

**UNITED STATES SPECIAL OPERATIONS COMMAND
21.1 Small Business Innovation Research (SBIR)
Direct to Phase II Proposal Submission Instructions**

Introduction:

The United States Special Operations Command (USSOCOM) 21.1 Direct to Phase II proposal submission instructions cover Direct to Phase II proposals only and change/append the Department of Defense (DoD) instructions for Phase II submissions as they apply to USSOCOM Direct to Phase II requirements.

A thorough reading of the “Department of Defense Small Business Innovation Research (SBIR) Program, SBIR 21.1 Program Broad Agency Announcement (BAA)”, located at <https://rt.cto.mil/rtl-small-business-resources/sbir-sttr/>, prior to reading these USSOCOM instructions is highly recommended. These USSOCOM instructions explain certain unique aspects of the USSOCOM SBIR Program that differ from the DoD Announcement and its instructions. The Offeror is responsible for ensuring that their proposal complies with the requirements in the most current version of these instructions. Prior to submitting your proposal, please review the latest version of these instructions as they are subject to change before the submission deadline.

These USSOCOM instructions explain USSOCOM specific aspects that differ from the DoD Announcement and its instructions.

Table 1: Consolidated SBIR Topic Information

Topic	Technical Volume (Vol 2)	Additional Info. (Vol 5)	Period of Performance	Award Amount
<i>Direct to Phase II</i> SOCOM211-D004	Not to exceed 10 pages not including Feasibility Appendix	15-page PowerPoint	Typically 18 months	Not to Exceed \$1,650,000.00
<i>Direct to Phase II</i> SOCOM211-D005	Not to exceed 10 pages not including Feasibility Appendix	15-page PowerPoint	Typically 18 months	Not to Exceed \$830,000.00

Contract Awards:

SBIR awards for these Direct to Phase II topics will be awarded as a fixed price (level of effort type), Other Transactions Agreement (OTA). Successful completion of the prototype under an OTA may result in a follow-on production OTA or contract. Successful completion of the prototype is defined as meeting one or more threshold requirements. Firms may download the template at <https://www.socom.mil/SOF-ATL/Pages/SBIR-21-1.aspx>. The terms and conditions as well as the requirements are included in the OTA template provided in this solicitation. The terms and conditions of the Template OTA and the latest version of the OTA may change prior to execution. The document deliverables required for the effort are under attachment 2 of the OTA and the statement of objectives is under attachment 3 of the OTA template. Offerors must review these documents to develop their proposal. The template needs to be filled only by those Offerors selected to present.

Those selected to present would be required to enter their company information, expected milestones (attachment 1), and provide a non-proprietary Statement of Work (SOW) following the format of the Statement of Objectives (SOO) (attachment 3). The Government will evaluate only responsive proposals.

Proposal Submission:

Firms must upload their proposals to the Defense SBIR/STTR Innovation Portal Proposal Submissions at <https://www.dodsbirsttr.mil/submissions/login> . Additional USSOCOM specific submission requirements for each volume are detailed below.

Technical Inquiries:

During the Pre-release Period of the DoD SBIR 21.1 Program BAA, all questions must be submitted in writing either by e-mail to sbir@socom.mil or to the online Topic Q&A (formerly SITIS). All questions and answers submitted to Topic Q&A will be released to the general public. USSOCOM does not allow inquirers to communicate directly in any manner to the topic authors (differs from Section 4.13.c. of the DoD SBIR 21.1 Program BAA instructions). **All inquiries must include the topic number in the subject line of the e-mail.**

During the Open Period, follow the instructions in section 4.13.d of the DoD SBIR 21.1 Program BAA Instructions.

Site visits will not be permitted during the Pre-release and Open Periods of the DoD SBIR 21.1 Program BAA.

Proposal Volumes:

Volume 1: Cover Page is created as part of the DOD Proposal Submissions process.

Volume 2: Technical Volume

2.1 The Technical Volume shall not exceed 10 pages and will include all required items under section 5.4.c. of the DoD SBIR 21.1 instructions. Any additional pages will be deleted from the proposal prior to evaluation.

Note: The Phase I feasibility Appendix (Appendix A) is required for the Direct to Phase II proposal and is specified in **Volume 5**.

The technical proposal shall include a Statement of Work (SOW) with the planned tasks and descriptions to meet the Statement of Objectives (SOO) and Contract Data Requirement Lists (CDRLs) detailed in Attachments 2 and 3 of the OTA Template. Do not upload the SOO or CDRLs with your proposal. The SOO, and CDRLs will be provided in the OTA Template and can be downloaded from <https://www.socom.mil/SOF-ATL/Pages/SBIR-21-1.aspx>. The proposal must also include a completed Section K which does not count toward the page limit. Any templates are provided to help the Offerors consider the required work/deliverables when developing the proposal, but it is an Offeror's responsibility to provide fully responsive, complete, and clear submissions. If an Offeror is selected for award, the Offeror will be required to submit a separate non-proprietary SOW with the planned tasks and descriptions from the proposal and all other applicable sections of the SOO. If the offeror is selected for award, the provided SOW will become Attachment 3 of the resulting OTA, incorporating any agreed upon changes. The SOW attached to the OTA shall include no proprietary information, data, or markings

The identification of foreign national involvement in a USSOCOM SBIR topic is required to determine if a firm is ineligible for award on a USSOCOM topic that falls within the parameters of the United States Munitions List, Part 121 of the International Traffic in Arms Regulation (ITAR). A firm employing a foreign national(s) (as defined in paragraph 3.7 entitled "Foreign Nationals" of the DoD SBIR 21.1

Announcement) to work on a USSOCOM ITAR topic must possess an export license to receive a SBIR Phase II contract.

Volume 3: Cost Volume

Offerors must complete the cost volume using the Phase II OTA Cost Proposal template posted on the USSOCOM Portal at <https://www.socom.mil/SOF-ATL/Pages/SBIR-21-1.aspx>, and read instructions before completing it. The Cost Proposal information (PDF format) shall be appended to and submitted in Volume 3. Those recommended for award shall submit the original cost proposal in Excel format.

For the direct to phase II topics in this announcement, the limit to provide a testable prototype is listed in table 1 titled “Consolidated SBIR Topic Information”. **Any proposal submitted with a total price above the provided limit (not including TABA) will not be considered for award.**

USSOCOM may provide TABA funds in Phase II awards to firms to meet up to Cybersecurity Maturity Model Certification (CMMC) Level 3 certification requirements. Draft of the CMMC is located at <https://www.acq.osd.mil/cmmc/draft.html>. Technical and Business Assistance (TABA) cost (if applicable) may be provided, not to exceed \$50,000 over the period of performance.

The TABA information must be included in the firm’s proposal specifically identified as “Discretionary Technical and Business Assistance” and cannot be subject to any profit or fee by the requesting SBIR firm. In addition, the provider of the TABA may not be the requesting firm, an affiliate of the requesting firm, an investor of the requesting firm, or a subcontractor or consultant of the requesting firm otherwise required as part of the paid portion of the research effort (e.g., research partner, consultant, tester, or administrative service provider). Proposed TABA will be evaluated by the USSOCOM SBIR Program office. The proposed amount is in addition to the award amount for Phase II and cannot exceed \$50,000. The firm’s proposal must (1) clearly identify the need for assistance (purpose and objective of required assistance); (2) provide details on the provider of the assistance (name and point of contact for performer and unique skills/specific experience to carry out the assistance proposed); and (3) the cost of the required assistance (costs and hours proposed or other details on arrangement that would justify the proposed expense).

The final negotiated price of a USSOCOM Phase II SBIR contract will result from a determination of price fairness and reasonableness commensurate with the magnitude and complexity of the required research and development effort. The resulting agreement will be a firm priced.

Proposal information should include the itemized listing (a-h) specified below. The proposal information must include a level of detail that would enable the Government personnel to determine the purpose, necessity, and reasonability of the proposal and show an understanding of the scope of the work. It is requested that a breakdown of labor hours per labor category and other associated costs be provided by task. The Agreements Officer may request additional information to support price analysis or understand the approach if needed.

a. Special Tooling and Test Equipment and Material: The inclusion of equipment and materials will be carefully reviewed relative to need and appropriateness of the work proposed. The purchase of special tooling and test equipment must, in the opinion of the Contracting Officer, be advantageous to the Government and relate directly to the specific effort. They may include such items as innovative instrumentation and/or automatic test equipment. The reason for the requirement and the intention of offeror on disposition of the special material / equipment shall be documented in the proposal.

b. Direct Cost Materials: Justify costs for materials, parts, and supplies with an itemized list that includes item description, part number, quantities, and price.

c. Other Direct Costs: This category of costs includes specialized services such as machining or milling, special testing or analysis, and costs incurred in obtaining temporary use of specialized equipment. Proposals that include leased hardware must provide an adequate lease vs. purchase justification or rationale.

d. Direct Labor: For each individual, include the number of hours, and loaded rate to include all indirect costs. Identify key personnel by name if possible and labor category.

e. Travel: Travel costs must relate to the needs of the project. Proposed travel cost must be in accordance with the Federal Travel Regulation (FTR).

1. Per Diem Rates can be obtained at: <http://www.gsa.gov/perdiem>

2. The following information is documented –

- (i) Date (estimated), length and place (city, town, or other similar designation) of the trip;
- (ii) Purpose of the trip; and
- (iii) Number of personnel included in the estimate.

f. Cost Sharing: Cost sharing is permitted. However, cost sharing is not required, nor will it be an evaluation factor in the consideration of a proposal. Please note that cost share contracts do not allow fees/profit.

g. Subcontracts: Involvement of university or other consultants in the planning and/or research stages of the project may be appropriate. If the Offeror intends such involvement, describe in detail and include information in the cost proposal. The proposed total of all consultant fees, facility leases or usage fees, and other subcontract or purchase agreements may not exceed one-half of the total contract price or cost, unless otherwise approved in writing by the Agreements Officer.

Support subcontract costs with copies of the subcontract agreements. The supporting agreement documents must adequately describe the work to be performed (i.e., cost proposal) or provide a statement of work with a corresponding detailed proposal for each planned subcontract.

h. Consultants: Provide a separate agreement letter for each consultant. The letter should briefly state what service or assistance will be provided, the number of hours required and hourly rate.

Volume 4: Company Commercialization Report –

CCR is required to be submitted with proposals in response to SOCOM 21.1 SBIR topics. Please refer to the DoD 21.1 SBIR BAA for full details.

Volume 5: Supporting Documents

Potential Offerors shall submit a slide deck not to exceed 15 PowerPoint slides. Must be separate and clearly marked. Any additional slides will not be evaluated only slide 1-15 will be evaluated.

Offerors must provide documentation to satisfy the Phase I feasibility requirement as specified in the direct to Phase II topic. The documentation shall be included as a Feasibility Appendix in **Volume 5**. Offerors are required to provide sufficient information to determine, to the extent possible, the scientific, technical, and commercial merit and feasibility of ideas submitted, and that the feasibility assessment was performed by the Offeror and/or the Principal Investigator. **If the Offeror fails to demonstrate the scientific and technical merit, feasibility, and/or the source of the work, USSOCOM will not continue to evaluate the Offeror's proposal.** Refer to the topic's Phase I

description under the Direct to Phase II topic to review the minimum requirements needed to demonstrate feasibility. There is no minimum or maximum page limitation for the Feasibility Appendix (Appendix A).

Volume 6: Fraud, Waste and Abuse Training

Fraud, Waste and Abuse (FWA) training is required for Phase I and Direct to Phase II proposals. Please refer to the DoD 21.1 SBIR BAA for full details.

Direct to Phase II Evaluations:

USSOCOM evaluates Direct to Phase II proposals using the evaluation criteria specified in section 7.4 of the DoD 21.1 SBIR Announcement with the following exceptions:

1. Proposals missing technical volume, feasibility appendix, cost volume, or slide deck will not be evaluated or those that exceed the maximum price allowed as per Table 1 of this instructions. Those proposals will be consider non-responsive.
2. Feasibility determination. The Feasibility Appendix to the Phase II proposal will be evaluated first to determine that the Offerors demonstrated they have completed research and development to establish the feasibility of the proposed Phase II effort based on the criteria outlined in the topic description of Phase I. **USSOCOM will not continue evaluating the Offeror's related Phase II proposal if it determines that the Offeror failed to demonstrate that feasibility** has been established **or** the Offeror failed to demonstrate work submitted in the feasibility documentation was substantially performed by the Offeror and/or the Principal Investigator. Refer to the Phase I Topic description included in the Direct to Phase II topic to review the minimum requirements that need to be demonstrated in the feasibility documentation.
3. The technical evaluation will utilize the Evaluation Criteria provided in Section 7.4 of the DoD SBIR 21.1 BAA. The Technical Volume and slide deck will be reviewed holistically. The technical evaluation is performed in two parts:

Part I: The evaluation of the Technical Volume will utilize the Evaluation Criteria provided in Section 7.4 of the DoD SBIR 21.1 BAA. Once the evaluations are completed, all Offerors will be notified as to whether they were selected to present their slide deck portion of their proposal.

Part II: Selected Offerors will receive an invitation to present their slide deck (30-minute presentation time / 30-minute question and answer) to the USSOCOM evaluation team using a virtual teleconference. All selected firms will be required to provide a teleconference information for the presentation. This presentation will be evaluated by a panel against the criteria listed under Section 7.4 of the DoD SBIR 21.1 BAA. Notifications of selection/non-selection for Phase II award will be completed within a timely manner.

4. The Cost Volume (Volume3) evaluation:

For this direct to phase II, the award amount is set at a not to exceed (NTE), a technical evaluation of the proposal cost will be completed to assess the probability of success to obtain a working prototype. Proposal above the set NTE for the effort will not be considered for award. The team will assess the technical approach presented for the effort based on the number of labor hours by labor categories, the key personnel level of involvement, materials, equipment, subcontractors and consultants (scope of work, expertise, participation and proposed effort), travel and other direct cost as proposed.

The resulting award/s will be a fixed price OTA prototyping agreements and a successful prototype may lead to follow on production. Follow on production awards may be FAR based, Fixed Price or Cost-Plus Fixed Fee contracts. A Defense Contracts Audit Agency approved accounting system will be required to issue a Cost-Plus Fixed Fee contract.

Additionally, input on technical aspects of the proposals may be solicited by USSOCOM from non-Government consultants and advisors who are bound by appropriate non-disclosure requirements. Non-Government personnel will not establish final assessments of risk, rate, or rank Offeror's proposals. These advisors are expressly prohibited from competing for USSOCOM SBIR awards. All administrative support contractors, consultants, and advisors having access to any proprietary data will certify that they will not disclose any information pertaining to this announcement, including any submission, the identity of any submitters, or any other information relative to this announcement; and shall certify that they have no financial interest in any submission. Submissions and information received in response to this announcement constitutes the Offeror's permission to disclose that information to administrative support contractors and non-Government consultants and advisors.

Selection Notifications:

The USSOCOM Contracting Officer notifies the Offeror by e-mail of selection/non-selection for award. The e-mail notification will only be sent to the Corporate Official (Business) identified by the Offeror.

Informal Feedback:

A non-selected Offeror can make a written request to the Contracting Officer, within 30 calendar days of receipt of notification of non-selection, for informal feedback. The Contracting Officer will provide informal feedback after receipt of an Offeror's written request rather than a debriefing as specified in paragraph 4.10, entitled "Debriefing," of the DoD SBIR 21.1 Announcement.

USSOCOM SBIR Program Point of Contact:

Inquiries concerning the USSOCOM SBIR Program should be addressed to sbir@socom.mil.

SOCOM 21.1 SBIR Direct to Phase II Topic Index

SOCOM211-D004	Integrated Cyber and Electronic Warfare Infrastructure
SOCOM211-D005	Next Generation Field Computing Device - Wearable

SOCOM211-D004

TITLE: Integrated Cyber and Electronic Warfare Infrastructure

TECHNOLOGY FOCUS AREA(S): Network Command, Control and Communications; General Warfighting Requirements (GWR); Directed Energy

TECHNOLOGY AREA(S): Sensors; Information Systems; Battle Space

ACQUISITION PROGRAM: Special Operations Mission Planning & Execution

The technology within this topic is restricted under the International Traffic in Arms Regulation (ITAR), 22 CFR Parts 120-130, which controls the export and import of defense-related material and services, including export of sensitive technical data, or the Export Administration Regulation (EAR), 15 CFR Parts 730-774, which controls dual use items. Offerors must disclose any proposed use of foreign nationals (FNs), their country(ies) of origin, the type of visa or work permit possessed, and the statement of work (SOW) tasks intended for accomplishment by the FN(s) in accordance with section 3.5 of the Announcement. Offerors are advised foreign nationals proposed to perform on this topic may be restricted due to the technical data under US Export Control Laws.

OBJECTIVE: The objective of this topic is to develop applied research toward an innovative capability in Probability of Detection (LPD)/Low Probability of Intercept (LPI) communications network operating in a “zero trust” environment that can be integrated with Electronic Warfare, Information Warfare, and/or Cyber Reconnaissance and Surveillance (R&S) tools to include using commercial off the shelf technologies (COTS) in order to blend into the operational environment.

DESCRIPTION: As a part of this feasibility study, the proposers shall address all viable overall system design options with respective specifications on the key system attributes. This platform must have the ability to integrate tools that can sense, detect, locate, characterize and catalog unintended and intended signals/emissions from non-alerting sensors, and either store the data locally on the sensor for later download or have the ability to rapidly and securely move the sensor data back to a base location without using local cellular networks. Secondary, but required in the overall design, the platform must have the ability to take the sensor data and immediately identify threat related signals for immediate Electronic Warfare or wireless disruption to protect Special Operations Forces (SOF) personnel from potential discovery, improvised explosive device/Vehicle-Borne Improvised Explosive Devices (IED/VBEID) devices, or support assault forces conducting actions on an objective. Lastly, the platform must demonstrate the ability to operate as a full spectrum cyberwarfare weapons platform for defensive and offensive operations. In this capacity, the platform must provide options as a rapidly configurable, Android Tactical Assault Kit (ATAK) compatible (secure ATAK traffic), attributable or non-attributable, disposable communications network and cyber weapons platform.

PHASE I: Conduct a feasibility study to assess what is in the art of the possible that satisfies the requirements specified in the above paragraph entitled “Description.”

The objective of this USSOCOM Phase I SBIR effort is to conduct and document the results of a thorough feasibility study to investigate what is in the art of the possible within the given trade space that will satisfy a needed technology. The feasibility study should investigate all known options that meet or exceed the minimum performance parameters specified in this write up. It should also address the risks and potential payoffs of the innovative technology options that are investigated and recommend the option that best achieves the objective of this technology pursuit. The funds obligated on the resulting Phase I SBIR contracts are to be used for the sole purpose of conducting a thorough feasibility study using scientific experiments and laboratory studies as necessary. Operational prototypes will not be developed with USSOCOM SBIR funds during Phase I feasibility studies. Operational prototypes

developed with other than SBIR funds that are provided at the end of Phase I feasibility studies will not be considered in deciding what firm(s) will be selected for Phase II.

PHASE II: Develop, install, and demonstrate a prototype system determined to be the most feasible solution during the Phase I feasibility study on a virtual private network/virtual private server (VPN/VPS) certificate based secure COTS communications system with the ability for rapid establishment (within 15 minutes or less) for use as an Electronic and Cyber Warfare reconnaissance and surveillance platform with the ability to conduct rapid tear down (within 15 minutes or less) to significantly reduce overall risk to exposure or compromise upon the conclusion of conducting electronic or cyber warfare attacks or disruption.

PHASE III DUAL USE APPLICATIONS: This system could be used in a broad range of military applications where communication security is a high priority and early warning of adversary electronic warfare or intelligence, surveillance and reconnaissance threat is high. These tools provide for emergency communications for operations in high threat areas where non attributable, LPI/LPD communications are an absolute requirement.

REFERENCES:

1. USSSOCOM S&T SOF "Hard Problems" <https://www.socom.mil/SOF-ATL/Pages/SOF-Hard-Problems.aspx>

KEYWORDS: Non Attributable Communications; LPI/LPD communications; Cyber Electromagnetic Activities (CEMA); Electronic Warfare (EW); Information Warfare (IW); Cyber, Full Spectrum Cyber Warfare; Virtual Private Networks (VPN); ATAK

Email: sbir@socom.mil

SOCOM211-D005

TITLE: Next Generation Field Computing Device - Wearable

TECHNOLOGY FOCUS AREA(S): Biotechnology Space; Network Command, Control and Communications; Cybersecurity; General Warfighting Requirements (GWR)

TECHNOLOGY AREA(S): INFORMATION SYSTEMS; MATERIALS; SENSORS; ELECTRONICS; HUMAN SYSTEMS; BIOMEDICAL

ACQUISITION PROGRAM: Specific Acquisition Program(s) this effort transitions to is directly related to the Tactical Local Area Network program.

The technology within this topic is restricted under the International Traffic in Arms Regulation (ITAR), which controls the export and import of defense-related material and services. Offerors must disclose any proposed use of foreign nationals, their country of origin, and what tasks each would accomplish in the statement of work in accordance with section 5.4.c.(8) of the solicitation.

OBJECTIVE: The objective of this topic is to develop applied research toward an innovative capability to replace the current Field Computing Device – Wearable (FCD-W) with open system architecture. Specific focus of this topic investigates improving human factors as a result of excessive cabling, developing a smart hub for plug and play use of peripheral devices, integrating a secure personal area network on the smart hub capable of being certified for processing higher levels of classification, and integrating additional processing capabilities into the smart hub.

DESCRIPTION: The FCD-W variant was adopted in the TACLAN program back in 2016 in response to a Combat Mission Needs Statement. Since the inception of the FCD-W, several incremental changes have been made to replace the End User Device and upgrade versions of the Android Tactical Assault Kit (ATAK) but the overall functionality of the system has remained the same. USSOCOM is seeking a direct to phase II SBIR to advance the FCD-W capability while meeting the following high level objectives:

- 1) Design a rugged tactical USB cabled solution
- 2) Develop a tactical hub and prove feasibility of smart hub features
- 3) Implement power and data management
- 4) Develop connections to tactical radios, peripheral equipment, and tactical batteries for system power

PHASE I: The Offerors shall conduct requirements analysis and perform design trade-offs, feature feasibility risk reduction, design validation prototyping, and developmental testing to achieve the stated development objectives.

The objective of this USSOCOM Phase I SBIR effort is to conduct and document the results of a thorough feasibility study (“Technology Readiness Level 3”) to investigate what is in the art of the possible within the given trade space that will satisfy a needed technology. The feasibility study should investigate all options that meet or exceed the minimum performance parameters specified in this write up. It should also address the risks and potential payoffs of the innovative technology options that are investigated and recommend the option that best achieves the objective of this technology pursuit. The funds obligated on the resulting Phase I SBIR contracts are to be used for the sole purpose of conducting a thorough feasibility study using scientific experiments and laboratory studies as necessary. Operational prototypes will not be developed with USSOCOM SBIR funds during Phase I feasibility studies. Operational prototypes developed with other than SBIR funds that are provided at the end of Phase I feasibility studies will not be considered in deciding what firm(s) will be selected for Phase II.

PHASE II: Develop and demonstrate a prototype system determined to be the most feasible solution. In addition, as a system intended for comparative operational evaluation, the Phase II prototype may be required to satisfy security requirements that will allow its implementation and use on the SOF information enterprise.

PHASE III DUAL USE APPLICATIONS: This system could be used in a broad range of military and private sector applications to enhance mission planning and execution.

REFERENCES:

1. <https://ndiastorage.blob.core.usgovcloudapi.net/ndia/2018/sofic/PEOC4Woods.pdf>
2. <https://www.militaryaerospace.com/unmanned/article/16707347/military-wearable-computing-hits-the-mainstream>

KEYWORDS: Hyper Enabled; Personal Area Network; Secure Communications; Edge Compute; Field Computing Device; ATAK; Tactical Mission Networking

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