AERONAUTICAL CHARTING MEETING Charting Group Meeting 22-02 – October 25-27, 2022

RECOMMENDATION DOCUMENT

FAA Control #22-02-372

<u>Subject</u>: There should be no cross-hatched airspaces without names. I'm looking at you, SMARs.

Background/Discussion: (see attached proposal for details) **S**pecial **M**ilitary **A**ctivity **R**outes (SMARs, and there may be others, too) are identified by cross-hatching on aeronautical charts but have no name or alphanumeric identifier. This poses a problem when a pilot is trying to communicate with ATC or Flight Service about that airspace while headed towards it.

<u>Recommendations</u>: Eliminate SMARs, or promote them to MOAs. **If an airspace deserves cross-hatching, it deserves a name**. Make a concerted effort to identify any other non-named- but-cross-hatched airspaces that I may be unaware of, and deal with them similarly.

<u>Comments</u>: (see attached proposal for details and examples)

<u>Submitted by</u>: Mark A. Guenin <u>Organization</u>: submitted as a private citizen <u>Phone</u>: 717-305-0079 <u>E-mail</u>: mguenin@protonmail.com <u>Date</u>: August 26, 2022

> Please send completed form and any attachments to: <u>9-AMC-AVS-ACM-Info@faa.gov</u>

There should be no cross-hatched airspaces without names. I'm looking at you, SMARs.

Mark Guenin For consideration by the 22-02 Aeronautical Charting Meeting (ACM), October 24-27, 2022

Stating the obvious: cross-hatching of an airspace on an aeronautical chart indicates that the airspace is important to know about. Risks of ignoring such an airspace include injury, death, grounding or other disciplinary action, and disruption of legitimate military activity, to name but a few.

I've recently become aware of Special Military Activity Routes (SMARs). They are nowhere documented in the Aeronautical Information Manual (AIM), and everything I know about them comes from inference. Near as I can tell, they're like a Military Training Route (MTR) on steroids. Each SMAR that I've seen surrounds and expands an MTR.

SMARs have no names. And that's my objection; that needs to change. MOAs have names. Prohibited, Restricted, Warning, and Alert areas have alphanumeric identifiers. All of these have a handle; a name you can attach to *that thing* when talking to someone else about it, typically by radio.

SMARs need names. Somehow, some way, you need to assign those things an identifier. Whether that means doing away with them and just letting the underlying MTR take precedence; or whether that means promoting them to long, skinny MOAs and giving them names; it doesn't matter. *SMARs need names.*

The broad principle: *There should be no cross-hatched airspace on a chart that doesn't have a name*. I've single out SMARs since they're the only unnamed, cross-hatched airspaces I've encountered.

There may be others that I don't know about. If so, please broaden this discussion to include those, too.

My anecdote

Rule-making should not, generally speaking, be driven by a single anecdote. Sometimes it is, though, and in some of those cases that's perfectly appropriate. Pacific Southwest flight 182 and the Grand Canyon midair collisions are two catastrophic examples. My anecdote pales by comparison. But if you folks ignore anecdotes completely, you'll be unaware of the real-world consequences of your policies.

In the summer of 2021, I flew from my home in southwest Colorado to California. As always, such trips involved deviating around, or at least inquiring about the status of, the large cluster of MOAs and restricted zones of south-central Nevada. In my case, I was headed to northern California, so I deviated to the north to skirt the norther boundary of Reveille North MOA. My approximate route of flight is depicted in magenta in Figure 1 below:



Figure 1: my planned route westbound (magenta line)

Standing in my way were the two objects I've outlined in red in Figure 2. Those are two SMARs:

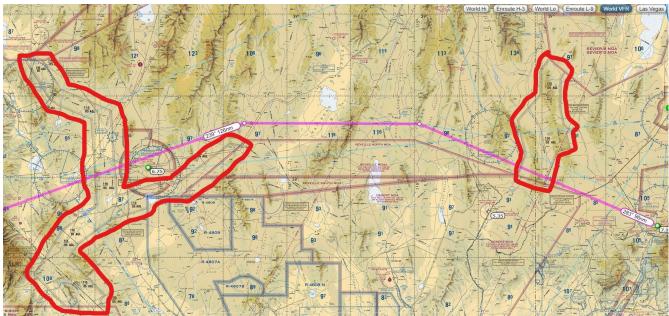
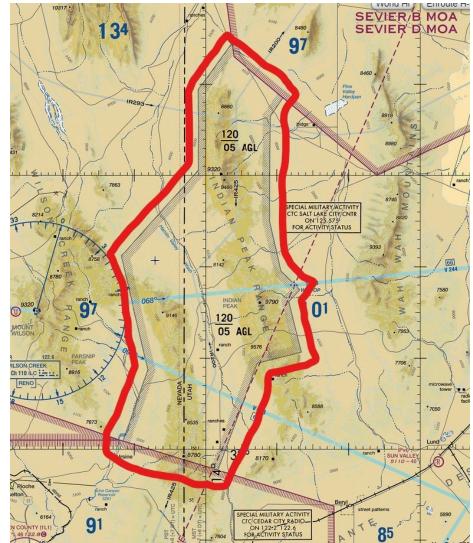


Figure 2: my planned route westbound (magenta line), with SMARs outlined in red



Here's a close-up of the eastern SMAR I had to cross first, flying westbound:

Figure 3: the more eastern of the two SMARs I had to cross

As I cleared Cedar City westbound, I tried to contact Cedar City Radio as instructed on the VFR chart. I was unsuccessful several times; meanwhile I was chugging along towards the SMAR depicted in Figure 3. Finally, I managed to reach Cedar City on the radio, but the reception was lousy. Imagine the following conversation, with static, as I'm headed towards the airspace I'm inquiring about at 100 mph (I had a headwind. Give me a break).

Me: Cedar City Radio, Bugsmasher-1-2-3, 10 west of Cedar City and westbound, wondering what the status of the SMAR is.
Cedar City Radio: <static> didn't <static> repeat.
Me (slowly): Cedar City Radio, Bugsmasher-1-2-3, 10 miles west of Cedar City and westbound, wondering what the status of the SMAR is.
Cedar City Radio: SMAR? Not sure <static> you're referring to.
Me: Special Military Activity Route. It's a Special Use Airspace, sort of oriented north-south, connects Reveille and Sevier MOAs.

Cedar City Radio: You broke up. Me (slowly): It's a Special Use Airspace. Special. Military. Activity. Route. It's oriented north-south. It connects Reveille MOA to Sevier MOA. Cedar City Radio: <static> Me (without keying the mic): %\$#@!!

(You get the picture).

When I finally managed to establish radio contact, Cedar City Radio was of no help. He had no information on it; specifically, whether it was active. If I had to guess, he was physically located nowhere near Cedar City, Utah; and he had none of what we used to call *local knowledge*. That is, he was unable to give me the benefit of his experience; f'rinstance: "The fighter guys are usually going through there on the weekends. I've never seen it used on a weekday morning."

So I proceeded right on through it, head on a swivel. Then I kept chugging along westbound, knowing I had another one up ahead:

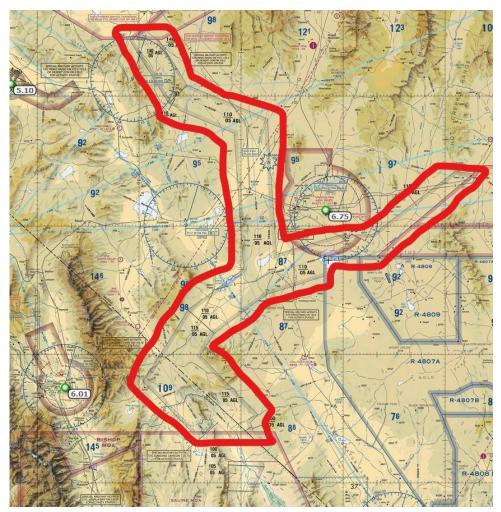


Figure 4: The more western of the two SMARs I had to cross

This time, I was completely unsuccessful in reaching Reno Radio, the controlling agency listed on the VFR chart. As before, I proceeded through it with head on swivel.

The problem(s)

SMARs are a problem. The downsides should be obvious. First, there's the difficulty in communication when two parties talking on the radio can't agree on what they're talking about. If an airspace has a name, it's easy to talk about it. If an airspace doesn't have a name, the two parties are stuck with trying to describe it; meanwhile, one of the two parties is hurtling (sort of) through space, closing the gap on the airspace in question. Second, these problems are made worse when communication conditions are not optimal. In my case, I had marginal communications trying to cross the first SMAR; and *no* communication prior to crossing the second, despite my best efforts. Or: what happens if Cedar City or Reno Radio were busy communicating with someone else, either on the same frequency or a different one, at the same time I was trying to reach them?

The solutions

Two solutions occur to me; there may be more, but I just haven't thought of them.

First solution: eliminate them. If they are simply MTRs on steroids, find out what makes them "on steroids" and stop doing those activities. These SMARs all seem to be connected to one or more MOAs – so you could simply *confine the activity* that makes these "MTRs on steroids" *to the MOAs*.

That may not be possible for every SMAR. From a friend who lived in California, there's a SMAR that wraps like a snake around Santa Barbara and courses inland. Feast your eyes on this monstrosity:



Figure 5: The Santa-Barbara-area SMAR. How else would you identify this? It doesn't have a name. See the problem?

My friend's understanding was that cruise missiles would be fired from offshore, follow the SMAR while being chased by a fighter jet, and end up in an MOA.

Or what about this one? Somewhere in Alabama is a SMAR that would make Elbridge Gerry proud. (Gerrymandering? Get it?)

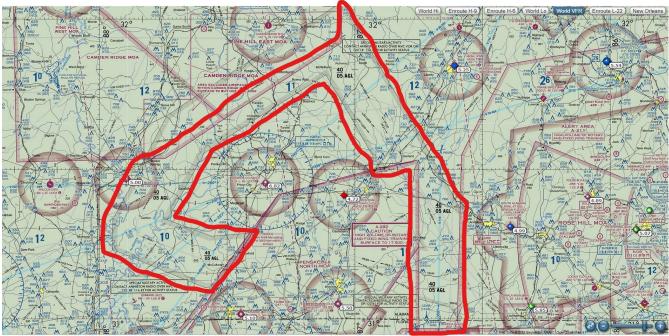


Figure 6: Elbridge Gerry would've been proud of this SMAR in Alabama

If you look closely at the most southeastern portion of what I've outlined in red in Figure 6, I **suspect** I've outlined it correctly, since it's labeled with a floor (500 AGL) and ceiling (4000 AGL). That floor/ceiling labeling seems to be a characteristic of a SMAR. I said I *suspect --* but I'm not *certain --* that I've outlined it correctly. Imagine flying the magenta route depicted below, in Figure 7:

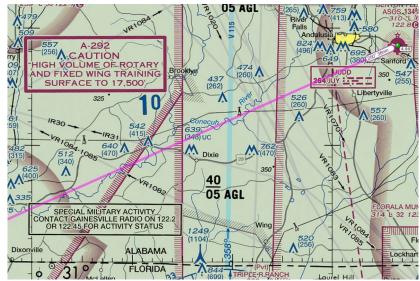


Figure 7: A hot mess in southern Alabama. What SUAS overlies the words "Conecuh River"? Are you sure?

The middle section of this magenta line is in ambiguous territory, isn't is? There is evidence you're in a SMAR, with *some* 45-degree-angle cross-hatching and the **40/05 AGL** annotation. But why isn't the entire corridor outlined with inward-facing 45-degree-cross-hatching? Parenthetically, it's not entirely

clear to me whether the airspace in that lower-left triangular area which contains the words "ALABAMA" and "FLORIDA" is special use airspace or not.

If you ask me, it's a hot mess.

Which brings me to the...

Second solution: Eliminate the entire category of SMARs by making them all MOAs. As far as I can tell, the rules for entry for SMARs and MOAs are equivalent. That is, *Enter at your own risk, also knowing you might be really screwing up a training mission*. Why do I say "As far as I can tell"?

Because I've been unable to find explicit instructions for SMARs. MOA rules are clearly spelled out in AIM 3-4-5. As I pointed out before, SMARs are not even mentioned in the AIM.

Is there anything good about SMARs?

Well, yes. The single good thing about SMARs is that *the floor and ceiling, and controlling agency with contact frequency, are depicted right on the chart. You don't have to consult the margins of the chart to find out that information.*

That's how it should be for all SUAS. But that's the subject of a separate plea to this committee.

In summary:

Eliminate SMARs, and any other unnamed airspaces that are cross-hatched on an aeronautical chart. **If it deserves cross-hatching, it deserves a name**. Look at each SMAR individually. Some undoubtedly don't really need to be there – the underlying MTR that each SMAR follows will serve the purpose just fine. Eliminate those. For the rest, promote them to MOAs, and for God's sake give 'em each a name.

Mark Guenin mguenin@protonmail.com

MEETING 22-02

Mark Guenin, private citizen, presented his recommendation on Special Military Activity Routes (SMARs). He explained that he encountered an area depicted on the Las Vegas Sectional Chart that is charted similarly to special use airspace, however he couldn't identify it, couldn't find any information or rules about how to transit it and it didn't have an ident to communicate to ATC. There is a boxed note on the chart that identifies it as a Special Military Activity Area with contact information for Cedar City Radio; however, when he contacted them they didn't know what he was referring to. Mark's recommendation is that the SMARs should either be eliminated from the charts or they need to be identifiable by a name/identifier or perhaps be reclassified as a Military Operations Areas (MOA).

Allison Miller, FAA/AJV-A213, said the Visual Charting Team reached out to the National Geospatial-Intelligence Agency (NGA) and they responded that they want the FAA to keep charting the areas and that they cannot re-designate them as MOAs. She reported NGA recognized that there is a communication problem if the charted boxed contact frequency does not provide a reliable conduit for the user to determine activity status of the area and they will work with the FAA to resolve that.

Mike MacLean, NAVFIG, said these areas surround charted military training routes (MTR) and are used for unmanned aircraft activity. As far as Mike can tell, the NOTAM system is working appropriately for these areas. If a pilot encounters a problem, he recommended that they contact the Air Traffic Control Center overseeing that area. Valerie Watson, FAA/AJV-A250, said the contact information that is published on the chart needs to be verified to ensure it is correct. Users should not have to seek additional contact information. Valerie then asked whether the description of SMARs that is included in the margin area of the charts should be updated to make it clearer. She also asked if the SMARs should be referenced to the underlying MTR when a pilot contacts the facility for activity status. Mike said yes, he thinks it would be helpful if the pilot refers to the underlying MTR route by identifier and agreed this could be added to the explanatory language in the margin note and the boxed contact note associated with each area.

Valerie asked if explanatory language should be added to the Aeronautical Information Manual (AIM). Joel Dickinson, FAA/AFS-410, does think language should be added to the AIM and will reach out to the military to draft AIM language.

Paul Gallant, FAA/AJV-P210, confirmed that these are named areas based on the IFR military training routes so that is what pilots should use to ask about the status. He agrees with improving the language on the chart and in the AIM.

Steve Madigan, Garmin, asked what the source is for the boundary. John Collins, ForeFlight, said the width descriptions of the MTRs are in the National Airspace System Resource (NASR) database and represent the outer boundaries of those areas designated as Special Military Activity Areas. Valerie said AJV-A will research this further to determine if all the needed information is already included in NASR.

John Moore, Jeppesen/Boeing, voiced he doesn't think the FAA should try to train pilots with text on the chart. The necessary data should be provided, but not instruction in how to use it.

There was general audience agreement that the boxed note should include the route identifier, the contact information needs to be verified, and there should be guidance added to the AIM.

Valerie asked if Paul Hoegstrom, AFFSA, and Mike MacLean, NAVFIG, could help the Visual Chart Team ensure they get the needed contact information, i.e., facility and frequency, from the military. Paul said there are very few of these areas and he thinks the military would not have a problem providing the information. He said will reach out to the Air Force and Mike MacLean said he can reach out to the Navy to ensure the contact information is correct.

STATUS: OPEN

- **ACTION:** Paul Hoegstrom, AFFSA, and Michael MacLean, NAVFIG, will assist Allison Miller, FAA/AJV-A213 and the Visual Charting Team in researching the appropriate communication information to be published in the SMAR communication box.
- **ACTION:** Allison Miller, FAA/AJV-A213, will draft an Interagency Air Committee specification change to update the SMAR communication box to include the route identifier and to expand the explanatory guidance published on the VFR charts.
- **<u>ACTION</u>**: Allison Miller, FAA/AJV-A213, will research the SMAR data that is currently included in NASR.
- **<u>ACTION</u>**: Joel Dickinson, FAA/AFS-410, will coordinate with the military on the addition of SMAR guidance in the Aeronautical Information Manual (AIM).
- **<u>ACTION</u>**: Jennifer Hendi FAA/AJV-A250, will update the Chart Users' Guide SMAR guidance to include the current chart margin explanatory note.

MEETING 23-01

Katie Murphy, FAA/AJV-A213, reported that Visual Charting submitted Interagency Air Committee Requirement Document (RD) 856 to expand the Special Military Activity Route (SMAR) communications box to include the corresponding instrument rules (IR) route identifier. Her team is also working to confirm the facilities and frequencies for these areas. Paul Hoegstrom, AFSA, reported that there are three IR routes for which it has been hard to determine when they were established and whether they are still being used. There are two U.S. Navy SMARs and one Air Force SMAR and two of them overlap. He said finding contacts for the three IR routes out west has been difficult.

Tom Carrigan, FAA/AJV-A260, said every IR route has been updated, some recently, but none of them associated with SMARs have been updated. He is trying to figure out what is different about these areas. The source document shows they were historically all used for one particular thing, but there is no updated information.

Paul said he will find out whether these areas have been discussed with the services to find out whether they are still correct. Tom said we need to figure out how they will be sourced.

Katie said at last fall's ACM there was a vote that these areas should stay on the charts. Jennifer Hendi, FAA/AJV-A250, said Michael MacLean, NAVFIG, wanted them to remain because he said they are still used for unmanned activity. Paul said he will reach out to Michael and try to track down whether they are all still needed. He will also try to find someone in Air Traffic Control to ask about the matter.

Rich Boll, NBAA, asked for clarification on the proposal. Katie recapped that one option is to take the SMARs off the charts. The second option is to continue charting them, confirm the data in the

communications boxes, and improve the pilot guidance. She said the SMARs on the east coast are associated with the FAA, so they have been able to confirm the communications information. Paul is still helping them confirm communications information for the SMARs in the west.

Rich said there is specific information in the Aeronautical Information Manual (AIM) about what to do with Military Training Routes. He asked how these are different. Katie said these areas are bigger (polygon-shaped) and in the communications boxes, pilots are given specific frequencies to contact. Rich thinks the fact that the Flight Service Stations (FSSs) did not know what the areas were when communication was established is a greater concern.

Joel Dickinson, FAA/AFS-410, said the pilot who brought this concern to the ACM said he looked into all the regular pilot resources about what a SMAR was and could not find a description. Therefore, Joel's team created a Document Change Proposal (DCP) to add the term in the AIM, but he has not submitted it yet. This discussion shows there are still questions regarding whether SMARs should continue to exist. He is going to hold the DCP until it has been determined whether they will continue to be charted. Paul said he will talk to people in his office and try to determine whether to go forward or not. Joel said he will send Paul the draft DCP for his information.

Katie said she will continue to work with Paul and Joel and will provide an update at the next meeting.

Jennifer reported the Aeronautical Chart Users' Guide (CUG) has been updated with the current language that is documented on the margin of the VFR charts. It will be updated again when the RD for the IR Route identifiers in the SMAR communications boxes is approved.

Rich thinks this never should have been an issue and the FSS should have known about the SMARs. He would like an action item to follow up with the facilities to make sure they know about SMARs. Scott Jerdan, FAA/AJV-A310, agreed and suggested Greg Yuhasz, FAA/AJR-B1, Flight Service Headquarters, as a good point of contact. He will contact Greg.

STATUS: OPEN

- **<u>ACTION:</u>** Paul Hoegstrom, AFSA, will continue to assist Katie Murphy, FAA/AJV-A213, and the Visual Charting Team in confirming the appropriate communication information to be published in the SMARs communication boxes.
- **ACTION:** Katie Murphy, FAA/AJV-A213, will work with Paul Hoegstrom, AFSA, and Joel Dickinson, FAA/AFS-410, in researching whether the SMARs should continue to be charted.
- **ACTION:** Joel Dickinson, FAA/AFS-410, will submit the addition of SMAR guidance to the Aeronautical Information Manual (AIM) if it is determined that SMARs will continue to be published.
- **<u>ACTION</u>**: Jennifer Hendi FAA/AJV-A250, will report on the IAC Specification and Chart Users' Guide updates to SMAR guidance.
- **<u>ACTION</u>**: Scott Jerdan, FAA/AJV-A310, will reach out to Greg Yuhasz, FAA/AJR-B1, regarding Flight Service Station awareness of SMARs.

MEETING 23-02

Katie Murphy, FAA/AJV-A213, thanked Paul Hoegstrom, AFFSA, and the other military contacts. With their help, Visual Charting was able to verify and update the information for the ten Special Military Activity Routes (SMARs) that are currently charted. She said those changes were effective with the 5 October 2023 chart cycle. Additionally, the Interagency Air Committee (IAC) specification change to add the route number to the SMARs communications boxes, as well as updating the note in the margin to more clearly explain that those notes are related back to the route itself, has also been signed and implemented. Katie said the updates resulted in changes to eight aeronautical charts. She recommended closing the issue.

Jennifer Hendi, FAA/AJV-A250, reported that, in addition to the IAC specification change, the guidance in the Aeronautical Chart Users' Guide was also updated for the 5 October 2023 effective date.

Joel Dickinson, FAA/AFS-410, reported that since it has been determined that SMAR guidance will continue to be published and the specification change is complete, he will now submit the Document Change Proposal for the addition of SMAR guidance to the Aeronautical Information Manual (AIM).

Tom Carrigan, FAA/AJV-A311, said he had worked the action from the last meeting to reach out to Greg Yuhasz, FAA/AJR-B1, regarding Flight Service Station awareness of SMARs. Tom confirmed with Greg that Flight Services is aware of this issue and will be providing training on SMARs.

Jennifer summarized the issue and said all actions are now complete. There was agreement to close this issue.

STATUS: CLOSED