



COLORADO DEPARTMENT OF PUBLIC SAFETY  
DIVISION OF FIRE SAFETY AND CONTROL  
PROCUREMENT OFFICE  
690 Kipling Street, Suite 2000  
Lakewood, CO 80215

Request for Information: DFPCRFI16000515A/G DATA  
TITLE: AIR TO GROUND DATA LINK  
DATE DUE: Monday, June 13th, 2016 at 2:00PM MDT

MAIL OR EMAIL QUOTES TO:

**Purchasing Agent:** Michelle Brown  
**Telephone Number:** 303-239-5876  
**E-mail Address:** [michellel.brown@state.co.us](mailto:michellel.brown@state.co.us)

**SIGNATURE PAGE: SIGN AND RETURN WITH SUBMISSION**

FEIN \_\_\_\_\_ DATE \_\_\_\_\_

^Enter your FEIN or SSN as registered on Colorado's Vendor Self Service System (VSS).

NAME OF COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP CODE \_\_\_\_\_

PHONE \_\_\_\_\_ FAX \_\_\_\_\_

EMAIL ADDRESS \_\_\_\_\_

MY COMPANY IS REGISTERED ON COLORADO VSS. Yes \_\_\_\_\_ No \_\_\_\_\_

CONFIRM # \_\_\_\_\_ OF AMENDMENTS RECEIVED. CONFIRM # \_\_\_\_\_ OF ADDENDA RECEIVED.

CONFIRM THAT YOU ARE AWARE THAT THE AWARD NOTICE WILL BE PUBLISHED ON COLORADO VSS. Yes \_\_\_\_\_

PRINT NAME OF COMPANY REPRESENTATIVE \_\_\_\_\_

TITLE: \_\_\_\_\_

SIGNATURE OF COMPANY REPRESENTATIVE \_\_\_\_\_

(REQUIRED: Handwritten signature by an authorized officer or agent of the vendor)

The DFPC Procurement Office is the SOLE point of contact concerning this solicitation.  
Please direct any questions about this solicitation to the DFPC Procurement Office.

The Division of Fire Prevention & Control encourages free and open competition among Bidders. Whenever possible, specifications, bid invitations and conditions are designed to accomplish this objective consistent with the necessity to satisfy the needs of the Division of Fire Prevention & Control.

## **SECTION I: ISSUE AND TIMELINE INFORMATION**

### **ISSUING OFFICE:**

This Request for Information (RFI) [# 16000515] is issued for the State of Colorado (State) by the Division of Fire Prevention & Control (DFPC) for the benefit of the Department through the DFPC Purchasing Agent. The DFPC Purchasing Agent is the SOLE point of contact concerning this RFI.

### **INVITATION TO SUBMIT PROPOSALS:**

The State of Colorado is posting this RFI on the Colorado -Vendor Self Service Portal (VSS) so that organizations with an interest may submit a response in accordance with the terms of this RFI.

In accordance with Procurement Code, CRS 24-103-207.5 titled -Purchasing Preference for Environmentally Preferable Products; bidders responding to this solicitation may seek to qualify for the preference and governmental bodies conducting this solicitation shall award a contract to a bidder who offers environmentally preferable products subject to the conditions in the Code and Procurement Rules.

Colorado law mandates that resident bidders be given a preference over non-resident bidders equal to the preference given by the state in which the non-resident bidder is a resident. Low tie bids will be awarded in accordance with CRS 24-103-202.5.

### **MEANS OF COMMUNICATION:**

In the event that it becomes necessary to revise any part of this RFI, a modification will be published on the Colorado VSS website: <https://www.colorado.gov/VSS>. It is incumbent upon qualified vendors (Respondents) to this RFI to carefully and regularly monitor VSS for any such postings.

The **DFPC Purchasing Agent is the SOLE point of contact** concerning this RFI and the RFI response process.

### **SCOPE:**

This RFI contains the instructions governing the RFI to be submitted and the material to be included therein.

### **INDEMNIFICATION:**

The contractor agrees, to the extent authorized by law, to indemnify, save and hold harmless the State, its employees and agents, against any and all claims, damages, liability and court awards including costs, expenses and attorney fees incurred as a result of any act or omission by the contractor or its employees, agents, subcontractors or assignees, arising out of or in connection with performance of any services provided as a result of this solicitation.

### **ADDITIONAL ITEMS OR SERVICES:**

- List minimum order on parts or services.
- List information and pricing on warranty of hardware.
- Specify the replacement process for hardware.
- List information and pricing on software updates or upgrades.
- List volume discounts if applicable.
- Specify service updates or upgrades required on hardware and/or software.

### **SHIPPING AND BILLING INFORMATION:**

The Division of Fire Prevention & Control is Tax Exempt.  
All pricing must include shipping and handling.

**SCHEDULE OF EVENTS:**

RFI RELEASE DATE:	MAY 15, 2016
INQUIRIES REGARDING THE RFI DUE:	MAY 25, 2016, 5:00 PM MDT
ESTIMATED RESPONSE TO INQUIRIES:	JUNE 1, 2016, 5:00 PM MDT
RFI SUBMISSION DUE DATE & TIME:	JUNE 13, 2016, 2:00 PM MDT

**Pre-submission meeting:**

(Not applicable)

Division of Fire Prevention & Control  
690 Kipling Street, Lakewood CO 80215

**How to complete your submission:**

**Bid submissions should occur through Colorado VSS.** Registration on VSS can occur at this link: [www.colorado.gov/VSS](http://www.colorado.gov/VSS). Email **or** mail a hard copy of your submission to the procurement agent listed in this solicitation.

**No faxed proposals will be accepted.**

All submissions must include the signature page and pricing information:

- The signature page is the first page of this document.
- The pricing page should be clearly marked in the vendor submission documents.
- The applicable Requested Information should be listed and identified in the order requested.

## DATA COMMUNICATIONS FOR WILDLAND FIREFIGHTERS

### 1. BACKGROUND, OVERVIEW, AND PURPOSE OF THIS RFI

This request for information (RFI) facilitates the effort undertaken by the Center of Excellence for Advanced Technology Aerial Firefighting (CoE) to identify, test, and deploy a technology for sending data files from an aircraft used to collect real-time information—regarding the size, location, and other attributes of wildfires—to Wildland firefighters on the ground in areas where no terrestrial infrastructure exists to connect to the Internet.

In 2014, the Colorado Division of Fire Prevention and Control (DFPC) acquired two (2) Pilatus PC-12 Multi-Mission Aircraft (MMA). The aircraft have been adapted to their intended use as aerial firefighting intelligence collection and support tools through the installation of a thermal infrared/electro-optical camera sensors and associated processing and georeferencing equipment aboard each aircraft. Specific missions performed or contemplated for the aircraft include small fire detection, fire behavior monitoring, personnel over watch, fire mapping, aviation monitoring, and prescribed-burn monitoring. The MMAs fly at least 5,000 feet above fires and can loiter over a fire for an extended period of time to collect and relay intelligence.

Experience with the aircraft in the field has shown that, to maximize the effectiveness of the aircraft, there is a need to develop the capability to transfer data files generated onboard the aircraft directly to firefighters on the ground, or otherwise provide firefighters with data from the MMA within a short time frame. Video clips from the MMA sensor may reach up to 15 megabytes in size, still images may reach 1 megabyte, and vector spatial data formatted as a .kml file (keyhole markup language, an XML based file format used to display geographic data in an Earth browser) may reach 100 kilobytes. All of these types of files are candidates for transmission to firefighters on the ground.

Each aircraft is equipped with an Aircell Internet connection that provides backhaul to the Internet at 3G speeds. This connection allows the aircraft to provide near real-time spatial data, still images, and short video clips to the Colorado Wildfire Information Management System (CO-WIMS), a web-based situational awareness platform. Fire managers who log into CO-WIMS can view fire perimeters, other types of spatial data, and infrared or electro-optical images and videos taken from the aircraft. When viewing CO-WIMS in the field, a 4G cellular connection is typically required to provide access to the website from tablets, smartphones, or computers within a reasonable time frame. However, fast and reliable cellular data connections are frequently unavailable to firefighters on the ground in remote areas of Colorado.

The CoE has developed a list of questions to aid in determining a technical solution to this communication gap. This list of questions is presented in **Section 5, "Requested Information."**

## **2. INQUIRIES**

For questions and clarifications regarding this RFI, please submit your inquiries in writing (via email) to **Michelle Brown, Purchasing Agent**. All inquiries must be received by **May 25<sup>th</sup>, 2016**. All questions and corresponding answers will be posted by **Wednesday June 1<sup>st</sup>, 2016** on the Vendor Self Service (VSS) website ([colorado.gov/vss](http://colorado.gov/vss)) as a modification to the VSS system.

## **3. SCHEDULE OF EVENTS**

The schedule of the RFI is outlined below. This schedule is subject to change based on the number of RFI inquiries or RFI responses received and the information contained in those responses. Please note that early responses are appreciated. All responses received by **June 13<sup>th</sup>, 2016** will be considered by the CoE. Late responses are not accepted as the CoE is not able to integrate them into its planning and decision-making process.

RFI Release Date:	<b>May 15, 2016</b>
Inquiries Regarding the RFI Due:	<b>May 25<sup>th</sup>, 2016 5:00 PM MDT</b>
Estimated Response to Inquiries (To Be Posted on VSS):	<b>June 1<sup>st</sup>, 2016 5:00 PM MDT</b>
RFI Submission Due Date/Time:	<b>June 13<sup>th</sup>, 2016 5:00 PM MDT</b>

## **4. DISCLOSURE OF RESPONSES**

All responses to this RFI, including attachments, supplementary materials, addenda, etc. shall become the property of DFPC and will not be returned to the respondent. The only documents that will be considered confidential will be financial statements or trade secrets that are specifically marked "CONFIDENTIAL" on each page. All other documents submitted to DFPC will be subject to the Colorado Open Records Act. Responses that are copyrighted or marked "CONFIDENTIAL" in their entirety will be rejected and not receive consideration for review.

## **5. REQUESTED INFORMATION**

Respondents are required to complete each of the following sections of this RFI. Please provide clear and concise answers to each question. In addition to the specific questions below, respondents are also encouraged to provide any additional observations, strategies, and recommendations to support the CoE's efforts to address the need outlined above.

**ALL RESPONDENTS:**

- 1a. Provide the physical dimensions, including weight, of the proposed device. Please specify how the device is powered and indicate the expected battery life in typical use scenarios. Please specify whether the device is waterproof, dustproof, and shockproof and stipulate whether it has any other physical attributes that would make it particularly suitable for use in austere field environments.
- 1b. If the device is not a complete, self-contained data transmission and viewing solution, please describe the method or methods used by the device to create a physical layer connection to other devices (e.g., via Bluetooth, Wi-Fi, wired connection) and to compatible end-user devices and software platforms capable of viewing or processing data.
- 1c. Is the device a complete, self-contained data transmission and viewing solution? If not, please provide information regarding the software or companion mobile application required to interact with the device. In addition, please indicate the availability of any software development kit, application programming interface, or other means of adapting the device to the specific use scenario contemplated by this RFI.
- 1d. Describe your level of experience partnering with other organizations to develop customized software and/or hardware in response to digital communications needs.
- 1e. Provide information about the cost of the device and costs associated with the required software/interface, as well as any costs to transmit data. Are annual costs expected for software or hardware support/maintenance? Is a warranty provided for the device, software, or interface?
- 1f. List the expected longevity of the device, software, and interface (if applicable)? Have provisions been made to support these elements in the future?

**ONLY RESPONDENTS SEEKING TO DIRECTLY TRANSMIT DATA FROM AIRCRAFT TO GROUND:**

- 2a. Describe the method used by the proposed device to transmit data files from a Microsoft Windows mission computer on the MMA to devices on the ground in the absence of an Internet connection.
- 2b. Describe the expected data speed of this connection and any stipulations regarding the size or types of digital files that can be transmitted. Could the connection transmit spatial data, still images, or video clips in a reasonable time frame?
- 2c. Describe the radio frequency bands in which the proposed device operates. Please address any restrictions placed on those frequency bands by Federal Communications Commission regulations, specifically addressing use of the frequencies to transmit from aircraft. Please address the provisions for connecting the proposed device to an antenna integrated with the aircraft.
- 2d. Describe the procedures required to deploy the device and specify how much time would be required to set up equipment in the aircraft and on the ground.

**Only Respondents Seeking to Provide Data to Ground Firefighters Without a Direct Connection to the Aircraft:**

- 3a. Describe the method used by the proposed device to provide digital data files to firefighters in areas where cellular data connections or other permanent terrestrial telecommunications infrastructure is not present.
- 3b. Describe the expected data speed of this connection and any stipulations regarding the size or types of digital files that can be transmitted. Could the connection transmit spatial data, still images, or video clips in a reasonable time frame?
- 3c. Describe the procedures required to deploy the device and specify how much time would be required to set up equipment.

**OPTIONAL SECTION:**

- 4a. Does the device allow multiple firefighters on the ground to exchange digital information with each other in the absence of an aircraft, terrestrial repeater, or cellular infrastructure?
- 4b. Does the device have location tracking features? If so, what is the spatial and temporal accuracy of the device's location tracking?
- 4c. If the device has any other features that may be pertinent to Wildland firefighters or firefighting aircraft, please share them here.

**6. VENDOR RESPONSES**

Respondents are requested to limit their narrative response to no more than 50 pages total, of which no more than 10 pages should be devoted to supporting materials (e.g., marketing materials, brochures).

Responses may be sent via email or delivered in hard copy.

Responses should be emailed to: [michellel.brown@state.co.us](mailto:michellel.brown@state.co.us)

Please mark the subject line of your email response as follows: **RFI Response Center of Excellence A/G**  
**Link Due: June 13, 2016**

In the response, please include:

- Introduction
- Executive Summary
- Discussion Points (Answers to Questions in Section 5)
- Supporting Information
- Contact Information (Point of Contact Name, Telephone Number, Email Address)

THIS IS A NON-BINDING RFI. REPLIES TO THIS RFI WILL NOT BE CONSIDERED AS OFFERS, NOR WILL REPLIES RESULT IN AN AWARD FOR THESE SERVICES. REPLIES MAY OR MAY NOT BE USED TO AID IN CREATING A FUTURE SOLICITATION.