Civil Air Patrol

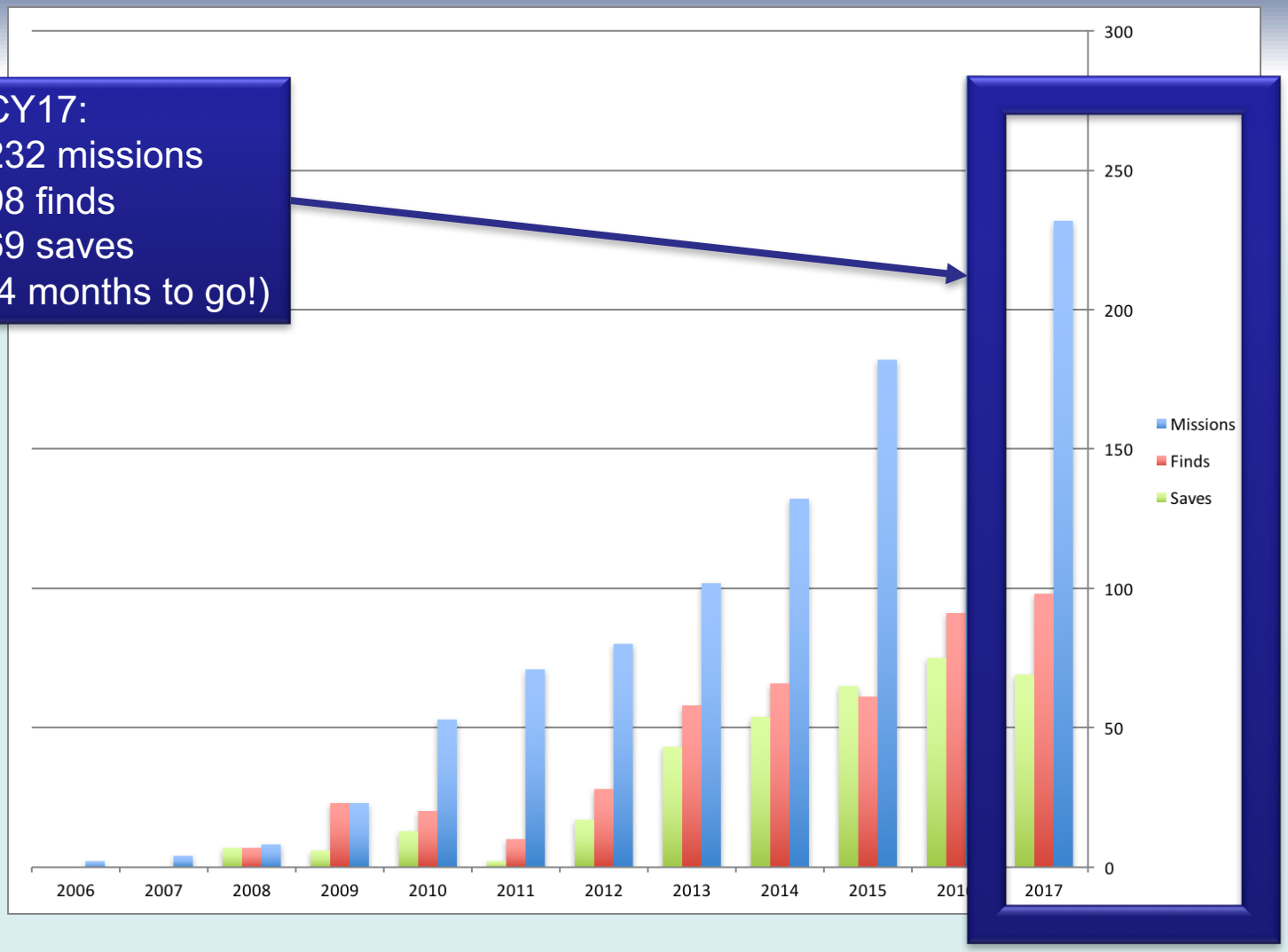
National Cellular Forensics Team Update

2017 CAP National Conference
San Antonio, TX

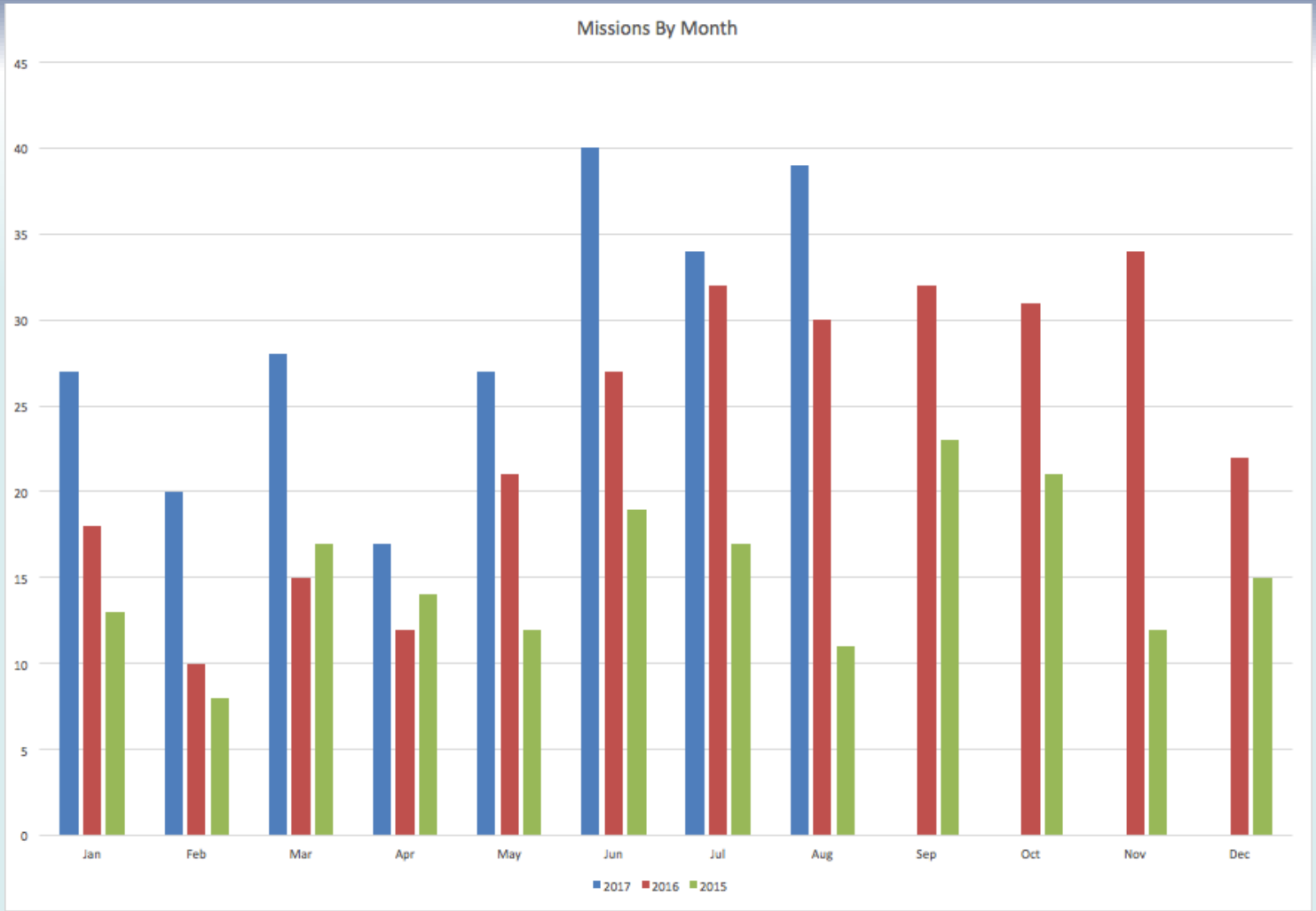
CITIZENS SERVING COMMUNITIES

By the numbers

CY17:
232 missions
98 finds
69 saves
(4 months to go!)



Missions by Month



Team Growth

- Justin Ogden, 2006
- Brian Ready, 2009
- Jerad Hoff, 2015
- Paul Combellick, 2017
- Two in training, 2017

Tools

- Process Tools
  - Automatic Log Creation & Team Notification (automated phone call) triggered by WMIRS mission entry
  - Heavy use of enterprise collaboration tools:
    - Google Docs, Hangouts, Drive
    - Slack
  - Fax Form Generators for Carrier Paperwork
- Analysis Tools
  - Customized analysis tools
  - Monitor phone on/off status
  - Geolocate phones that are on & cooperative
- Presentation Tools
  - Analyzed data in Google Earth
  - Direct teams to a specific location with Map2Target
  - Screen sharing via GoToMeeting/Slack/Hangout
  - Static presentations with Microsoft PowerPoint
  - Data animation with Camtasia

Mission Initialization

17-M-0675A automated mission initialization tasks are complete

Inbox x ** Mission Log ** x

justin.ogden@forensics.cap.gov 10:56 PM (13 hours ago) Reply

to brian.ready, jerad.hoff, paul.combellick

This is an automated email.

Mission initialization tasks for mission number 17-M-0675A are complete. The following items were created:

Mission folder: [illegible]

Mission log: [illegible]

Mission Hangout: [illegible]

Mission Details: 17-M-0675A - REQUESTING CELL PHONE FORENSICS TO AID IN THE SEARCH FOR 2 OVERDUE BOATERS. LAST SEEN AT EDGEWATER MARINA IN CLEVELAND, OH ~0600ET THIS MORNING. PHONES ARE VERIZION. POC: SSGT CERNIGLIARO AFRCC 800-851-3051 or 850-283-5955

If this is a missing aircraft search, you can find the NRAT mission chat here: [illegible]

Mission Log

17-M-0492A Mission Log

File Edit View Insert Format Data Tools Add-ons Help Custom Tools All changes saved in Drive

	B	D	E	F	G	H	I	J
1	Time (Z)	Transaction	Direction	Agency	POC	Details		
2	Mon, 03 Jul 2017 18:29:37 GMT	Email	From	WMIRS		17-M-0492A - REQUEST ASSISTANCE SEARCHING FOR A/C [redacted] SUBJECT OF ALNOT. A/C DEPARTED U82 AT 1355Z, BOUND FOR U81. LKP: U82. POC: SSGT BURNS AFRCC 800-851-3051 or 850-283-5955		
3								
4						U82:		
5						44.7503333 / -116.4450556		
6						U81:		
7						45.2935000 / -114.9453056		
8								
9	18:32	Call	From	AFRCC	Sgt Burns	Opened a new mission in WMIRS		
10						Looking for pilot of missing aircraft. Subject of ALNOT		
11						[redacted]		
12						[redacted]	[redacted] is a US mobile number operating on the Verizon Wireless network. MNC is 012. MCC is 310.	Communicator
13						ALNOT issued because the aircraft is overdue from transitioning from one area of radar coverage to another.		
14						Opened up for radar forensics for NRAT. Calling them next.		
15						Time of departure from U82: 1355 Z (today) 4.5 hours ago		
16						Did not pass the time of radar drop off.		
17						ID Aeronautics Dept is in charge of the incident		
18						ALNOT issued by FSS		
19						No clear description of the loss of coverage		
20						Seems to be a radar drop off when transitioning between radar coverage areas		
21								
22	18:38	Note				is an iPhone		
23	18:38	iMessage				This is Search & Rescue. You've been reported overdue/missing. Click here to share your location https://gps[redacted] [03-Jul-17 18:37:26 UTC]		
24						not delivered		
25								
26	18:38	Fax	To	VZW		Forms sent		
27								
28						1953 CESSNA 170B		
29						Fixed wing single engine		
30						(4 seats / 1 engine)		

Mission Briefing | Mission Log | Target 1 | References | README | Config | Blank Target

17-M-0048A - Conversation

Communicators / Conversations / Conversation with [17-M-0048A -- Missing Skier on Mt Rainier]

Justin Ogden — sent about 5 hours ago — JO
This is Search & Rescue. You've been reported overdue/missing. Click here to share your location https://gps [22-Jan-17 21:20:09 UTC]

Justin Ogden — sent about 5 hours ago — JO
Hey Sam - I'm on with National Park Service. Can you click this link to share your location? https://gps

Justin Ogden — sent about 4 hours ago — JO
This is Search & Rescue. You've been reported overdue/missing. Click here to share your location https://gps [22-Jan-17 22:08:44 UTC]

Target — received about 4 hours ago
I am trying but don't have enough service it seems

Justin Ogden — sent about 4 hours ago — JO
We just got a good location. Good work!

Type your message here... Send
0/160

Quick Text 1 2 3 4 5 6 7 8 9 10 Clear Text Configure Quick Text

Attach a file...

☐ Attempt to determine if the phone is powered on

Tools

Automatically attempt to determine if the phone is on once an hour

Location Link
History Map

✔ Link last accessed about 4 hours ago
✔ Last location recorded about 4 hours ago

Edit Settings
Communicator Conversation Location Link

Encourage cooperative user to reply and click the Location Link

17-M-0048A - Conversation

Communicators / Conversations / Conversation with [17-M-0048A -- Missing Skier on Mt Rainier]

Target — received about 4 hours ago
I am trying but don't have enough service it seems

Justin Ogden — sent about 4 hours ago — JO
We just got a good location. Good work!

Justin Ogden — sent about 4 hours ago — JO
Team en route. Arrival at 1530. (approx 1 hour)

Justin Ogden — sent about 4 hours ago — JO
Be prepared to tie knots. Keep hands warm.

Target — received about 3 hours ago
Ok. Cornices keep falling around me

Target — received about 3 hours ago
I am extremely close to ridge but wind slabs are too extreme

Type your message here... Send

0/160

Quick Text 1 2 3 4 5 6 7 8 9 10 Clear Text Configure Quick Text

Attach a file...

☐ Attempt to determine if the phone is powered on

Tools

Automatically attempt to determine if the phone is on once an hour

Disabled

✖ Phone never determined to be on

Place a call to the target phone

Call the Phone

Location Link

History Map

✔ Link last accessed about 4 hours ago

✔ Last location recorded about 4 hours ago

Edit Settings

Communicator Conversation Location Link

17-M-0048A - Conversation

Communicators / Conversations / Conversation with [17-M-0048A -- Missing Skier on Mt Rainier]

Target — received about 3 hours ago
Ok. Cornices keep falling around me

Target — received about 3 hours ago
I am extremely close to ridge but wind slabs are too extreme

Brian Ready — sent about 3 hours ago — BR
Passing message to National Park Service

Brian Ready — sent about 3 hours ago — BR
Team is 600' below ETA 1520-1530 local time.

Jerad Hoff — sent about 3 hours ago — JH
Team is in the area. Is Andrew still above you?

Brian Ready — sent about 3 hours ago — BR
Team is with Andrew

Type your message here... Send
0/160

Quick Text 1 2 3 4 5 6 7 8 9 10 Clear Text Configure Quick Text

Attach a file...

☐ Attempt to determine if the phone is powered on

Tools

Automatically attempt to determine if the phone is on once an hour
Disabled
✖ Phone never determined to be on

Place a call to the target phone
Call the Phone

Location Link
History Map
✔ Link last accessed about 4 hours ago
✔ Last location recorded about 4 hours ago

Edit Settings
Communicator Conversation Location Link

Multiple team members communicate with the target and appear as "one voice"

17-M-0048A – Location Link

Location Links / 17-M-0048A -- Missing Skier on Mt Rainier / Location Link History

17-M-0048A -- Missing Skier on Mt Rainier (Target [redacted]) gps[redacted]

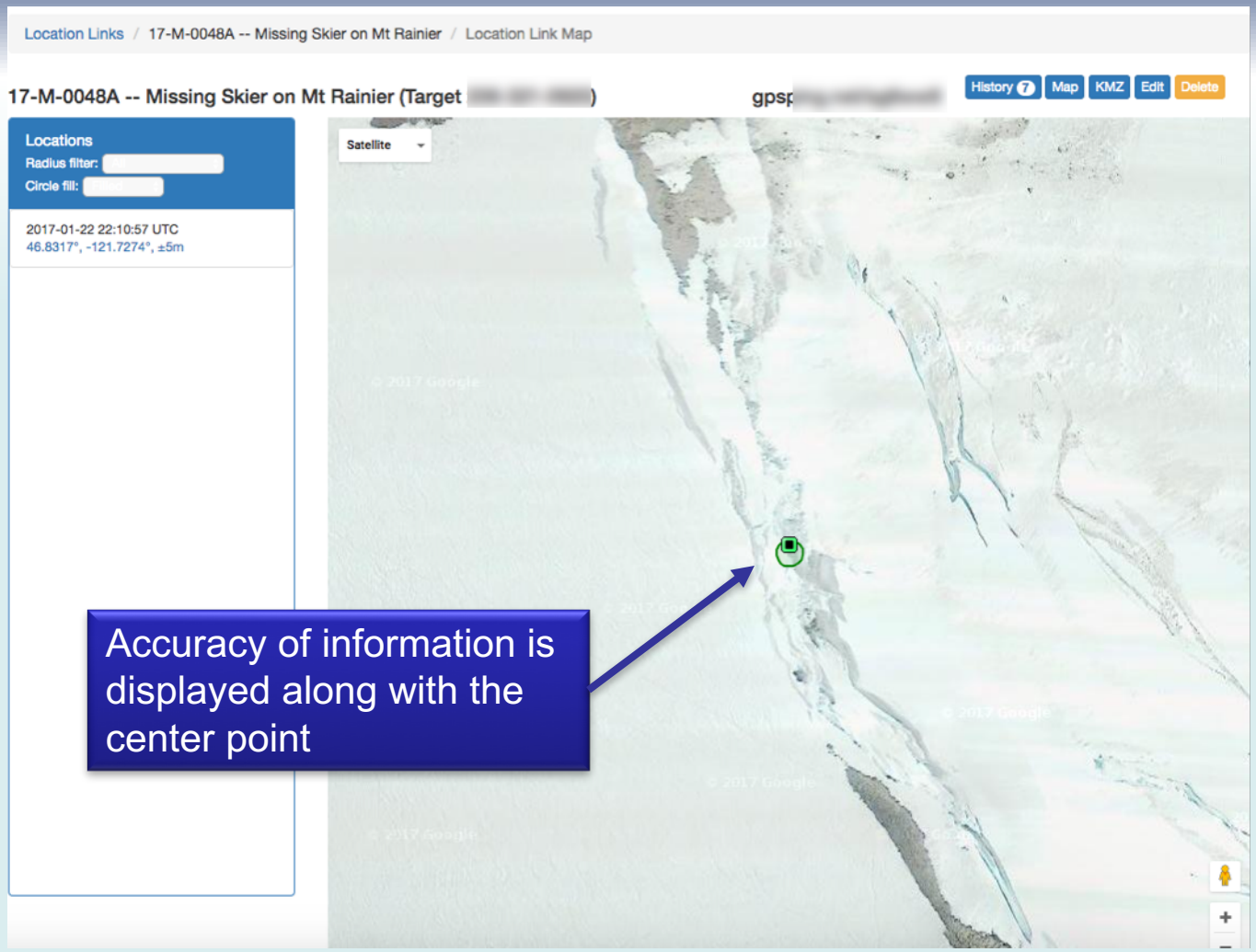
History 7 | Map | KMZ | Edit | Delete

Location Link History

Date/Time (GMT)	Event	Description
2017-01-22 22:10:58	location	Location provided: 46.8317°, -121.7274°, ±5m, More...

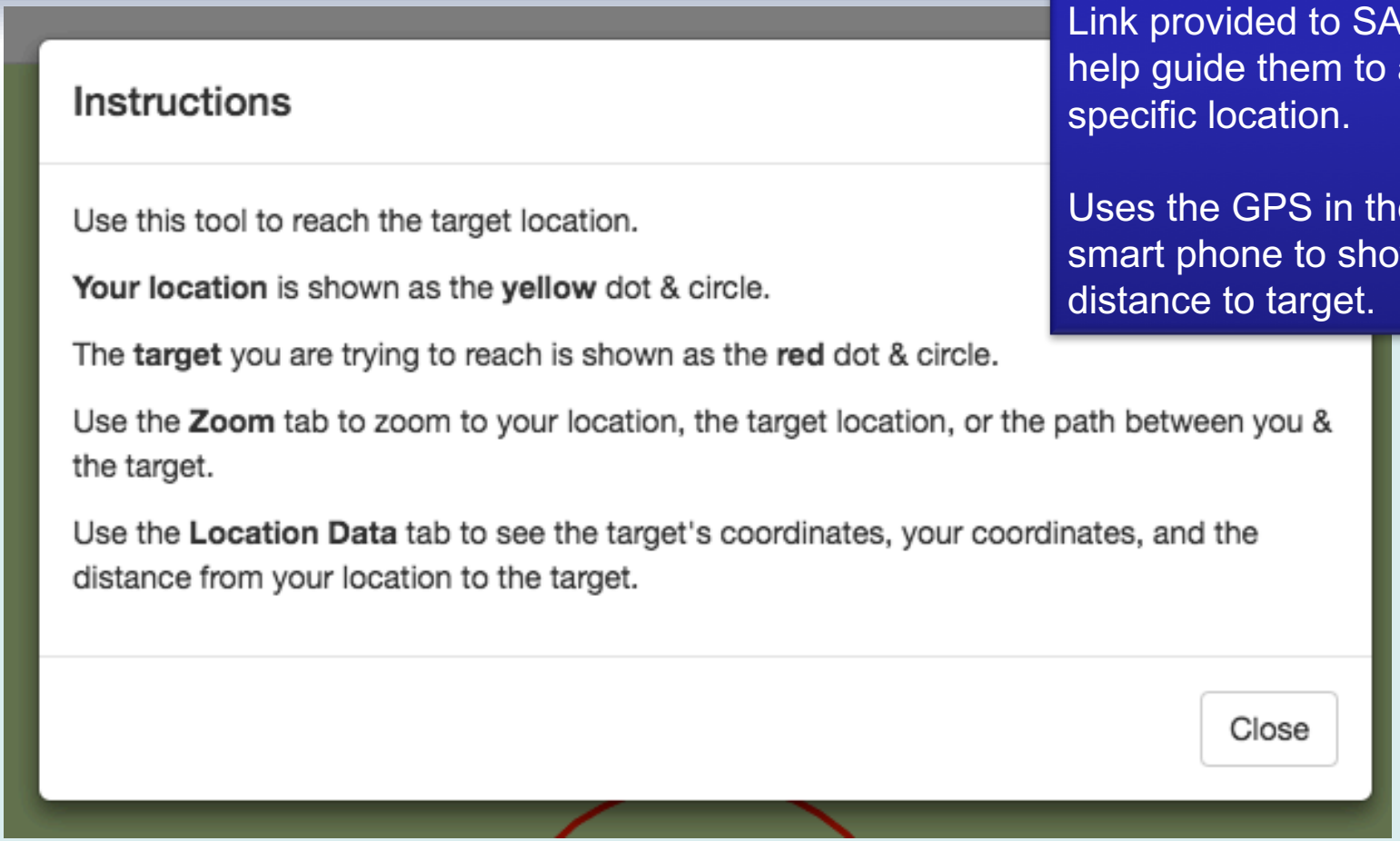
Latitude: 46.8317°
Longitude: -121.7274°
Accuracy: ±5 m (16 ft)
Altitude: 2923 m (9590 ft)
Altitude Accuracy: ±8 m (26 ft)
Heading: 110.7°
Speed: 0 mph
IP Address: 66.87.76.187
Browser: Apple Safari, 10.0, mac
Unique ID: vybaHOAL5uaSmmMG
Reported timestamp: 2017-01-22 22:04:44 UTC
Recorded timestamp: 2017-01-22 22:10:57 UTC

17-M-0048A – Location Link



Accuracy of information is displayed along with the center point

17-M-0048A – Map2Target



Link provided to SAR to help guide them to a specific location.

Uses the GPS in their smart phone to show distance to target.

17-M-0048A – Map2Target

17-M-0048A – Map2Target

Map | Zoom | Location Data | Help

Change Coordinate Format

Target Location (red)

Target location accuracy: ±16 feet

46.83170° N, 121.72740° W
46° 49.902' N, 121° 43.644' W
46° 49' 54.1" N, 121° 43' 38.6" W
10T 597053m E, 5187248m N

My Location (yellow)

My location accuracy: ±12703 feet

37.36375° N, 79.28975° W
37° 21.825' N, 79° 17.385' W
37° 21' 49.5" N, 79° 17' 23.1" W
17S 651449m E, 4136598m N

Path To Target (orange)

Distance to target: 2240.13 miles

Bearing to target: 300.6°

Try out a Map2Target

https://goo.gl/HyPtiq

Location Link Demo

- Create a new Location Link
- Configure notifications to call
- Share URL with audience on screen
- Demonstrate notifications
- Demonstrate map of locations

Communicator Demo

- Create new Conversation with audience member (Target)
- Have Target phone turned off
- Configure notifications to call upon power on
- Send standard messages and enable power monitoring of Target
- Have Target phone turned on
- Demonstrate phone on detection and two way texting

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