MillerTitle: Chief ScientistBusiness Address: 319 First Ave. N., Minneapolis, MN 55401Business Phone: 612-339-7438

**DECLARATION / ASSIGNMENT**  
(Inventor with Co-inventors)

WHEREAS, I, **Heath Ruff**, while employed by **Ball Aerospace and Technologies Corp.** ("Contractor"), jointly made an invention with **Jeffrey Eggers, Mark Draper, Joshua Hamell, Michael Patzek, and Robert Shaw** under contract/subcontract number **FA8650-08-D-6801** described in invention disclosure AFD 1339 entitled "Mechanism for Path Specification, Visualization, and Control", to be filed as an application for Letters Patent of the United States (Application serial number 14/298992, filed 6 June 2014), and I hereby authorize and request AFMCLO/JAZ to insert here in the above parentheses (Application serial number, filed) the filing date and application number of said application when known;

WHEREAS, The above-identified application for Letters Patent was made or authorized to be made by me;

WHEREAS, I believe that I am an original joint inventor of a claimed invention in the application;

WHEREAS, I hereby acknowledge that any willful false statement made in this Declaration/Assignment is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both; and

NOW, THEREFORE, to all whom it may concern, I, **Heath Ruff**, in recognition of my obligation as an employee of the Contractor to assign inventions to the Contractor, and pursuant to the obligations of the Contractor to the Government of the United States under the above contract and by agreement, hereby assign to the Government of the United States, as represented by the Secretary of the Air Force, my entire right, title, and interest throughout the world in and to each invention disclosed and claimed in the above application for Letters Patent, made jointly with **Jeffrey Eggers, Mark Draper, Joshua Hamell, Michael Patzek, and Robert Shaw**, employee(s) of the Government and Contractor, and all Letters Patent issuing thereon and any continuations, continuations-in-part, divisions, and reissues or extensions thereof, subject to the reservation to the Contractor of any license to which the Contractor may be entitled under the above contract.

I agree to assist the Contractor and the Government of the United States, upon request, by furnishing any available information and documents, performing all acts, and doing all things which may be reasonably necessary to timely prepare, file and prosecute such applications, and make this assignment effective.

The Contractor joins in and agrees to this assignment and, except for the reservation of any license under the above contract, relinquishes and assigns to the Government of the United States, as represented by the Secretary of the Air Force their entire right, title, and interest throughout the world in and to such inventions, and further agrees to furnish to the Government of the United States, upon request, any available information and documents necessary for the timely preparation, filing, and prosecution of such applications, for Letters Patent.

  
Heath Ruff

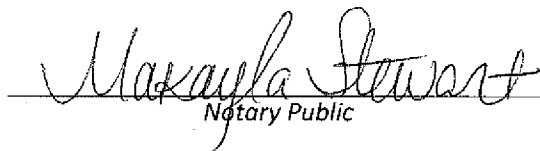
SUBSCRIBED AND ACKNOWLEDGED before me by **Heath Ruff** this 6<sup>th</sup> day of

June 2014, at the city of Beavercreek in the County of

Greene and State of Ohio.



**Makayla Stewart**  
Notary Public, State of Ohio  
My Commission Expires 03-28-2018

  
Notary Public

**PATENT**

**REEL: 033054 FRAME: 0056**



DECLARATION / ASSIGNMENT  
(Inventor with Co-inventors)

WHEREAS, I, Robert Shaw, while employed by JXT Applications, Inc. ("Contractor"), jointly made an invention with Jeffrey Eggers, Mark Draper, Joshua Hamell, Michael Patzek, and Heath Ruff under contract/subcontract number FA8650-08-D-6801 described in invention disclosure AFD 1339 entitled "Mechanism for Path Specification, Visualization, and Control", to be filed as an application for Letters Patent of the United States (Application serial number - 14/298992, filed 6 June 2014), and I hereby authorize and request AFMCLO/JAZ to insert here in the above parentheses (Application serial number, filed) the filing date and application number of said application when known;

WHEREAS, The above-identified application for Letters Patent was made or authorized to be made by me;

WHEREAS, I believe that I am an original joint inventor of a claimed invention in the application;

WHEREAS, I hereby acknowledge that any willful false statement made in this Declaration/Assignment is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both; and

NOW, THEREFORE, to all whom it may concern, I, Robert Shaw, in recognition of my obligation as an employee of the Contractor to assign inventions to the Contractor, and pursuant to the obligations of the Contractor to the Government of the United States under the above contract and by agreement, hereby assign to the Government of the United States, as represented by the Secretary of the Air Force, my entire right, title, and interest throughout the world in and to each invention disclosed and claimed in the above application for Letters Patent, made jointly with Jeffrey Eggers, Mark Draper, Joshua Hamell, Michael Patzek, and Heath Ruff, employee(s) of the Government and Contractor, and all Letters Patent issuing thereon and any continuations, continuations-in-part, divisions, and reissues or extensions thereof, subject to the reservation to the Contractor of any license to which the Contractor may be entitled under the above contract.

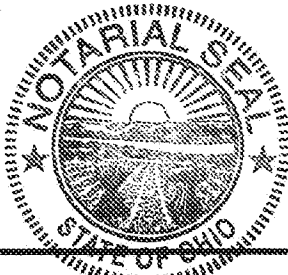
I agree to assist the Contractor and the Government of the United States, upon request, by furnishing any available information and documents, performing all acts, and doing all things which may be reasonably necessary to timely prepare, file and prosecute such applications, and make this assignment effective.


The Contractor joins in and agrees to this assignment and, except for the reservation of any license under the above contract, relinquishes and assigns to the Government of the United States, as represented by the Secretary of the Air Force their entire right, title, and interest throughout the world in and to such inventions, and further agrees to furnish to the Government of the United States, upon request, any available information and documents necessary for the timely preparation, filing, and prosecution of such applications, for Letters Patent.

  
Robert Shaw

SUBSCRIBED AND ACKNOWLEDGED before me by Robert Shaw this 28th day of

May 2014, at the city of Beavercreek in the County of Greene and State of Ohio.



  
Notary Public

SHERIE L. SMITH, Notary Public  
in and for the State of Ohio  
(My Commission Expires Sept. 26, 2014)

**CONTRACTOR CERTIFICATION:**

I certify that I am an officer or agent of the Contractor herein; and that **Robert Shaw** who signed this assignment on behalf of the Contractor was then an employee of said Contractor at the time of invention. The Contractor further herein assigns their rights as the employer of **Robert Shaw** to the Government of the United States consistent with our rights and obligations under contract and statute, subject to the reservation to the Contractor of any license to which the Contractor may be entitled under the above contract or statute. This assignment is duly signed below by Contractor's Officer or Agent for and on behalf of said Contractor by authority of its governing body, and is within the scope of the Officer's or Agent's corporate powers.

**FOR THE CONTRACTOR**Contractor: JXT Applications, Inc.By: Terrell W. Fulbright  
(Signature of officer or agent)Date: 18 May 2014Printed Name: TERRELL W. FULBRIGHTTitle: PRESIDENT/CEOBusiness Address: 1195 MEADOW BRIDGE DR, STE CBusiness Phone: BEAVER CREEK, OH 45934  
937-431-1566 X110