

**AIR FORCE**  
**13.2 Small Business Innovation Research (SBIR)**  
**Proposal Submission Instructions**

**INTRODUCTION**

The Air Force (AF) proposal submission instructions are intended to clarify the Department of Defense (DoD) instructions as they apply to AF requirements.

The Air Force Research Laboratory (AFRL), Wright-Patterson Air Force Base, Ohio, is responsible for the implementation and management of the AF Small Business Innovation Research (SBIR) Program.

The AF Program Manager is Mr. David Sikora, 1-800-222-0336. For general inquiries or problems with the electronic submission, contact the DoD Help Desk at 1-866-724-7457 (1-866-SBIRHLP) (8:00 a.m. to 5:00 p.m. ET Monday through Friday). For technical questions about the topics during the pre-solicitation period (24 April through 23 May 2013), contact the Topic Authors listed for each topic on the Web site. For information on obtaining answers to your technical questions during the formal solicitation period (24 May through 26 June 2013), go to <http://www.dodsbir.net/sitis/>.

General information related to the AF Small Business Program can be found at the AF Small Business website, <http://www.airforcesmallbiz.org>. The site contains information related to contracting opportunities within the AF, as well as business information, and upcoming outreach/conference events. Other informative sites include those for the Small Business Administration (SBA), [www.sba.gov](http://www.sba.gov), and the Procurement Technical Assistance Centers, [www.aptacus.org/new/Govt\\_Contracting/index.php](http://www.aptacus.org/new/Govt_Contracting/index.php). These centers provide Government contracting assistance and guidance to small businesses, generally at no cost.

The AF SBIR Program is a mission-oriented program that integrates the needs and requirements of the AF through R&D topics that have military and commercial potential.

**PHASE I PROPOSAL SUBMISSION**

**Read the DoD program solicitation at [www.dodsbir.net/solicitation](http://www.dodsbir.net/solicitation) for program requirements.**

When you prepare your proposal, keep in mind that Phase I should address the feasibility of a solution to the topic. For the AF, the contract period of performance for Phase I shall be nine (9) months, and the award shall not exceed \$150,000. We will accept only one Cost Volume per Topic Proposal and it must address the entire nine-month contract period of performance.

The Phase I award winners must accomplish the majority of their primary research during the first six months of the contract. Each AF organization may request Phase II proposals prior to the completion of the first six months of the contract based upon an evaluation of the contractor's technical progress and review by the AF technical point of contact utilizing the criteria in section 6.0 of the DoD solicitation. The last three months of the nine-month Phase I contract will provide project continuity for all Phase II award winners so no modification to the Phase I contract should be necessary.

**The Phase I Technical Volume has a 20-page-limit (excluding the Cover Sheet, Cost Volume, Cost Volume Itemized Listing (a-j), and Company Commercialization Report).**

## **Limitations on Length of Proposal**

The Technical Volume must be no more than 20 pages (no type smaller than 10-point on standard 8-1/2" x 11" paper with one (1) inch margins. The Cover Sheet, Cost Volume, Cost Volume Itemized Listing (a-j), and Company Commercialization Report are excluded from the 20 page limit. Only the Technical Volume and any enclosures or attachments count toward the 20-page limit. In the interest of equity, pages in excess of the 20-page limitation (including attachments, appendices, or references, but excluding the Cover Sheet, Cost Volume, Cost Volume Itemized Listing (a-j), and Company Commercialization Report, will not be considered for review or award.

## **Phase I Proposal Format**

**Proposal Cover Sheets:** The Cover Sheet does NOT count toward the 20 page total limit. If your proposal is selected for award, the technical abstract and discussion of anticipated benefits will be publicly released on the Internet; therefore, do not include proprietary information in these sections.

**Technical Volume:** The Technical Volume should include all graphics and attachments but should not include the Cover Sheet or Company Commercialization Report (as these items are completed separately). Most proposals will be printed out on black and white printers so make sure all graphics are distinguishable in black and white. It is strongly encouraged that you perform a virus check on each submission to avoid complications or delays in submitting your Technical Volume. To verify that your proposal has been received, click on the "Check Upload" icon to view your proposal. Typically, your uploaded file will be virus checked. However, if your proposal does not appear after an hour, please contact the DoD Help Desk at 1-866-724-7457 (8:00 am to 5:00 pm ET Monday through Friday).

**Key Personnel:** Identify in the Technical Volume all key personnel who will be involved in this project; include information on directly related education, experience, and citizenship. A technical resume of the principle investigator, including a list of publications, if any, must be part of that information. Concise technical resumes for subcontractors and consultants, if any, are also useful. You must identify all U.S. permanent residents to be involved in the project as direct employees, subcontractors, or consultants. You must also identify all non-U.S. citizens expected to be involved in the project as direct employees, subcontractors, or consultants. For all non-U.S. citizens, in addition to technical resumes, please provide countries of origin, the type of visa or work permit under which they are performing and an explanation of their anticipated level of involvement on this project, as appropriate. You may be asked to provide additional information during negotiations in order to verify the foreign citizen's eligibility to participate on a contract issued as a result of this solicitation.

**Voluntary Protection Program (VPP):** VPP promotes effective worksite-based safety and health. In the VPP, management, labor, and the Occupational Safety and Health Agency (OSHA) establish cooperative relationships at workplaces that have implemented a comprehensive safety and health management system. Approval into the VPP is OSHA's official recognition of the outstanding efforts of employers and employees who have achieved exemplary occupational safety and health. An "Applicable Contractor" under the VPP is defined as a construction or services contractor with employees working at least 1,000 hours at the site in any calendar quarter within the last 12 months that is NOT directly supervised by the applicant (installation). The definition flows down to affected subcontractors. Applicable contractors will be required to submit Days Away, Restricted, and Transfer (DART) and Total Case Incident (TCIR) rates for the past three years as part of the proposal. Pages associated with this information will NOT contribute to the overall Technical Volume page count. NOTE: If award of your firm's proposal does NOT create a situation wherein performance on one Government installation will

exceed 1,000 hours in one calendar quarter, **SUBMISSION OF TCIR/DART DATA IS NOT REQUIRED.**

### **Phase I Work Plan Outline**

**NOTE: THE AF USES THE WORK PLAN OUTLINE AS THE INITIAL DRAFT OF THE PHASE I STATEMENT OF WORK (SOW). THEREFORE, DO NOT INCLUDE PROPRIETARY INFORMATION IN THE WORK PLAN OUTLINE. TO DO SO WILL NECESSITATE A REQUEST FOR REVISION AND MAY DELAY CONTRACT AWARD.**

At the beginning of your proposal work plan section, include an outline of the work plan in the following format:

- 1) Scope  
List the major requirements and specifications of the effort.
- 2) Task Outline  
Provide a brief outline of the work to be accomplished over the span of the Phase I effort.
- 3) Milestone Schedule
- 4) Deliverables
  - a. Kickoff meeting within 30 days of contract start
  - b. Progress reports
  - c. Technical review within 6 months
  - d. Final report with SF 298

### **Cost Volume**

Cost Volume information should be provided by completing the on-line Cost Volume form and including the Cost Volume Itemized Listing (a-j) specified below. The Cost Volume detail must be adequate to enable Air Force personnel to determine the purpose, necessity and reasonability of each cost element. Provide sufficient information (a-j below) on how funds will be used if the contract is awarded. The on-line Cost Volume and Itemized Cost Volume Information (a-j) will not count against the 20-page limit. The itemized listing may be placed in the "Explanatory Material" section of the on-line Cost Volume form (if enough room), or as the last page(s) of the Technical Volume Upload. (Note: Only one file can be uploaded to the DoD Submission Site). Ensure that this file includes your complete Technical Volume and the Cost Volume Itemized Listing (a-j) information.

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.

b. **Direct Cost Materials:** Justify costs for materials, parts, and supplies with an itemized list containing types, quantities, and price and where appropriate, purposes.

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

d. Direct Labor: Identify key personnel by name if possible or by labor category if specific names are not available. The number of hours, labor overhead and/or fringe benefits and actual hourly rates for each individual are also necessary.

e. Travel: Travel costs must relate to the needs of the project. Break out travel cost by trip, with the number of travelers, airfare, per diem, lodging, etc. The number of trips required, as well as the destination and purpose of each trip should be reflected. Recommend budgeting at least one (1) trip to the Air Force location managing the contract.

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. NOTE: Subcontract arrangements involving provision of Independent Research and Development (IR&D) support are prohibited in accordance with Under Secretary of Defense (USD) memorandum "Contractor Cost Share", dated 16 May 2001, as implemented by SAF/AQ memorandum, same title, dated 11 Jul 2001.

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 Volume. The proposed total of all consultant fees, facility leases or usage fees, and other subcontract or purchase agreements may not exceed one-third of the total contract price or cost, unless otherwise approved in writing by the Contracting 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 Volume). At a minimum, an offeror must include a Statement of Work (SOW) with a corresponding detailed Cost Volume 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.

i. Any exceptions to the model Phase I purchase order (P.O.) found at <https://www.afsbirsttr.com/Proposals/Default.aspx> (see "NOTE" within "Phase I Proposal Submission Checklist" section, p. AF-5).

j. DD Form 2345: For proposals submitted under ITAR-restricted Topics, a copy of the certified DD Form 2345, Militarily Critical Technical Data Agreement, must be included. The form, instructions, and FAQs may be found at the United States/Canada Joint Certification Program website, <http://www.dlis.dla.mil/jcp/>.

Note: Approval of the DD Form 2345 will be verified if proposal is chosen for award.

### **PHASE I PROPOSAL SUBMISSION CHECKLIST**

Failure to meet any of the criteria will result in your proposal being **REJECTED** and the Air Force will not evaluate your proposal.

- 1) The Air Force Phase I proposal shall be a nine-month effort and the cost shall not exceed \$150,000.
- 2) The Air Force will accept only those proposals submitted electronically via the DoD SBIR Web site ([www.dodsbir.net/submission](http://www.dodsbir.net/submission)).
- 3) You must submit your Company Commercialization Report electronically via the DoD SBIR Web site ([www.dodsbir.net/submission](http://www.dodsbir.net/submission)).

It is mandatory that the complete proposal submission -- DoD Proposal Cover Sheet, Technical Volume with any appendices, Cost Volume, Itemized Cost Volume Information, and the Company Commercialization Report -- be submitted electronically through the DoD SBIR Web site at <http://www.dodsbir.net/submission>. Each of these documents is to be submitted separately through the Web site. Your complete proposal **must** be submitted via the submissions site on or before the **6:00 am ET, 26 June 2013 deadline**. A hardcopy **will not** be accepted.

NOTE: If no exceptions are taken to an offeror's proposal, the Government may award a contract without discussions (except clarifications as described in FAR 15.306(a)). Therefore, the offeror's initial proposal should contain the offeror's best terms from a cost or price and technical standpoint. In addition, please review the model Phase I P.O. found at <https://www.afsbirsttr.com/Proposals/Default.aspx> and provide any exception to the clauses found therein with your cost proposal Full text for the clauses included in the P.O. may be found at <http://farsite.hill.af.mil>. **If selected for award, the award contract or P.O. document received by your firm may vary in format/content from the model P.O. reviewed. If there are questions regarding the award document, contact the Phase I Contracting Officer listed on the selection notification.** (See item g under the "Cost Volume" section, p. AF-4.) The Government reserves the right to conduct discussions if the Contracting Officer later determines them to be necessary.

<p>The AF recommends that you complete your submission early, as computer traffic gets heavy near the solicitation closing and could slow down the system. <b><u>Do not wait until the last minute.</u></b> The AF will not be responsible for proposals being denied due to servers being "down" or inaccessible. <u>Please assure that your e-mail address listed in your proposal is current and accurate. By late June, you will receive an e-mail serving as our acknowledgement that we have received your proposal. The AF is not responsible for notifying companies that change their mailing address, their e-mail address, or company official after proposal submission without proper notification to the AF.</u></p>
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### **AIR FORCE SBIR/STTR SITE**

As a means of drawing greater attention to SBIR accomplishments, the AF has developed a SBIR/STTR site at <http://www.afsbirsttr.com>. Along with being an information resource concerning SBIR policies and procedures, the SBIR/STTR site is designed to help facilitate the Phase III transition process. To this end, the SBIR/STTR site contains SBIR/STTR Success Stories written by the Air Force and Phase II summary reports written and submitted by SBIR companies. Since summary reports are intended for public viewing via the Internet, they should not contain classified, sensitive, or proprietary information.

### **AIR FORCE PROPOSAL EVALUATIONS**

The AF will utilize the Phase I proposal evaluation criteria in section 6.0 of the DoD solicitation in descending order of importance with technical merit being most important, followed by the qualifications of the principal investigator (and team), and followed by Commercialization Plan. The AF will utilize Phase II evaluation criteria in section 8.0 of the DoD solicitation; however, the order of importance will differ. The AF will evaluate proposals in descending order of importance with technical merit being most important, followed by the Commercialization Plan, and then qualifications of the principal investigator (and team). Please note that where technical evaluations are essentially equal in merit, and as cost and/or price is a substantial factor, cost to the Government will be considered in determining the successful offeror. The next tie-breaker on essentially equal proposals will be the inclusion of manufacturing technology considerations.

The proposer's record of commercializing its prior SBIR and STTR projects, as shown in its Company Commercialization Report, will be used as a portion of the Commercialization Plan evaluation. If the

"Commercialization Achievement Index (CAI)", shown on the first page of the report, is at the 20th percentile or below, the proposer will receive no more than half of the evaluation points available under evaluation criterion (c) in Section 6 of the DoD 13.A STTR instructions. This information supersedes Paragraph 4, Section 5.4e, of the DoD 13.2 SBIR instructions.

A Company Commercialization Report showing the proposing firm has no prior Phase II awards will not affect the firm's ability to win an award. Such a firm's proposal will be evaluated for commercial potential based on its commercialization strategy.

NOTICE: Only Government personnel and technical personnel from Federally Funded Research and Development Center (FFRDC), Mitre Corporation and Aerospace Corporation, working under contract to provide technical support to Air Force product centers (Electronic Systems Center and Space and Missiles Center respectively) may evaluate proposals. All FFRDC employees at the product centers have non-disclosure requirements as part of their contracts with the centers. In addition, AF support contractors may be used to administratively process or monitor contract performance and testing. Contractors receiving awards where support contractors will be utilized for performance monitoring may be required to execute separate non-disclosure agreements with the support contractors. See section "Cost Volume", item g regarding identification of Conflicts of Interest.

## On-Line Proposal Status and Debriefings

The AF has implemented on-line proposal status updates for small businesses submitting proposals against AF topics. At the close of the Phase I Solicitation – and following the submission of a Phase II via the DoD SBIR/STTR Submission Site (<https://www.dodsbir.net/submission>) – small business can track the progress of their proposal submission by logging into the Small Business Area of the AF SBIR/STTR site (<http://www.afsbirstr.com>). The Small Business Area (<http://www.afsbirstr.com/Firm/login.aspx>) is password protected and firms can view their information only.

To receive a status update of a proposal submission, click the "Proposal Status" link at the top of the page in the Small Business Area (after logging in). A listing of proposal submissions to the AF within the last 12 months is displayed. Status update intervals are: Proposal Received, Evaluation Started, Evaluation Completed, Selection Started, and Selection Completed. A date will be displayed in the appropriate column indicating when this stage has been completed. If no date is present, the proposal submission has not completed this stage. Small businesses are encouraged to check this site often as it is updated in real-time and provides the most up-to-date information available for all proposal submissions. **Once the "Selection Completed" date is visible, it could still be a few weeks (or more) before you are contacted by the AF with a notification of selection or non-selection.** The AF receives thousands of proposals during each solicitation and the notification process requires specific steps to be completed prior to a Contracting Officer distributing this information to small business.

The Principal Investigator (PI) and Corporate Official (CO) indicated on the Proposal Cover Sheet will be notified by e-mail regarding proposal selection or non-selection. The e-mail will include a link to a secure Internet page containing specific selection/non-selection information. Small Businesses will receive a notification for each proposal submitted. Please read each notification carefully and note the Proposal Number and Topic Number referenced.

A debriefing may be received by written request. As is consistent with the DoD SBIR/STTR solicitation, the request must be received within 30 days after receipt of notification of non-selection. Written requests for debrief must be uploaded to the Small Business Area of the AF SBIR/STTR site (<http://www.afsbirstr.com>). Requests for debrief should include the company name and the telephone

number/e-mail address for a specific point of contract, as well as an alternate. Also include the topic number under which the proposal(s) was submitted, and the proposal number(s). Further instructions regarding debrief request preparation/submission will be provided within the Small Business Area of the AF SBIR/STTR site. Debrief requests received more than 30 days after receipt of notification of non-selection will be fulfilled at the Contracting Officers' discretion. Unsuccessful offerors are entitled to no more than one debriefing for each proposal.

**IMPORTANT:** Proposals submitted to the AF are received and evaluated by different offices within the Air Force and handled on a Topic-by-Topic basis. Each office operates within their own schedule for proposal evaluation and selection. **Updates and notification timeframes will vary by office and Topic. If your company is contacted regarding a proposal submission, it is not necessary to contact the AF to inquire about additional submissions.** Check the Small Business Area of the AF SBIR/STTR site for a current update. Additional notifications regarding your other submissions will be forthcoming.

We anticipate having all the proposals evaluated and our Phase I contract decisions within approximately three months of proposal receipt. **All questions concerning the status of a proposal, or debriefing, should be directed to the local awarding organization SBIR Program Manager.** Organizations and their Topic Numbers are listed later in this section (before the Air Force Topic descriptions).

## **PHASE II PROPOSAL SUBMISSIONS**

Phase II is the demonstration of the technology that was found feasible in Phase I. Only Phase I awardees are eligible to submit a Phase II proposal. All Phase I awardees will be sent a notification with the Phase II proposal submittal date and a link to detailed Phase II proposal preparation instructions. If the contact information for technical/contracting points of contact has changed since submission of the Phase I proposal, contact the appropriate AF SBIR Program Manager, as found in the Phase I selection notification letter, for resolution. Please note that it is solely the responsibility of the Phase I awardee to contact this individual. Phase II efforts are typically two (2) years in duration with an initial value not to exceed \$750,000.

**NOTE: All Phase II awardees must have a Defense Contract Audit Agency (DCAA) approved accounting system. It is strongly urged that an approved accounting system be in place prior to the AF Phase II award timeframe. If you do not have a DCAA approved accounting system, this will delay / prevent Phase II contract award. If you have questions regarding this matter, please discuss with your Phase I Contracting Officer.**

**All proposals must be submitted electronically at [www.dodsbir.net/submission](http://www.dodsbir.net/submission).** The complete proposal – Department of Defense (DoD) Cover Sheet, entire Technical Volume with appendices, Cost Volume and the Company Commercialization Report – must be submitted by the date indicated in the invitation. The Technical Volume is **limited to 50 pages** (unless a different number is specified in the invitation). The Commercialization Report, any advocacy letters, SBIR Environment Safety and Occupational Health (ESOH) Questionnaire, and Cost Volume Itemized Listing (a-j) will not count against the 50 page limitation and should be placed as the last pages of the Technical Volume file that is uploaded. (Note: Only one file can be uploaded to the DoD Submission Site. Ensure that this single file includes your complete Technical Volume and the additional Cost Volume information.) The preferred format for submission of proposals is Portable Document Format (.pdf). Graphics must be distinguishable in black and white. **Please virus-check your submissions.**

## **AIR FORCE PHASE II ENHANCEMENT PROGRAM**

On active Phase II awards, the Air Force may request a Phase II enhancement application package from a limited number of Phase II awardees. In the Air Force program, the outside investment funding must be from a Government source, usually the Air Force or other military service. The selected enhancements will extend the existing Phase II contract awards for up to one year. The Air Force will provide matching SBIR funds, up to a maximum of \$750,000, to non-SBIR Government funds. If requested to submit a Phase II enhancement application package, it must be submitted through the DoD Submission Web site at [www.dodsbir.net/submission](http://www.dodsbir.net/submission). Contact the local awarding organization SBIR Program Manager (see Air Force SBIR Organization Listing) for more information.

### **AIR FORCE SBIR PROGRAM MANAGEMENT IMPROVEMENTS**

The AF reserves the right to modify the Phase II submission requirements. Should the requirements change, all Phase I awardees will be notified. The AF also reserves the right to change any administrative procedures at any time that will improve management of the AF SBIR Program.

### **AIR FORCE SUBMISSION OF FINAL REPORTS**

All Final Reports will be submitted to the awarding AF organization in accordance with the Contract. Companies **will not** submit Final Reports directly to the Defense Technical Information Center (DTIC).

**Topic Number**

AF132-001

**Activity**

Information Directorate AFRL/RI

**Program Manager**

Janis Norelli  
(315) 330-3311

## **Air Force SBIR 13.2 Topic Index**

AF132-001

Aircraft Mission Planning Equipment (MPE) Obsolescence

## Air Force SBIR 13.2 Topic Descriptions

AF132-001

TITLE: Aircraft Mission Planning Equipment (MPE) Obsolescence

TECHNOLOGY AREAS: Information Systems, Materials/Processes

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: Develop an innovative open systems architecture approach to address mission planning data transfer device (DTD) performance/storage obsolescence needs for aircraft. The solution should address life cycle requirements across all DOD aircraft systems.

DESCRIPTION: The current aircraft Data Transfer Device (DTD) technologies (e.g. tape drives and tape cartridges) are rapidly becoming unavailable on the commercial marketplace. Many DTDs and their associated interfaces are based on twenty year old commercial Personal Computer (PC) standards that are no longer supported. Unfortunately, this is what is currently used in our military aircraft today for transferring information from the mission planning systems to the aircraft. Many of these DTDs are proprietary devices with no government data rights, and the commercial companies that sell them are fewer and fewer. This presents a major challenge whenever there is an aircraft or mission planning computer change. There is no insight into the device or device interface to incorporate the corresponding changes.

Replacing current DTD technology also represents a huge developmental challenge. The options to the DOD are first to either replace the device readers in the aircraft with a current digital architecture, or second, develop a digital replacement for the analog DTD e.g. tape cartridges. Digital replacements will need to appear to the readers and writers as though they are tapes/cartridges, but are in fact ruggedized, digital devices with modern features and protections (e.g. encryption, zeroizable, Information Assurance, anti-tamper). The cost to do the former is absurdly high, because the cost to modify each aircraft is high, and there are many aircraft models with different DTDs and many different aircraft models.

While this development will clearly be beneficial to Air Force systems, there are other legacy systems in the commercial space which also rely on the same and similar tape systems which would benefit from the development.

All US Air Force platforms are currently affected and their status is being briefed at the Air Force Life Cycle Management Center Commander's level. This effort will have the most impact if the project does not just develop a digital solution with advanced features that can't be replicated in legacy-based systems, but also establishes an open standard for how such systems would interface to legacy systems. This will enable the same basic flexible solution to be adopted across the fleets of various aircraft models.

PHASE I: Investigate options for a new technology developing proposing new standard for digital, removable, ruggedized, plug compatible, upgradeable system with higher capacities than current systems and has the ability to address additional "digital only" features. Specific features to be added will be addressed in the investigation, but might include on-cartridge encryption and fast zeroize feature.

PHASE II: Design and develop a non-proprietary open-standards architecture for DOD legacy fighter/bomber/transport aircraft Mission Planning Equipment subsystems, DTDs, and interfaces. Demonstrate a solution applicable for two different DTDs for two different military aircraft, selected jointly with the Government. If new standards are required, those standards need to be open.

PHASE III: Flight qualify a solution applicable for each aircraft/DTD selected.

REFERENCES:

1. <http://articles.janes.com/articles/Janes-Avionics/Data-Transfer-Equipment-Mass-Memory-DTE-MM-United-States.html>

2. [http://www.rockwellcollins.com/sitecore/content/Data/Products/Computing/Storage\\_Solutions/DTU-7100\\_Data\\_Transfer\\_Unit.aspx](http://www.rockwellcollins.com/sitecore/content/Data/Products/Computing/Storage_Solutions/DTU-7100_Data_Transfer_Unit.aspx)

3.  
<http://www.google.com/search?q=aircraft+data+transfer+device&hl=en&tbo=u&tbm=isch&source=univ&sa=X&ei=Yhm3UPb0C-3iyAHeiYC4DQ&ved=0CEsQsAQ&biw=1280&bih=615>

**KEYWORDS:** aircraft mission planning digital transfer device, data transfer