#### Matt Fronzak 10/7 10:36 AM

Good morning, folks. We'll be starting shortly.

#### Nathan Polderman 10/7 10:46 AM

Good morning virtual FPAW participants! Thank you for joining. A reminder to please check your mics to ensure they are muted. Thank you!

## Walter Rogers 10/7 10:55 AM

Your speakers are not visible on any of visible feeds right now

#### Matthias Steiner10/7 10:57 AM

That is correct, the co-chairs are sitting at a table on the side. The camera in the room is focused on the presenter table in the front and center. Stay tuned to the actual sessions to get going.

## Elizabeth Wilson10/7 11:02 AM

You'll need to advance the slide. We're still seeing the title slide. ©

## Tammy Flowe (FAA)10/7 11:02 AM

Hey Matt/Matthias/Nathan - It might be helpful to close the blinds behind the table at the front of the room. The speaker is back lit.

Awesome - thanks for shutting the blinds.

## Matthias Steiner10/7 11:05 AM

Thank you, Tom!

# Mike Graf\_National Weather Service10/7 11:14 AM

They did this recently for Alaska

# Judson Stailey10/7 11:16 AM

Just so you know, we're getting an echo. It's not entirely disruptive, but certainly annoying and makes it a little difficult to understand.

## Matt Fronzak 10/7 11:27 AM

Jud - all speakers? Just the ones online?

Hats off to you, Tom Ryan, for being in the unenviable position you were in as the opening act ©. Well done!

## Judson Stailey10/7 11:32 AM

Just the ones online, as far as I can tell. I'm using earphones.

# Ryan, Thomas E-CTR (FAA)10/7 11:33 AM

Thanks Matt. That's kind of you to say, but this is a great group of folks all looking to make this stuff better!

# Daniel Fuka10/7 11:33 AM

Noise cancelation is my first thought.

## DiVito, Stephanie (FAA)10/7 11:34 AM

I don't know about others, but I'm not hearing an echo. I'm on the computer though so maybe its different

## Daniel Fuka10/7 11:34 AM

removal of outliers.

## Mike Graf\_National Weather Service 10/7 11:34 AM

The end of ICAO Annex 3 provides the following: OPERATIONALLY DESIRABLE ACCURACY OF MEASUREMENT OR OBSERVATION

## Daniel Fuka10/7 11:34 AM

Sample averaging to start

# Annicka Hennigan 10/7 11:35 AM

You want to sure your measurements are accurate and converted to the appropriate unit of measurements and are "averaged" appropriately

## Daniel Fuka10/7 11:37 AM

Yay, I get 1 point in my quiz score!

# Daniel Fuka10/7 11:42 AM

Kewl... I actually didn't know how gusts were officially determined. This will be great additional trivia for soaring club BBQs.

#### Paul S. Richter 10/7 11:45 AM

Your discussion is about ASOS, not AWOS. Are ASOS / AWOS ICAO compliant?

#### Mike Graf National Weather Service 10/7 11:45 AM

I wonder if the error was introduced by the CWO

# Doug Morris10/7 11:46 AM

Why don't we round off the observation time, i.e, 0253Z should be 0300Z observation? Like most of the planet?

# Mike Graf\_National Weather Service10/7 11:48 AM

Yes they are ICAO compliant...though some consider the Remarks to not be.

# Doug Morris10/7 11:50 AM

Thanks. I am Canadian. ©That's why I ask.

## Daniel Fuka10/7 11:51 AM

Rounding up to top of hour could interfere with a SPECI report.

# Mike Graf\_National Weather Service 10/7 11:56 AM

NWS uses both AWOS and ASOS for TAFs...

#### Daniel Fuka10/7 11:58 AM

Thunderstorms (TS) are reported immediately, and frequently come out between the (ex 071553Z) report, for (ex 071558Z) TS report.

Maddox, Dustin10/7 12:01 PM video is not moving

Mike Graf\_National Weather Service10/7 12:01 PM No sound...but it could just be my connection

Maddox, Dustin10/7 12:02 PM we are back

Matt Fronzak 10/7 12:02 PM

There we go!

gordon brooks10/7 12:13 PM

Is there anything that we can "statistically deduce" from UP reports? Very light precip? Etc.

Thanks Randy.

gordon brooks10/7 12:18 PM

Mixed precip/transition...?

Mike Graf\_National Weather Service10/7 12:23 PM

IWXXM METAR will be available hopefully by the end of the year.

Kory Gempler10/7 12:26 PM

isn't there a volpe line for another RVR real time data feed?

Daniel Fuka10/7 12:32 PM

Room conversations are fun... "hydraulic thinger"

Matt Fronzak 10/7 12:35 PM

I thought you were going to be here in person (that's how you registered). I was looking forward to saying "Hello."

Andy McClure10/7 12:41 PM

The best way to track ACTUAL outages might be the dispatchers at part 135 and 121 companies. They might be able to report how many times they haven't been able to fly to station XXX in the past month/year/lifetime.

Doug Morris10/7 12:52 PM

How are the FAA airport cameras in Alaska working out?

# We only have two in Florida. ©

# Andy McClure10/7 12:55 PM

Even the angle-limited cameras are hugely useful! 360 cameras will give pilots the ability to adapt to local partial obscurations or limited visibility.

## Chris Oak 10/7 12:55 PM

can we get a commercial license to integrate the FAA cameras into products to help users better? (This was blocked before I believe)

#### Elizabeth Wilson10/7 12:59 PM

We're also planning to have a panel at the end of the session, time permitting, so feel free to hold your questions until then.

## Mike Jones - Univ AK Anch10/7 1:00 PM

I'm quite interested in how specially trained individuals in an off-road community might be able to provide support for FAA Tech Ops. Even in diagnostics, or very narrow tasks. If Tech Ops can't get there for a month or more, then might realize they need a specific part which requires a second fly out, couldn't this speed the process? Then communities have some ownership of their own recovery.

## Andy McClure10/7 1:04 PM

Unfortunately, Mike, there is no easy answer to your question. Some (or most) of the villages in remote areas have NO technicians available. The only way to fix equipment on-site is to fly a tech out there, but the Wx system isn't reporting, so there's no flying into that site!

#### Randall Bass10/7 1:05 PM

Doug, there is at least one commercial company that has networked open source cameras (DOT, Walmart, etc.) for use in "seeing" the weather as well as deriving weather information from those images. I believe they have hundreds if not more weather cameras in Florida they have accessed, many thousands in the US, and quite a few internationally now. It costs money of course for a subscription but it is a good supplement to the FAA Wx Camera system.

## Whitney, Mark10/7 1:06 PM

Greg Dyer here-there are some village technical job support efforts that Dr. Jones has explored that could fit the task, but funding and authorization challenges remain. The Alaska State DOT is in conversations with FAA Alaska on these topics.

## Andy McClure10/7 1:08 PM

The other possible solution: have remotely resettable equipment. Some camera sites and other new remote sensing equipment has that capability.

## Whitney, Mark10/7 1:09 PM

In the past, the limitation of remote maintenance options has been constrained by the phone line problems. Starlink (or other satcomm) seems to be a promising approach

## Andy McClure10/7 1:09 PM

I totally agree with using satellites to upgrade the comms!

(AFK)

Randall Bass10/7 1:11 PM

Andy - I know VWOS and the new MWOS system Walter Combs has developed have redundant sensors. Any talk of maybe doing some similar things with ASOS to make them more reliable?

gordon brooks10/7 1:20 PM SLides not updating

Dr. Bill Bauman10/7 1:20 PM We can't see teh screens online

gordon brooks10/7 1:20 PM We're stuck on slide 15

Maddox, Dustin10/7 1:21 PM frozen

Andy McClure10/7 1:21 PM Sorry, Randy... I'm not aware of any such conversations.

Joe Bracken10/7 1:21 PM we've lost audio

Matt Fronzak 10/7 1:21 PM We're unfreezing. Stand by....

Maddox, Dustin10/7 1:22 PM were back

Andy McClure10/7 1:22 PM Yaya!

@Randy: I believe Walter has been talking to lots of folks - at the Wx Cam office and others. The content is what I'm not privy to.

Doug Morris10/7 1:27 PM
What is the typical cost of an ASOS installation?

Walter Rogers10/7 1:28 PM forego q's... same old story

Andy McClure10/7 1:28 PM (ouch!)

Walter Rogers 10/7 1:30 PM

What does acronym AWxS stand for?

## Matt Fronzak 10/7 1:31 PM Edited

It's a made-up acronym, because I got tired of typing Automated Weather System (ASOS/AWOS) ©.

#### Matt Fronzak 10/7 1:42 PM

Andrew just spoke to the cost #s, and the first set of #s align with what I've heard: \$1M-\$2M for Fed ASOS/AWOS-C, \$250K-\$350K for non-Fed AWOS.

# Whitney, Mark10/7 1:43 PM

Some of the costs from recent fed systems lump the comm/power costs in with the installation. There is some difference in equipment package costs, but the biggest difference is whether you include comm/power in the number

# Ryan, Thomas E-CTR (FAA)10/7 1:45 PM

This is one of the reasons we in Flight Standards, along with the NextGen Aviation Weather Division are working to enable utilization of third party weather data providers, that could be analyzed weather and/or non-certified wx systems.

# Doug Morris10/7 1:45 PM

Thanks Matt. I also heard those great facts. \$2M. Wow!

## Matt Fronzak10/7 1:52 PM

...and see Mark Whitney/Greg Dyer's comment above yours. There might be some degree of apples and oranges in the comparison.

Walter Rogers 10/7 2:31 PM

Has Heather started her talk?

Whitney, Mark10/7 2:31 PM

Yes

Maddox, Dustin10/7 2:31 PM

Yes

hear you fine

Michael McPartland (MIT LL)10/7 2:32 PM

Camera out of focus at Logan?

# Maddox, Dustin10/7 2:32 PM

its blurry for me too

# Fred Remer10/7 2:39 PM

We were told by our contractor (Midwest Wx) not to allow a VCTS to be transmitted.

# Dave Kochevar (NWS)10/7 2:45 PM

One note since a number of people have mentioned the NWS ASOS users guide. To my knowledge the policy on this is now updated by the FAA in JO 7900.5: <a href="https://www.faa.gov/regulations\_policies/orders\_notices/index.cfm/go/document.information/documentID/1036970">https://www.faa.gov/regulations\_policies/orders\_notices/index.cfm/go/document.information/documentID/1036970</a>

# Andy McClure10/7 2:50 PM

Just go for it, Gary!



# James Pinto10/7 2:59 PM slides are not updating

ok, they are...

# James Pinto10/7 3:22 PM

nice talk gary - have you thought about blending in remotely sensed products like satellite imagery to help better characterize the spatial variability of low clouds?

# Pokodner, Gary (FAA)10/7 3:25 PM

Yes James. The more we can cross track the higher confidence we can have in an output. Our long term goal is to enhance access by mathematically showing a confidence of greater than 99% when X sources of inputs are available. X is determined by the rating of each sensor/human in the crowd.

# Donald Eick10/7 3:30 PM

From the NTSB side unless its a RAWs or DOT system what is provided is extremely limited to temp/dew point/ wind, no visibility, precipitation, or type of weather.

# Whitney, Mark10/7 3:30 PM

Can you please display the QR code

## Elizabeth Wilson10/7 3:32 PM

Not sure I can share it here, but the website is viewer.synopticdata.com.

#### Joe Bracken10/7 3:33 PM

Elizabeth, does your site specify what weather information is available from the various sites?

# Walter Rogers 10/7 3:34 PM

I'm a bit disappointed of the lack of discussion of "...Improving Aviation Decisions ..." part of the Session. For example w.r.t Microbursts. JAWS addressed this 40+ yrs ago with LLWS systems (expensive). We now have IoT related inexpensive tech to provide something similar at all GA/Business Jet airports.

Take a look at this thorough analysis of a fatality related to a microburst that occurred in Rifle Colorado: https://chessintheair.com/invisible-microburst-kills-expert-glider-pilot/

## Elizabeth Wilson10/7 3:40 PM

Yes. Once you click on a weather station and display conditions, you can view the metadata (About StationID) that shows you what parameters are being ingested and disseminated from that site. Here's an example: <a href="https://viewer.synopticdata.com/map/data/now/air-temperature/KBDG/about#map=3/36/-95">https://viewer.synopticdata.com/map/data/now/air-temperature/KBDG/about#map=3/36/-95</a>

Dr. Bill Bauman10/7 4:07 PM Lightning is misspelled

Maddox, Dustin10/7 4:09 PM P6SM

4SM

Daniel Fuka10/7 4:17 PM

Can we mention the discount for FPAW again? {: -)

Andy McClure10/7 4:22 PM

Observer rules: predominant vis for half or more of the circle.

Maddox, Dustin10/7 4:23 PM

can the blurriness on the camera in the room be fixed? thanks

Ethan Krimins10/7 4:25 PM

33%...which is live now (no need for codes)

## Richard McKay10/7 4:27 PM

Ethan, interesting talk, will you be opening the app to other regions? (I am visiting from the UK and when I tried to view the app, it tells me it is not available for my region. (maybe later?)

# Ethan Krimins10/7 4:28 PM

Hi Richard. That's odd - it is usable & available globally. Could you please take a screenshot and send me that message?

Richard McKay10/7 4:32 PM Sure, thanks.

## Ethan Krimins10/7 4:33 PM

Thanks Bill. Good catch.

# Richard McKay10/7 4:35 PMEdited

This is what the UK App Store shows. I couldn't find it in the app store so searched on my browser and then used the link from the webpage to go to the app store if that helps. (sorry for low-res image, trying to keep data size low!)

# Andy McClure10/7 4:37 PM

What became of the MIT LL project to measure visibility from weather camera images?

## Walter Rogers 10/7 4:38 PM

Q directed at Campbell Scientific... Can a JAWS like LLWAS be created at 10-100x less cost than it was for Microburst detect with today's technology? A decision-based aid to avoid this fatal hazard would be highly desirable

## Ethan Krimins10/7 4:42 PM

Richard - what is your email please?

# Richard McKay10/7 4:43 PM

Richard.McKay@campbellsci.co.uk

## Matt Fronzak 10/7 4:43 PM

It (Visibility Estimation through Image Analytics, or VEIA) is alive, doing well, and being expanded to include cloud ceilings (CEIA). Mike Matthews from MIT/LL briefed the Wx COI at our last meeting.

## Ethan Krimins10/7 4:45 PM

Thank you, sir. I added you to an email with our team. We will try to solve this.

## Andv McClure10/7 4:47 PM

Thanks, Matt!

Proprietary data: PIREPs are increasingly proprietary!

# Pokodner, Gary (FAA)10/7 4:52 PM

How is Tru weather dealing with different sources of visibility if they have different limitations. For example, ASOS does not detect smoke, but another visibility sensor does take smoke into account. How do you advise the user of the limitations of each different type of sensor?

## Paul S. Richter10/7 4:57 PM

The current weather info announced by a tower (orally by radio) to a landing or departing aircraft is not necessarily taken from either the current ATIS weather or the most recent METAR weather. Tower has both the current ATIS and the current METAR available.

# Andy McClure10/7 5:04 PM

Generally, the ATCT also has a real-time anemometer available.

Pokodner, Gary (FAA)10/7 5:05 PM

Thanks

## Matt Fronzak 10/7 5:09 PM

McGettigan, Starr (FAA) and Murphy, Douglas E (FAA)- I've given Scott the 5-minute high sign, and we'll transition quickly to your presentations, with the idea of being done by 4 PM MDT / 6 PM EDT (a late night for you both). Will that work?

McGettigan, Starr (FAA)10/7 5:10 PM

sure. I will be fast.

# Pokodner, Gary (FAA)10/7 5:14 PM

Agree with Gus as well. Users' knowledge may be limited on what information or products they need and how to use them.

Johnson, Ian (FAA)10/7 5:17 PM

Great day 1, but I need to leave. Enjoy the rest of your day

Andy McClure10/7 5:28 PM

Thanks, Starr! (ex-PIREP SWAT co-chair)

Dr. Bill Bauman10/7 5:29 PM

Thanks Starr - ex-Wx COI co-Chair and co-founder-in-chief! Oh, and portal founder...

Richard McKay10/7 6:07 PM

Being new to FPAW, great day 1 discussions and presentations, thanks to everyone that contributed today!