SBIR 23.4 Release 2 Q&A Telecon Transcript

SBIR Process Timeline
~~04 April 2023: Topic issued for pre-release~~
19 April 2023: USSOCOM begins accepting proposals via DSIP
04 May 2023: DSIP Topic Q&A closes to new questions at 12:00 PM ET
18 May 2023: Deadline for receipt of proposals no later than 12:00 PM ET

Special Area of Interest
PHASE I Open Topic:
SOCOM234-P002: Open Topic for Family of Special Operations Vehicles

1. **Can you share the plan for number of awards under this topic?**
   SOCOM awards Phase I contracts to firms that have the best chance of providing feasible solutions that solve the topic's problem. The number of Phase I awards can vary.
2. **What is the target vehicle (e.g., 2022 Chevrolet Tahoe)?**
   There isn't a target vehicle because we have multiple vehicle platforms, makes, and models that we would be interested in utilizing, and those we already utilize for SOCOM and/or other government agencies. What I would focus on is a recent make and model that is widely proliferated somewhere in the world that we might want to use. So I know that's really vague, but here's some good examples: 2022/2023 Toyota Hilux. Why? Because it's the most proliferated pick-up truck in the world.
3. **Can you share if there is interest in autonomous flight vehicles / drones / drone autonomy systems?**
   Our team represents the family of special operation vehicles, so everything that we work with is certainly ground vehicles. We're talking not only military vehicles, but more specifically, we're talking about nonstandard commercial vehicles. We're talking about a vehicle like I previously mentioned. Maybe a rental car or something that would blend into an urban mission profile. That's more the direction that we're heading. Of course, I know that there are a lot of similarities in terms of some of the technologies in flight vehicles and some of that technology can be certainly augmented to fit the vehicle platform. Of course, there's a lot of technical modification that needs to happen, but a lot of the ideas are the same. If you have something that works in some sort of drone or a flight vehicle, that's something that I think can be modified to work in a vehicle.

   Yes, we as in, SOCOM, is interested, it's just that these SBIRs and STTR are directed towards the right office to involve those kinds of things. We do integrate counter UAS systems and UAS control systems into some of our vehicles, but from our standpoint it's just an integration. We will be tapped to integrate this magic box onto the vehicle platforms, because it's a requirement that's been validated at SOCOM. So from the S&T standpoint, we're not really involved with that on a PM post op. When it gets, over the valley of death that people are familiar with DOD acquisition and they validate that

that's a requirement and we have the platform, then they would hand it over. But again we would be concerned with integration, not the development of that type of technology.

4. **Can a single business submit for "Navigation and Team Awareness Kit Integration:", "Force Protection" and "Open Architecture Electronic Control Unit" topics?**
   There's been some new guidance from DOD, where only one proposal can be submitted by a firm for a topic. A particular offeror is only allowed to provide a single proposal on a particular topic. One proposal on a particular topic.
5. **Will Phase I be Unclassified, and will there be a need for higher levels of classification during Phase II?**
   We have a security classification guide that we use as our guidelines for the family of special operations vehicles. Phase I SBIR contracts are unclassified. For Phase II, it depends. We would have to reference the security classification guide, determining on your solution sets and the technology development in our own vehicles. If you start specifically attaching something to one of our current vehicle programs, then there is a potential for classification. We don't have the intent that that would occur. Phase II, you will definitely be using controlled unclassified information, ideally, not producing classified information. It would be determined in accordance with our security classification guide. If you move on to Phase II, one of the first things you'll get is our security classification guide, which will help provide those guidelines.
6. **Can you provide information about the Indigenous Operations Vehicle (IOV) program? Is the IOV different from the current FSOV products?**
   The indigenous operating vehicle is more of a concept, as I understand. It is the ability for an operator who is out in the field to blend into the environment a little better. For example, the operator would need to find an 84 Honda Civic, because there are so many in the certain environment. The operator would need to basically go out and purchase one and then the force protection will come in and be able to harden that vehicle a little bit more than then what is just OEM. Right now, non-standard commercial vehicles have purpose built vehicles, essentially the Toyota Hilux to the Toyota Land Cruisers. The indigenous operating vehicle will be an extension of that. We're still having the same concept of blending into the environment, but it will be a little bit more targeted than simply a Land Cruiser, because we can all pretty much agree that although the Land Cruisers are very popular, they might not be the most popular in every environment.

   Short answer is, IOV is different from the current wholesale products, but it is a concept with the intent to be part of the family of NSCVs and that is pending acquisition strategy. You're at the forend of what's coming, so to speak. The IOV being part of our FSOV products is probably coming and some of this technology is what's going to help us get there.
7. **What should be the format of the proposal due on 18 May? Is there a distinction in proposal formats between a Phase I or D2Phase II approach?**
   It's important for all of the offerors to very closely read the USSOCOM specific instructions and the DOD instructions that are included in the broad agency

announcement. You will find guidance there on what needs to be included in the Phase I proposal.

8. **Please confirm that operations within a so called "smart city" or within areas with open Wi-Fi are presumed to employ all available RF spectrum assignments.**
   For this topic of Phase I, we are assuming everything, we're assuming all possibilities are out there. So for smart cities, that will include all available RF spectrum assignments to include Wi-Fi, WiGig, radio waves, etc., so the answer is yes. We're including all of that into the smart city definition.

   In your proposal, if there is a capability or limitation on RF spectrum assignments that you're proposing to, then you should identify those. Make sure to list the limitation of your proposal.
9. **For Topic Area 2, Force Protection, are you listing several areas of interest? It seems like each sentence is a different, independent system.**
   Reviewing force protection, overall, the overreaching concept is just like I described. We're taking a rental car or an IOV and we are plugging into it an OBD or Port Sensor. That sensor will ride on the canbus and protect it through cyber security measures. It will include the capability of integrating fly away kits or carry on, carry off C5ISR equipment. It will allow the operator, the driver of the vehicle, to turn the infotainment units off and on, on the fly. Newer vehicles certainly have a way of "phoning home". For example, if I go out and I buy a new Mercedes Benz, there are microchips on that vehicle that will send some data information back to "big" Mercedes Benz and we need that to obviously not happen in this kind of environment. This is something that we need to make sure that we give the operators the ability to turn on and off on the fly. Also, it includes the ability to communicate a cyber threat if one is happening. If there is a bad actor somewhere in the smart city, and they're trying to send a signal to disable a system on the vehicle, we need to be able to detect that in real-time. So, you are correct. There are a lot of things going on in the force protection, but only because we have a lot of needs that we need to address in the force protection sphere. We are challenging you to come up with something that's really spectacular and something that's going to check the box on a lot of the different needs that we have in a world where our operating environment is constantly changing.
10. **What technology readiness level (TRL) are you looking for at the conclusion of Phase I? Is there extra consideration if the solution/TRL at the end of Phase I is more mature.**
    I want to emphasize the need for the offerors to read the USSOCOM specific instructions. They have a lot of very important information for you to consider and to comply with the Phase I topic write up. It states that the TRL is typically 3. What we're looking for is for you to determine during our Phase I what is in the art of the possible. We're not looking for firms to provide solutions that delve into Phase II type of activities yet. We'd concentrate our SBIR dollars in Phase I for what is in the art of the possible.
11. **Is there an interest in new manufacturing processes or is the goal to provide a whole vehicle?**
    We are not looking for you to create an entire new vehicle. We are looking for you to take what's already out there on the market and make it more secure, a little bit better,

and more efficient and more usable for the operator.

The purpose of the open ECU is that we can control a commercial vehicle. The ECU from the factory goes away. Cut the wires, take the box, and chuck it in the trash can. As far as a whole new vehicle, it's not officially part of the phase of shop versions of vehicles as a programmer record today. The purpose built vehicle will be to the right end, and that's the vehicle that's built that does not currently exist in the commercial market, although it may look like one in the commercial market. That is also from a USSOCOM headquarters standpoint, a concept pending an acquisition strategy.

12. **Does the ECU focus area include engine ECU and transmission ECU? Or does this pertain to All-Electric vehicles?**
    It does not pertain to all-electric vehicles in any way other than it would any vehicle. To date, all of our NSDs have either been gas or diesel. We don't currently have an electric vehicle in our portfolio, not saying that if that is a good urban vehicle, it wouldn't be in the future. But as of today, there's no electric vehicle in the NSCD.

    When we say open ECU to control a vehicle, that's the main ECU, the one that controls everything - ECU for the engine, ECU for the transmission, or usually we call those Electric control modules (ECM)s at that point. Those probably stay so the main ECU has to control those. The main ECU vehicle, if you go back to the proposed topic and look in parentheses, it lists all the things the main ECU controls. It controls the lights, it controls over the engine ECU, and over the transmission ECU. Our focus is the vehicle ECU.
13. **Are software/algorithm-focused approaches appropriate for SOCOM234-P002: "Navigation and Team Awareness Kit"?**
    Yes, we are not necessarily looking for a hardware device. In fact, software works a little bit better for us. That's not to deter that if you have a hardware device, we are not interested in talking to you. What we are looking for is maybe taking your device, we can implement it into some sort of TAK server or something that we can put into the vehicle that will also feed information into the TAK server itself. Yes, if you have a software solution, we are very interested in speaking with you.
14. **Can you please confirm this topic allows for capabilities to be employed on the vehicle as opposed to the delivery of the vehicle itself?**
    Yes, we are looking for capabilities and ways to essentially plus up a vehicle that's already out there. We do not expect you to regenerate or re-engineer a vehicle itself. We're looking for something to just augment what's already there on the vehicle. We're not looking for vehicle delivery for this, we're looking for the technology that gets incorporated into a vehicle.
15. **Please clarify that last one. The solicitation says one proposal per topic per company.**
    We did get a clarification that you can only submit one proposal for the topic. It's stated very clearly in the solicitation itself in the USSOCOM specific instructions. Just to clarify - if I own Company X, I need to choose one topic to write on. You can only submit one proposal on any given topic.
16. **Can the SBC submit for each technology area of interest; is a single proposal that addresses multiple areas allowed? Or 'technology area of interest' topic?**

Again, only one proposal can be submitted on a particular topic. You can address multiple technology areas of interest but that could be a challenge because you are contrained to only 5 pages.

17. **Is there an interest in mobile power generation systems for charging the vehicles or other electric energy needs?**
    Yes, we're always interested in onboard vehicle power for the vehicles. However, I believe that would be out of scope for these SBIR topics.

    We are program systems engineers. We belong to a program of record, so if you have other products that would be of interest in our realm, this is not the venue for it. This SBIR topic doesn't involve that. We might help bridge the gap between S&T and a program of record, but we don't really live fully in the S&T world. General DOD acquisition is, you need to be at a certain TRL and there needs to be a validated requirement to get a program of record. You should tap into those other agencies and offices that are working on onboard vehicle power and get with them to help make sure your TRL is there and that you're getting attached to a validated requirement.
18. **Can a single proposal touch multiple focus areas (Navigation and ECU)?**
    Pick one focus area that you feel the most comfortable with and write your proposal on that, so one proposal on one topic. Your Phase I technical proposal is limited to 5 pages and you've got some other requirements that you have to put in that technical proposal that are mandated by the USSOCOM specific instructions and DOD instructions. It's going to be tough to consider multiple focus areas in the space available. However, the single proposal would be best suited for a particular aspect, either your navigation or ECU.
19. **You mentioned commercial passenger road vehicles. How about logistics material handling vehicles, such as forklifts and tugs?**
    Forklifts and tugs are out of the scope of family of special operations vehicles. Our concern is non-standard commercial vehicles.
20. **Is there interest in a truck launched UAV as part of this topic? For example, to provide force protection for the ground vehicle?**
    Typically not, we have a specific requirement out there. I understand it's an open topic and very general. If an offeror has a technology that in some way can address the problem set that is included in the Phase I topic write up, then they can submit it for consideration.
21. **Did not see a cost limit on the topic. Does the government have limit on this one?**
    I would like to emphasize to the offerors to read the USSOCOM specific instructions. They do specify that the not to exceed amount for a proposal is 175,000.
22. **Are there any opportunities to interact with the PM's or get better problem statements around what problems the organization is looking to solve?**
    This is the only opportunity and this would be the place to ask where they should ask questions. There won't be another forum or another opportunity for the offerors to reach out to the technical points of contact to do a deeper dive on specific requirements. Again, this is a Phase I open topic. It was purposely written that way to let the firms consider trade space and to come up with ideas that could be of benefit to

SOCOM and to our program of record. There's another opportunity to submit questions, this is in the DOD instructions (see SITIS). There's a period of time when the firms or the offerors can go into the DOD website to ask technical clarification questions, so that might be another opportunity for them to gain more information.

To guide your thinking and guide the framework around these topic proposals, consider that we are a non-standard commercial vehicle and then come up with the different scenarios that an operator would find themselves. Understand that we are looking at an environment where these operators are operating in urban environments and when you're writing up your topic proposals, think about the best way to keep not only the vehicle secure, the information on the vehicle secure, but also to keep the personnel on the vehicle secure. We are no longer in a situation where a “secure vehicle” is something that will stop a bullet from penetrating it. We are now looking at bad actors trying to use electronic threats to attack our vehicle - So how can we prevent this from happening? Keep that in mind when you're writing up your topics. That's the framework that we're after.

23. **Is the ability to interface with OBD2 port expected to be a hard requirement? There are other methods to access vehicle telemetry, especially newer vehicles.**
    If you have another option that is out there on the table, absolutely go ahead and throw it in your proposal. The OBD2 port was chosen simply because it is very common. Especially when we're looking at IOVs, they have them, so if you're looking at newer vehicles, the operator might not be aiming their attention at a newer vehicle.
24. **Hello! Are solutions proposed expected to be field deployable by a single operator?**
    It depends on the solution. I don't think we have a requirement for the topic - that it has to be deployable by a single operator nor do I think that we have any operations where it only involves a single operator. I believe the answer is, no, we don't expect anything will be deployable by a single operator.
25. **Can universities be subcontractors to small businesses on these topics?**
    Keep in mind that in a Phase I SBIR environment, the offeror or the prime contractor has to do 2/3 of the work. A third of it then can be subcontracted out and that could be subcontracted out to a university.
26. **Can the solution be an add-on module (at least temporarily) that resides in the passenger compartment rather than within the vehicle body?**
    Yes, when you're writing up your Phase I and you want to have it as something that is going to ride in the passenger compartment, that is fine. When we work on Phase 2 and we develop the prototype, that might be something that we look at and say - We need to change the form factor to fit this.

    The whole purpose of Phase I is - What is in the art of the possible? If you see something in Phase I that you want to move forward to in the statement of objectives that we write for Phase 2, you can make that adjustment.

27. **Are passive methods of depth sensing and 3D perception for vehicle navigation and situational awareness in DVE, day/night, of interest?**
    Yes, I am interested in this. We are looking at art of the possible, so if we're looking at say, force protection and we're talking about depth perception, I am interested in that. For force protection, we're looking at a 360 situational awareness situation.
28. **Are you open to explore non-TAK C2 solutions because the TAK footprint on the data connection lines are so known/visible?**
    I'm not going to turn down a non-TAK C2 solution if it's a viable one, because at some point we can integrate. In Phase 2, we can say this is a really good solution and we like what you have with the Phase I, let's see what we can do in order to integrate it into Phase 2. For Phase I, we're just looking at potential ideas. We're looking for a potential avenue that we can go down and research. We want to explore the possibility of addressing this through this method. When we get into the Phase 2, then we're looking more and along the lines of wanting a prototype and we're going to have to be a lot more specific in what it is that we need and want. When we're looking at the topic that talks about internal navigation system, if you have an internal navigation system that you think would work, that'd be great. However, please understand that at the end of the day we are looking for tech integration. If you design a proposal that doesn't address tech integration, we're still going to look at it, but please understand that maybe in the Phase 2, that's something that might be coming down the road.
29. **Regarding facial recognition prevention, are you looking for something on the window to prevent the detection?**
    Yes, whatever you come up with. That's the challenge that we're throwing out to these companies. What solutions can you come up with? If you have an idea that relates to facial recognition which can be deployed on the window – let's hear it.
30. **The only description of need to date is "Open Topic", where can we find more information about FSOV areas of interest for improvements, needs or enhancements?**
    We're program system engineers, so we don't directly deal with the business development end. This is one mechanism where we generate our requirements and our needs going forward. There are different ways that's done, sometimes the audience for those needs are limited and sometimes they're not. I cannot directly answer how you do your business development process. I can say there are a lot of requirements that go out there all the time, but many different buttons. They'll reach out within industry and find other companies who are doing business with SOCOM and see how they did it. Keep on looking at SOFWERX, we use the SOFWERX a lot for all sorts of different interactions of SOCOM innovative needs. I encourage you to go out within your industry base and find those things. For example, SOF Week happens in Tampa in May. It's an annual conference. You probably could glean a lot from going to something like that. It's an investment and you have to register for it. Those are very generic answers, because the direct answer is, I don't have a direct answer, but I know that all of our requirements do not go out by one single method or 5 single methods.
31. **Would a vehicle mounted display, or a smart device (phone or tablet) be appropriate for interacting with the open ECU? Any preference?**
    I'm not going to tell you how to come up with the answer. I'm looking to see - what is

your answer? How are you going to solve this problem? More generically, this is not a new problem, but I haven't seen anyone solve it yet. That's probably more the reason why it's one of the topics. Using a smart device to control it, it could be appropriate. I would for context say - why do we want to invest a money into an open ECU in the first place? We're trying to control the vehicle, which also means we're trying to control the telematics on the vehicle. So I'd be cautious with your smart device or how you control the telematics on it. You probably want to limit how smart that device is. The short answer is, yes. The preference is that you don't work so hard to make an ECU where we can reduce all the telematics of the vehicle and then you've introduced a new device that has represented those telematic tracks. Short answer: Yes, just be aware of telematics.

32. **Is the focus on On-Road or Off-Road vehicles?**
    The short answer is yes, absolutely. We're assuming you're thinking off-road meaning like an SUV, so yes if you're thinking off-road in terms of maybe like a Polaris type vehicle or a Humvee, not at this time. Right now, we are looking specifically at non-standard commercial vehicles, so on-road and off-road vehicles fit within that realm.
33. **Is there interest in converting a commercial vehicle into a low cost cruise missile launcher?**
    I think this question relates very similarly to the UAV question that was proposed earlier since the cruise missile launcher is something that is outside of the scope of this SBIR at this point, it is something that will need to be addressed potentially in another topic. PM Cruiser Missile or PM Missile and Space is somebody else. Is there interest in converting one into a low-cost business, I mean I'm sure there's interest in that. It sounds really cool to us, just not something that our office would directly work with so it's not within scope for this topic it's probably the bottom line. But, if you have a cool idea like that, reach out to the right weapons people.
34. **Please clarify what you mean by preventing access to the license plate or windshield via the OBDII port.**
    This is something that we aren't going to tell you how to answer the question, but something to the effect of maybe the OBDII port allows you to emit a signal that will prevent some sort of interference, preventing something from taking a picture or seeing into the windshield or having a camera look through the windshield or take a picture of the license plate.
35. **Is the underlying data management and security infrastructure also of interest?**
    Yes, very big yes. That's provided in the Force Protection System where we're talking about data protection. Yes, we are looking at data management and protecting the information that's on these vehicles. As you can imagine, we've got TAK, we have all sorts of materials, and C5ISR, all of that deals with very highly sensitive data. So yes, managing and protecting that is of key interest to our program.
36. **On that clarification about proposals vs. topics.... if a company has two or more different concepts / products to offer within the same topic.**
    Offerors can submit one proposal only. The technical proposal cannot exceed 5 pages and must include specific information required by the DoD and USSOCOM specific instructions. This is a feasibility study that should address what's in the art of the

possible. The solution(s) that has the best chance to solve the problem should be the outcome of the Phase I study. Existing products would not be relevant. Please see the Phase I topic write-up that further defines what a feasibility study is.

37. **Can a Ukrainian company be a subcontractor to an American prime contractor on this proposal?**
    No. In order to be eligible for the SBIR Program, a firm needs to be a US based firm incorporated in the United States employing US citizens.
38. **If you are accepting offline consultation on Power Systems, I'd like to be part of it.**
    No, we are not accepting offline consultation on Power Systems.
39. **Is it possible for a contractor to support work on responses by two different companies?**
    Somehow, two companies have reached out to me for this topic. Answer: You can participate as a subcontractor with both firms but you will need to resolve any SBIR data rights concerns formally ahead of time.
40. **Will the SOFWERX topics be on the https://www.dodsbirsttr.mil/ website?**
41. This USSOCOM topic is on the https://www.dodsbirsttr.mil/ and can be found under Active BAAs: DoD SBIR 2023.4
42. **Is there an interest in receiving proposals involving innovative lightweight and field-durable opaque or transparent armor for one or more FOSOV systems?**
    Yes, this is something that could potentially fit into the “Force Protection” topic to combat threats in a “smart city” and urban mission profile.
43. **Within the scope of this work, is there a need for organic power management for silent watch capabilities particularly in austere environments?**
    Yes. The unique mission sets of our Operators is controlled information, however, there is room to integrate this capability within this SBIR topic.
44. **Is there any interest in an amphibious manned or unmanned platform vehicle the size of a small car going 65 mph on land or water?**
    Yes. The unique mission sets of our Operators is controlled information, however, there is room to integrate this capability within this SBIR topic.
45. **Composites for preventing signal interferences are of interest for this solicitation?**
    Absolutely yes! Part of our mission is to ensure the vehicle platform is a capable vehicle that is able to withstand cyber threats from bad actors. Preventing signal interferences definitely fall within this scope.
46. **Is a near-universal UAV launcher (that could be used with virtually any vehicle to launch a UAV) be of interest as part of this topic?**
    Potentially yes. UAVs can help meet some of the items in the Force Protection topic.