SBIR 25.4 Release 5 Q&A Telecon Transcript
18 February 2025

- SOCOM254-D002 Operator Portable Oxygen Generation Device
- SOCOM254-003 Aviation Goggle Mount

SBIR Process Timeline
05 February 2025: Topics issued for pre-release
26 February 2025: USSOCOM begins accepting proposals via DSIP
12 March 2025: DSIP Topics Q&A closes to new questions at 12:00 PM ET
26 March 2025: Deadline for receipt of proposals no later than 12:00 PM ET

SOCOM254-003 Aviation Goggle Mount

1. **ANVIS mounts have vertical adjustment only – no fore-aft or tilt like they request in this SBIR, so doesn't this become redundant to the NVG device adjustments?** We currently have four different helmets that we use the goggles with and there are some difficulties or incompatibilities with the goggles and certain helmets. The ideal mount would have the ability to customize its installation to different helmets via internal adjustments or different mounting brackets so that it could afford the full range of adjustability that's built into the goggle without interfering with the helmet itself.
- **Would your office be able to provide CAD models of the helmet and mount prior to award, for phase 1 proposals?** We don't have CAD models to share. Helmet models are Gentex HGU-56p and SPH-4B and NVIS mount part # is A3260913, originally manufactured by ITT
2. **Also, would your office be able to provide Helmets, NVG (doesn't have to be functional) and existing mounts as GFE for development?** No, Helmet models are Gentex HGU-56p and SPH-4B
3. **If that's possible, how should we line item and cost that in the proposal (Cost Volume).** This is a phase one feasibility study, so the primary cost would be labor costs.
4. **Are there environmental or operational conditions (e.g., extreme temperatures, humidity, high G-forces) that the mount must withstand?** Extreme temperature, humidity, high G forces are always factors, but an additional consideration is that in crash sequences, the goggles have to breakaway, so there is a breakaway force that is required.
5. **Are there specific battery specifications (voltage, capacity, type) that the internal battery must adhere to?** Most of our systems are three volt systems, so whatever the battery source is going to be, it just has to be able to power all units and it will have to have a secondary power source. As an aviation requirement, we have to have a primary and alternate power source. Our current systems use battery packs that are a two-battery AA system for our primary and secondary, and operate on either alkaline or lithium AA batteries.
6. **Quick, one-handed operation while wearing gloves?** Yes
7. **What are the standards (MIL-STD-1472, MIL-STD-810)?**
   https://www.denix.osd.mil/soh/denix-files/sites/21/2016/03/02_MIL-STD-1472F-Human-Engineering.pdf
   https://www.atec.army.mil/publications/Mil-Std-810F/MILSTD810F.pdf

8. **Does the Government plan multiple awards for this Phase I SBIR? If so, how many?** We generally award between two to three phase ones, depending on the TPOC and their need and the technical proposals that are submitted.
9. **Regarding the break-away functionality, what poundage of force/G-force are you looking to have it break away at?** 16lbs
10. **What are the key performance metrics used for evaluation?** Please reference the USSOCOM specific instructions. As far as evaluations go, we look for technical merit, key personnel, and commercialization.
11. **There are multiple patents for tilt on an integrated NVG mount. Given the request for tilt, how would a patent preclude phase II hardware with this feature?** The government will not be helping submitters regarding patent protection. Submitters will need to use their creativity and expertise to navigate existing patents and develop solutions.
12. **Can you please clarify functionality number 4: Low Profile Mount solution must interface with an ANVIS style goggle mount?** An ANVIS style goggle mount is the ANVIS style that's been around for years. The device needs to be compatible with that style so that it works with currently fielded units of goggles. A good example that's been put out is an ANVIS 6 goggle. If it works with those goggles, it is likely going to work with the others.
13. **Can you please clarify functionality number 7: Assess if the Aviation Goggle Mount can be retrofitted to an existing goggle with minor modifications.** The biggest thing is that we don't want to have to modify our goggles. Goggles are already expensive, so to go through and modify our goggles to work with your mount, that's not going to be a good thing. As long as it fits with the ANVIS style mount that we currently have, it should work with your goggles.
14. **Is there a SBIR submission template or example that is preferred to be used?** Go to DSIP, the Defense SBIR/STTR Innovation Portal, then go to Solicitation Documents and Instructions. Select this effort, the 25.4 Release 5, and you'll be able to pull up the BAA instructions, the USSOCOM specific instructions, the topic descriptions, supporting documents, and the templates you will need for this.
15. **What helmet sizes do we need to accommodate?** It is more of a matter of the model of helmet and then the available sizes for that model of helmet. The four models we are interested in are HGU56, SPH4S, the final Forge Wrath helmet, and a variation of the Ops Core Ground Tactical Helmet.
16. **Can you specify which goggle model?** It is ANVIS 6 and a Wide Field of View Aviation Goggle.
17. **Is that 4 batteries total?> two per device?** Currently we have a battery pack that houses two battery trays. Each tray has two batteries and that just provides two batteries for primary power with the ability to switch over to the other tray for a backup. Four total, but the device operates off two at a time.
18. **Can you provide a fit in envelope for the swing through as well as up position in concern of the cockpit?** They would be operating in multiple different platforms. The general statement is that in the stowed position it would be as form fitting to the helmet as reasonable to keep the profile limited when in position number two.

19. **Are goggles and helmet synonymous for where the mount is to be secured?** The helmets mount in the front, but a lot of goggles have a different footprint for up and down, so that will be the challenge. There needs to be some flexibility in the way it installs onto multiple helmets to account for the helmet profile itself.
20. **Are you looking for a solution, a series of solutions, or a methodology to find a solution?** It is a SBIR Phase I, so we are open to any solution you guys can come up with. This is a matter of fact finding.
21. **What version Goggle again?** The ANVIS 6 and the Wide Field of View Aviation Goggle by ASU at Envision.
22. **The USSOCOM 25.4 instructions state a cost volume template will be issued on Feb 26. is this still intent? or should we use previously issued templates?** The template is already on DSIP. Go to the supporting documents and templates, and it looks like it's the last template on there labeled "SOCOM 254-003 Cost Volume Template."
23. **Is helmet stabilization contact, like sprung up against the helmet, in combination with the mount acceptable in the stowed position?** Yes, we would like the ability to flip up to the stowed position.
24. **Where would the mount be interfacing with the ANVIS mount? Is it where the vertical adjustment is or behind that?** Our goggles do not have a vertical adjustment in them.
25. **Is there an existing failure report of the legacy system that we can reference for benchmarking?** Not that we know of.
26. **How do we request to borrow the helmet and goggle short term?** This is a conversation that will be had with the awardee of SBIR I.
27. **For electrical contacts the original appears to achieve this through a combo of the break away feature and pivit. Is this sort of approach still desired? No wire flexible bend through range of motions?** Yes, and no wire flexible bend, at least through position one and two - that would just be a rotation, vertical, or any other potential range of motion, could have flexible wires in that one.
28. **From my understanding you want a replacement for the anvis 6 wide mount for NODs for Aviation helmets, the 4 tube version.** We are chasing the lateral stability of the four tube system to provide the operator with a good stable goggle that doesn't tilt. In addition, that goggle is a lot heavier, with a target weight of about 660 grams. The stability for this version is very critical.
29. **Are there any System Operation manuals or Mil Docs that we could use for reference? (MIL-STD-1472, MIL-STD-810)** https://www.denix.osd.mil/soh/denix-files/sites/21/2016/03/02_MIL-STD-1472F-Human-Engineering.pdf
https://www.atec.army.mil/publications/Mil-Std-810F/MILSTD810F.pdf
30. **How bad on a scale of 1-10 are the current mounts in operational vibration?** With a wide field of view goggles, maybe you're up to a four or a six, but vibration is not the problem with the existing model, its more of a stability issue, especially with the wide field of view goggles with the pano tubes. They have a tendency to fall down on their own even though they're locked in

the up position with the existing amount. It is definitely a usability concern, as the goggles will come out of alignment or adjustment which created a wide field of view problem.

31. **Any estimates on the Weight of the heaviest NVG set?** 660 Grams.
32. **Do you have any videos and/or photos to share that characterize that usability issue you just described? We do not have any pics or videos.** During operational testing of the ASU WFOVAG in November 2024, multiple users commented on the security/stability of attachment to the common NVG helmet mount. Noticeable vertical axis play in the down (operational) position resulted in the WFOVAGs shifting position (left or right about the vertical axis) during head movement. This occurred occasionally during flight and required the user to grab and re-center the goggles to maintain optimal alignment. Multiple users reported that the WFOVAGs were prone to unintentionally disengaging from the locked and stowed position. Usually this occurred during vertical head movement and resulted in the goggles falling from the stowed to the down position. However, in one case the goggles completed separated from the helmet (while in the stowed position) as the pilot stepped out of the aircraft. The insecure attachment to the helmet is a shortcoming that should be fixed in future versions of the NVG helmet mount.
33. **Reports will be helpful. How do we obtain them?** We don't have reports to share.

Please submit any additional questions to the DSIP tool here. Questions are typically answered within seven days.