

Alaska Flight Services Information Area Group (AFSIAG)

Flight Service Station Satellite Tracking Device
Briefing:

Enhanced Special Reporting Service (eSRS)

Date: January 2013



**Federal Aviation
Administration**



At Customer Request

- Alaskan Flight Service customers have, over the past several years, been asking for increased Flight Service support of satellite/GPS Tracking Devices such as SPOT and Spidertracks.
- These requests are for service in addition to Automated Flight Following.



Workgroup Formed in 2011

- User Groups
- NATCA
- AFSIAG
- FSS



- Presented to: Alaskan Pilots
- By: eSRS Special Work Group
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Workgroup Goals

- Develop operational knowledge about satellite/GPS tracking devices.
- Demonstrate how FSS might enhance search and rescue response supplemented by satellite/GPS tracking devices.
- Develop, test, train for, and make procedures available to pilots who wished to participate in an enhanced search and rescue responses.



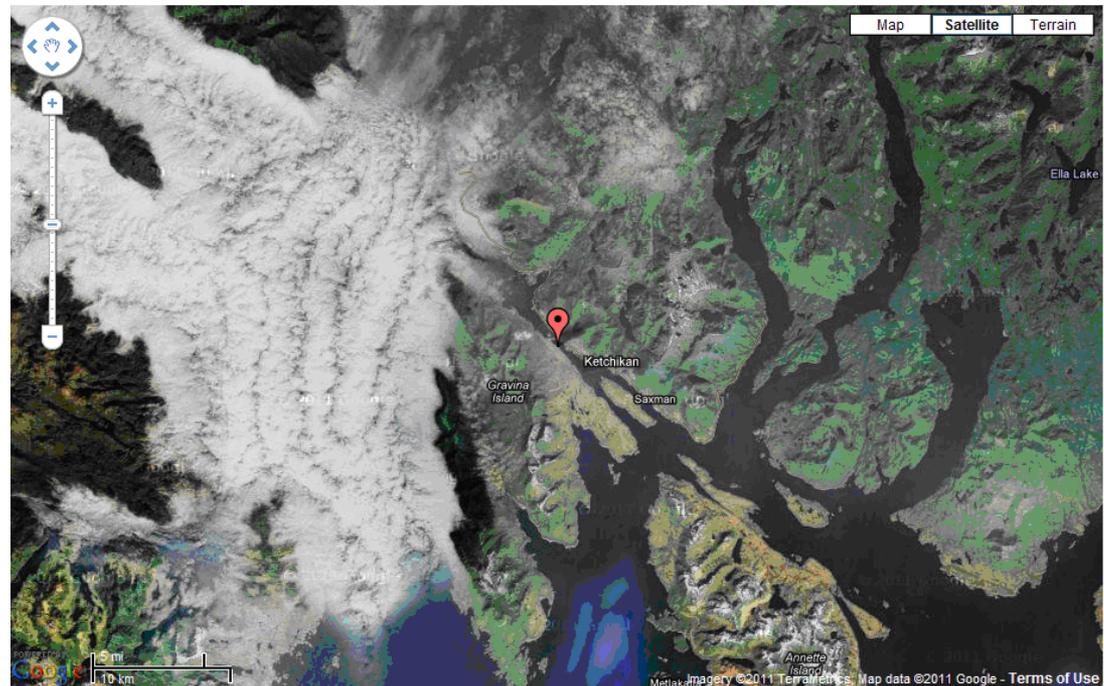
Workgroup Activities to Support Goals

- Developed “Enhanced Special Reporting Service” (eSRS) concept.
 - Similar to the current Special Reporting Service. eSRS provides that Flight Service will initiate search and rescue action upon receipt of electronic distress alerting messages.
 - eSRS is value-added search and rescue. It is intended to enhance and expedite search and rescue for aircraft on a flight plan. eSRS does not replace a flight plan.



Workgroup Activities to Support Goals

- Tested SPOT and Spidertracks over wide area of the state.
 - Anchorage
 - Fairbanks
 - Deadhorse
 - Ketchikan
 - Valdez



General Concept of Tracking Devices

- Pilot/Aircraft is equipped with a satellite/GPS tracking device (two manufactures devices included in this test program).
- Satellite/GPS tracking device transmits location to a private vendor either routinely inflight or in an pilot-initiated distress message.
- A distress message, either automatically generated by the vendor, or initiated by the pilot, is transmitted directly to Flight Service via text and email message.
- Messages include location, and may provide a link to an online map with additional information.



General Concepts (continued)

- Once received by Flight Service, messages can be correlated with Flight Plans or other information to reduce response time to an emergency. eSRS messaging/notification is totally dependent on message receipt at FSS. FAA makes no guarantee of vendor messaging reliability.
- The location information is expected to significantly reduce search and rescue response time when an emergency occurs.



General Concepts (continued)

- As with ELT's, FSS will have to investigate specifics of a report to distinguish real emergencies from false alarms.
- These procedures are intended for use with VFR flight plans originating and terminating within Alaska.



Summary of anticipated benefits

- Reduced response time to distress call in comparison to flight plan alone.
- Added protection in the event of ELT failure.
- Reduced total search time due to known track and/or location from alert message.



Summary of anticipated benefits

- Better protection when it becomes necessary to deviate from a given route and pilot is unable to update flight plan.
- Better protection when operating in remote areas, where there is a lack of Remote Communications Outlets (RCOs) or other communications, and it is necessary to file a "round robin" and/or extended period flight plan.



Portable “SPOT” GPS Tracking Devices



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Portable or Hard Wired Spidertracks GPS Tracking Device



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What if my device is not a SPOT or Spidertrack?

- Only SPOT or Spidertrack devices are approved for the eSRS program at this time.
- Additional satellite tracking devices will be evaluated for inclusion in the eSRS program as they become available.

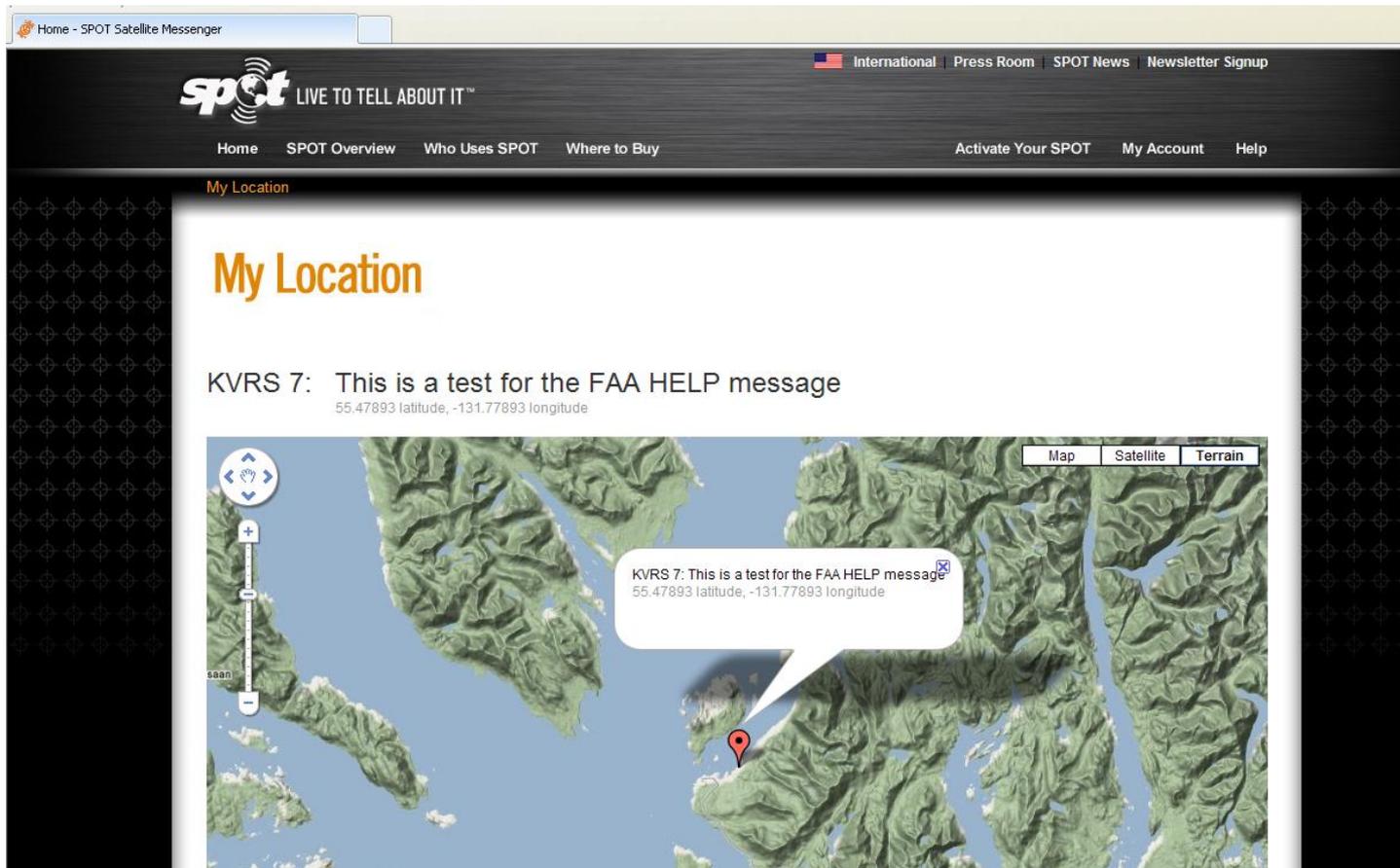


How Would eSRS Work?

- FSS monitors cell phone, 24 hours a day.
- "Help/Alert" messages are sent to FSS by text and email.
- Email messages provide a link to map depicting the last transmitted position of the tracking device.
- If FSS cannot determine that the aircraft is on an active flight, the information will be passed on to the RCC for search and rescue coordination.
- A call from the International Emergency Rescue Coordination Center (IERCC) (this is for SPOT devices only) to FSS would initiate search and rescue with no "Help/Alert" email message received.



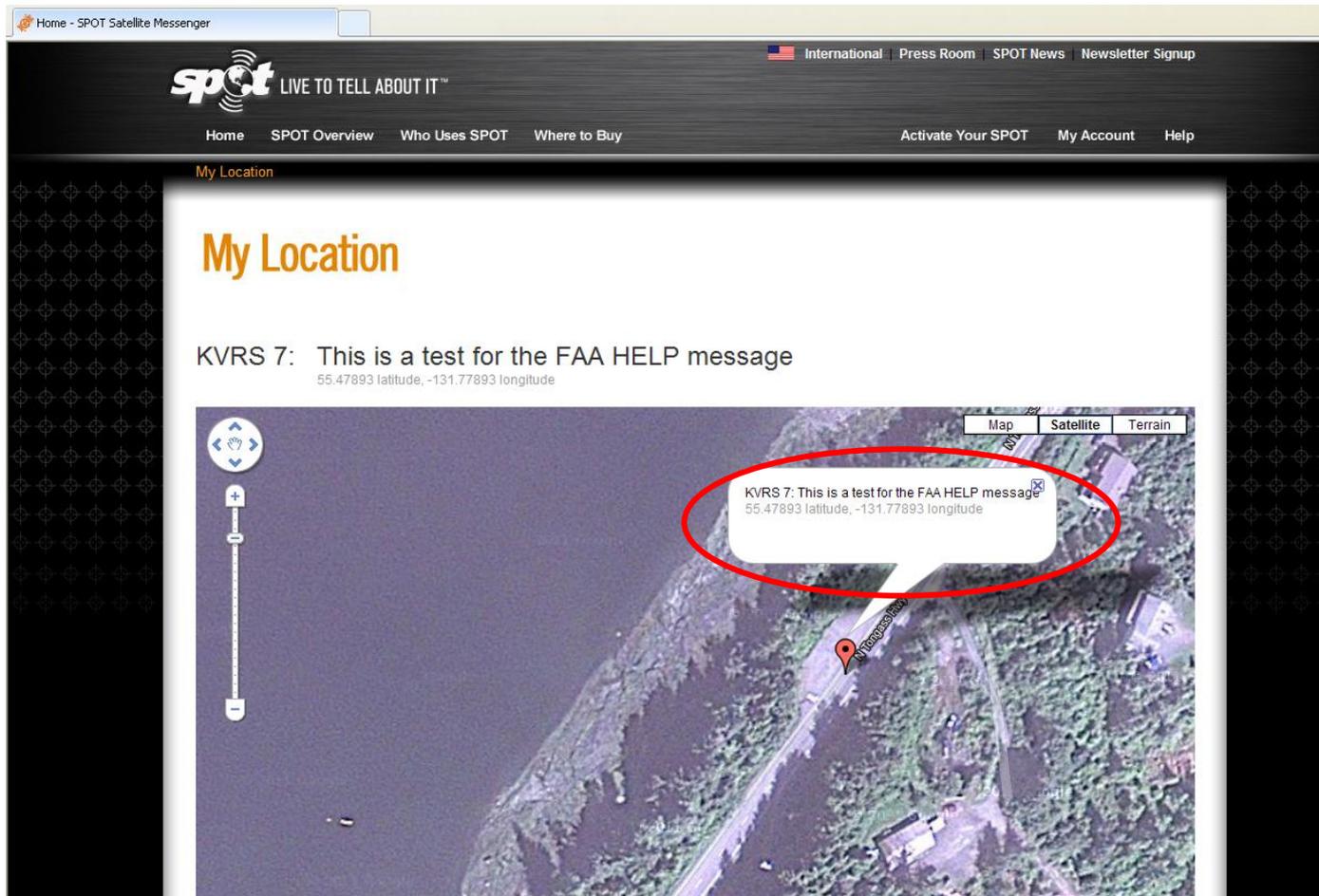
SPOT – Need Help Location Map



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Zoomed in on a Satellite Map - SPOT



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Messages With no Lat/Long

- During testing of SPOT GPS Tracking devices, it was noted that occasionally help messages were received without any coordinates. Search and rescue will be initiated based on the information from the flight plan when FSS receives "Help/Alert" messages without any corresponding coordinates.

Search and Rescue Still Initiated



Spidertracks Provides Continual Tracking

The screenshot displays the Spidertracks web application. At the top, there is a browser tab labeled "Spidertracks" and a navigation bar with the "spidertracks" logo and links for "application" and "faqs". Below the navigation bar, a text description reads: "spider 'tmm alaska' used by 'adam white' in the vehicle 'n412ep'". To the right of this text is a green question mark icon. The main content area is divided into two sections. On the left is a map of Alaska with a blue track line and several blue circular markers. The map includes standard navigation controls (directional arrows, zoom in/out, and a compass) and a legend at the bottom. On the right is a "Points of Interest" legend with a "Legend" tab. The legend lists three items: "Start of track (02-Sep-2011 21:36)", "Spiderwatch On (02-Sep-2011 21:39)", and "Last point in track (02-Sep-2011 22:59)". Below the map and legend is a "Notes" section.

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Spidertrack – Provides Data block for Each Position

The screenshot shows the Spidertracks application interface. At the top, there is a navigation bar with "Spidertracks" and "application" and "faqs" links. Below this, the text "spidertracks" is displayed in a large, stylized font. A subtitle reads "spider 'trmm alaska' used by 'adam white' in the vehicle 'n412ep'". The main content area features a map with a red track and a data popup window. The popup window is circled in red and contains the following information:

UTC Time:	02-Sep-2011 22:59
User Time:	02-Sep-2011 22:59
Latitude:	64° 32.018
Longitude:	-149° 6.772
Altitude:	886 ft
Speed:	91 knots
Direction:	54° T
Description:	

To the right of the map is a "Points of Interest" panel with a "Legend" tab. It lists three points of interest:

- Start of track (02-Sep-2011 21:36)
- Spiderwatch On (02-Sep-2011 21:39)
- Last point in track (02-Sep-2011 22:59)

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Does FSS Track me?

- FSS does not track routine traffic.
- Once a "Help/Alert" message has been activated some devices may continue to update the position every few minutes until the alert is cancelled.
- FSS is only interested in providing faster more efficient search and rescue service.



FSS search and rescue Procedures

- When the responsible FSS receives notification of a “Help/Alert” message, the facility would begin search and rescue. This may be a communications search but could be accelerated up to and including a full search and rescue response.
- If a Call is received from the SPOT International Emergency Rescue Coordination Center, (IERCC) the responsible FSS would immediately begin search and rescue procedures. The IERCC is Spot’s version of the RCC and will call FSS directly when the 911/SOS button is pushed on a SPOT tracking device. No text or email will be received by FSS.



"Help/Alert" Messages Not Tied to a Flight Plan

- When a "Help/Alert" message is received by FSS, they will verify that the aircraft is on a flight. If they are unable to verify that the alert is from an aircraft they will pass on the information to the RCC for search and rescue coordination.
- NOTE: Some of the GPS tracking devices are portable and may be used for many activities not related to aviation.



"Help/Alert" Messages Not Tied to a Flight Plan

- When using a portable GPS tracking device between multiple vehicles, it is important to remember to change the Profile/Vehicle to the appropriate settings.
- This will ensure FSS is looking for the right aircraft when the same tracking device is used in multiple aircraft.
- FSS contact info should only be used for aircraft Profile/Vehicle information. FSS should not be on the contact list when the device is used for non-aviation purposes.



"Help Cancelled/Alert Resolved" Message

- Search and rescue activities initiated by a ““Help/Alert”” message will be cancelled by FSS when a ““Help Cancelled/Alert Resolved”” message is received from the tracking device.
- Flight plans must be closed by conventional methods. A ““Help Cancelled/Alert Resolved”” or other text or email message asking to have the flight plan closed is not an accepted method to close a flight plan.



How Does a Pilot Enter the Program?

- A Pilot must have a Master Flight Plan (MFP) on File to participate in eSRS.
- Master Flight Plans may be submitted through your local FSS. They may also be submitted or updated on-line at the following link:

http://www.faa.gov/about/office_org/headquarters_offices/at_o/service_units/systemops/fs/alaskan/alaska/esrs-ak/media/MFP_Form_esrs.pdf

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How Does a Pilot Enter the Program?

- Once you have a master flight plan on file, contact one of the below contacts:

Fairbanks FSS:

Operations Manager: Mat Worker
Support Staff: Pat Magnuson/David Long
(907) 474-0388

Juneau FSS:

Front Line Manager: Kim Dodge
Support Staff: Alicia Foss
(907) 586-7517

Kenai FSS:

Support Staff:
Andy McClure/Alan Rudisill/Angela O'Neal
(907) 283-3735

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How Does a Pilot Enter the Program?

- In addition to answering any of your questions, these specialists will provide you with access to additional training material including FAQs, an eSRS brochure, this Power Point presentation and specific instructions on setting up your device.
- Once you have set up your device you are ready to take full advantage of the eSRS benefits.



More Information on eSRS

- To view a brochure, Power Point presentation or frequently asked questions (FAQ), go to the following web site:

http://www.faa.gov/about/office_org/headquarters_offices/at_o/service_units/systemops/fs/alaskan/alaska/esrs-ak

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