Joint Deployment Distribution Enterprise (JDDE)
Call for Government-proposed
Research, Development, Test and Evaluation (RDT&E) Projects, FY12-17

United States Transportation Command (USTRANSCOM) is soliciting government organizations for RDT&E projects to address applicable Distribution Process Owner (DPO)/Joint Deployment and Distribution Enterprise (JDDE) Capability technology gaps. This solicitation is for projects starting in FY12 through FY17 with approximately $15M available for new start efforts.

This is a two-phase selection process. Phase I requires submittal of a 4-page "white paper." This phase is intended to avoid undue effort while providing sufficient material to generate interest by the JDDE subject matter experts (who must agree to sponsor the development effort and manage transition efforts). USTRANSCOM will evaluate white papers against the evaluation criteria stated in this announcement, on interest in sponsorship/transition, and on available funding.

If selected for Phase II, proposers will be requested to complete a full proposal for comprehensive evaluation, building from the white paper up to 20 pages, as required, and evaluated against the same criteria as Phase I. Proposers in this phase may request a meeting with USTRANSCOM subject matter experts to discuss their proposal, details of the USTRANSCOM need, and other factors to improve the quality of the proposal and to better determine commitment to sponsorship and transition.

2010 Deadlines are as follows:

14 May 10 1600 (CST)	-- Submittal of electronic white papers (to addresses below)
11 Jun 10	-- Notification of selection to proceed to Phase II
23 Jun 10	-- Phase II Offerors' Conference
14 Jul 10 1600 (CST)	-- Submittal of electronic full proposals (to addresses below)
29 Dec 10	-- Notification of final selection (due multi-month collaborative vetting process)

Appendix 1 contains the highest-priority needs identified by USTRANSCOM, its Service components, and the Joint Intermodal Working Group. Additional technology gaps can be found at http://www.transcom.mil/rdte/, proposals addressing those technology challenges are a lower priority but will be considered. Proposals addressing Appendix 1 needs will compete best.

Projects should be described in terms of the appropriate Technology Readiness Level (TRL). In general, projects should start at TRL level 4-6 (Budget Activity 3, Advanced Technology Development) for best likelihood of success in the selection process. Proposals to merely extend an existing capability, or modernize it (such as preplanned product improvement (P3I)) fall in the acquisition/procurement area, are beyond TRL 8, and are not candidates for USTRANSCOM

RDT&E funding. TRL definitions/descriptions found in USTRANSCOMI 61-1 at http://www.transcom.mil/pubs2/pubs/2037-I61-1.pdf.

Proposals most likely to be chosen by the government will demonstrate a significant number of project selection criteria listed at Appendix 3. Prior experience demonstrates that relatively short-duration projects (up to 3 years), concentrating on prototyping *and transitioning/integrating* a new "component" capability within existing JDDE systems, architectures and programs/systems of record, are likely to be most competitive. Proposers *may* submit proposals for multi-year programs of research and development, but should be aware longer-duration efforts face significant challenges finding a transition sponsor and funding.

If multi-year/multi-project efforts are proposed, proposers should identify a baseline project, (including, if appropriate, a start-up engineering feasibility study) with optional follow-on efforts to be selected by the USTRANSCOM, based on assessment of the success of earlier segments, continued interest in proposed capability, and the availability of funding for development and a sponsor for transition.

Proposing organizations should plan to execute approved projects though their own contracting and technical/management oversight capabilities and facilities. USTRANSCOM will provide RDT&E funding via appropriate government funding vehicle. USTRANSCOM requires monthly report of funds (obligations/outlays) and semi-annual programmatic briefings.

The proposer, with assistance of the Government sponsor, is responsible for designing and executing a transition strategy, which should include detailed planning with programs/systems of record to move the new technology out of the development environment into system program office work and/or into operational use.

If the submitting government agency is sponsoring a project to be developed with an industry or academic partner, those outside agencies should be apprised that USTRANSCOM contractor personnel (including but not limited to The MITRE Corporation, LMI Government Consulting, Stanley Associates, and others) may act as advisors to the selection process. Contractors advising USTRANSCOM in this evaluation have already signed, or will be required to sign, non-disclosure agreements prior to accessing proprietary materials.

If the proposer wishes to submit a classified proposal, first contact below Points of Contact at phone/e-mail/address listed below.

Send correspondence to USTC-TCJ5J4-RDTE-Lst@USTRANSCOM.mil.

Points of contact:

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3 Appendices (Attached)
1. Technology Needs/Focus Areas for FY12
2. USTRANSCOM RDT&E Project Selection Criteria
3. USTRANSCOM RDT&E Two-Phase Project Selection Process (contains format templates)

APPENDIX 1
Technology Needs/Focus Areas for FY12

Innovative Distribution Methods

Point-Of-Need-Delivery (POND) Technologies – Seeks Air/Land/Sea technologies that provide timely capability to deliver cargo to dangerous (i.e. anti-access/austere) locations across a complex, distributed battlefield without jeopardizing warfighter safety (EUCOM/AFRICOM – we are attempting to garner support for JCTD-related efforts commencing in FY11 in cargo unmanned air systems and hybrid lift).

Agile Transportation for the 21st Century-USTRANSCOM is seeking research partners with experience in decision analysis support for transportation optimization solutions. Areas of interest for force movements include evaluation of flow effectiveness (e.g., based on closure times), flow efficiencies (e.g., in terms of cost, fuel usage), and Course of Action (COA) robustness (w.r.t. weather / maintenance risks). Additional areas of analysis might include limiting factors, sensitivity analysis w.r.t. uncertainty, and effects of alternative port usage. Prototypes could be demonstrated that provide the ability to dynamically replan as requirements and priorities change; allow users to visualize movement plans in terms of throughput (e.g., via port simulation), or allow users to replan as throughput varies (e.g., with port or assets changes). For deployment and distribution forecasting, areas of analysis might include projection of asset utilization and necessary capacity buys.

Common Operational Picture for COP Distribution and Deployment (D2)- To maximize reliability, performance, and flexibility in providing services to our customers, COP D2 is looking for maturing technologies that allow the sharing of information and services across security boundaries in such a way that maintains information assurance and system integrity; technologies that ease the development cycle on source systems for web services and make best use of geographically distributed server environments.

Finally, integration of these complex technologies and methodologies require improved processes for managing virtualized environments and service based architectures. These technologies include but are not limited to the following areas of interest; cloud computing, cross domain communications, web services provisioning and portfolio management capabilities and transfer of data from a government web site in the public domain to a sensitive, but unclassified government data system for transportation planning/shipping of vendor shipments.

Expeditionary capability to offload military equip – Seeking technologies that support a heavy duty, deployable system that would be suitable for Civil Reserve Air Fleet (CRAF). These capabilities will include portable vehicle loading ramps for rapid offload of vehicles and portable highline docks to support offload of palletized pallet trains, enabling more rapid turnaround of loaders for quicker aircraft offloads.

Rapid Distribution Technologies - Technologies that improve the end-to-end (E2E) flow of military unit equipment and cargo through ocean ports, aerial ports, and intermodal inter-change points. Technology concepts that improve deployment speed and throughput are critical to providing required customer support.

Automated Hazardous Materials Processing - The use of automated tools and technology will greatly enhance the processing and reduce loading time of combat units. The ability to quickly identify chemical and component incompatibilities will facilitate speedier loading of vehicles, pallets, and other cargo needed for quick air transport.

Routing of Mobile Units Cargo – Improve the selection of 'ship to' addresses for mobile units as it relates to providing time sensitive routing/supply sourcing addresses within overseas theaters for cargo delivery/sourcing locations.

Distribution Protection/Security/Safety Capabilities

Cyber Security – The command relies on its Command and Control (C2) and Information Assurance capabilities, and requires a defined Information Technology Governance process which postures itself to address current and future cyber threats. USTRANSCOM is interested in proposals which involve maturing technologies that allow for assured, secure and trusted communications across DOD networks. These technologies will support the warfighter in the detection, analysis, assimilation, and deterrence of cyber threats.

Cargo Screening – Seek technologies that will screen cargo for Chemical, Biological, Nuclear, explosives and tampering. Technology interests are in those systems with stand-off detection, hand-held detection, vehicle inspection detection, robotic inspection detection, unmanned vehicles detection-both on land and in the water, and fixed detectors which allow for detection before endangering personnel and/or resources. Interests include technologies that when applied detect access attempts and can be monitored for intrusion or tampering not exclusive to door.

Determine and Coordinate Convoy Security - The theater commander has not always been able to provide the appropriate security in a timely manner during movement from the Public Warehouse Company (PWC) to/from final destination. In some cases, there are insufficient security assets to oversee convoy security in-country and, therefore, all movement requirements

are competing for the same limited resources. Modeling, simulation, and decision support tools that assist convoy planning/routing would enable security providers to optimize resources.

Force Protection - Terrorism and asymmetric warfare pose an ever-present threat to our nation's strategic mobility assets (personnel, equipment, and mobility assets) and their embarked cargo, equipment, and personnel. This broad technology area of interest supports proposals to counter these types of threats. We seek advanced and affordable technologies for on and off board aircraft systems to enhance aircrew situational awareness and to defeat guided missiles and emerging directed energy threats. Also of particular interest is the application of technology to create virtual borders at the point of loading; screen cargo for smuggled goods and explosive, chemical, and biological threats; decontamination of transportation assets; provide early detection of container breach (by any means) or tampering not exclusive to door (subsequent to closing container door), and enhance seaborne and air cargo container standards.

Effects of Chemical Warfare Agents on Aircraft Materials of Construction - Aircraft decontamination research and testing determined that chemical warfare agents (CWA) "…have a detrimental effect on metal aircraft structures due to hydrogen embrittlement and corrosion, and can severally degrade other materials such as wiring and electrical connectors." Although the test reports characterized the effects as potentially "catastrophic," precise quantification of the effects (to facilitate development of mitigation strategies) was never accomplished. Precise quantification of chemical effects is required to develop non-destructive decontamination methods and mitigation strategies (increased aircraft inspections, repair or replacement of effected parts, etc.) to preserve the air worthiness of the aircraft. The key aircraft components most effected by hydrogen embrittlement and corrosion (landing gear, engine pylons, electrical components, etc) must be tested to quantify the detrimental effects of exposure to CWA.

Large Airframe Aircraft Air Transportable Decontamination Hangar – Seeks technologies that will provide an air transportable hangar suitable for chemical, biological, and radiological (CBR) decontamination of aircraft to at least the size of a C-17 (C-5 preferred). The hangar would need to keep CBR contaminants and decontamination agents within its confines. It would also need to withstand high temperatures and decontamination agents projected for aircraft use as well as surviving anticipated environmental elements (i.e., wind, rain, etc.). An air transportable decontamination hangar would enable exterior/interior decontamination at or near the site of the incident providing relief form overflight and landing restrictions of the aircraft to another location. In addition, the hangar would provide multiuse functions including protection during humanitarian relief efforts.

NOTE: Additional technology gaps can be found by accessing the USTRANSCOM RDT&E Handbook (USTRANSCOMH 60-2) under "References" tab at http://www.transcom.mil/rdte/, proposals addressing those technology challenges are a lower priority but will be considered.

APPENDIX 2

JDDE Capability Gaps/Sub-gaps

1. Visibility

There is insufficient timely and accurate information on the location and status of materiel and transportation assets. Stakeholders throughout the distribution process require the ability to determine shipment status through system/service access, automatic information technology (AIT) or event management. There is a lack of end-to-end materiel asset visibility and transportation process inefficiencies exist between nodes in the DOD supply chain. Stakeholders need the capability to view the status and availability of all materiel and transportation assets in-storage, in-transit, or in-repair, detect pipeline bottlenecks and provide recommended alternatives to overcome the bottleneck.

Total Asset Visibility (TAV) is not adequately supported and often requires manual workarounds due to disparate systems, lack of awareness, access, and training.

- The DOD Radio Frequency Identification (RFID) Policy dated 30 Jul 04 has no provisions for bulk petroleum.
- The issuing and ordering activities have little or no visibility of the movement of Class IV materiel once it has left the Port of Debarkation (POD). There is no over-arching system to provide all stakeholders with visibility of Class IV movement within theater. This lack of visibility limits the issuing activity's ability to respond to routine customer requests for updated shipment information in a timely manner.
- In-Transit Visibility (ITV) systems do not provide event management. Issues are revealed only after problems are experienced, investigated, and reported. Supply chain managers handle exceptions in a manual and reactive manner.
- Duplicate and disparate TAV system capabilities exist
- Lack of ITV systems/services awareness, access, and training exists

Sub-gaps:

Common Data Governance	1
Common Architecture	2
Bandwidth/Connectivity	3
Common User Movement Schedules	4
Business Event Capture	5
Tracking of Consolidated Orders	6
Data Quality	7
Single Aggregate View	8
Exception Handling/Event Management	9
User Access and Training	10
Transportation Closure	11

2. Distribution Systems Interoperability

Transportation information exchange across the DOD is inhibited by the disparity of systems, differing data standards and insufficient interfaces. Queries and retrieval of movement status and shipment information cannot be executed due to lack of connectivity between the various components of the supply chain.

• There is no single, shared, enterprise view(s) of transportation due to disparate, yet similar systems to serve individual Services, agencies, and other commands.

• Shipment-unit detailed information is lost due to manual data entry, because there is insufficient system interface between Transportation Coordinators-Automated Information for Movement System II (TC-AIMS II), Integrated Computerized Deployment System (ICODES), and World-wide Port System (WPS) Manifesting systems for vessels.

• Source systems use different data standards making aggregation in ITV systems difficult, and often inaccurate.

• Cargo Movement Operational System-Theater Distribution Center (CMOS-TDC) cannot read Global Air Transportation Execution System (GATES)-produced Radio Frequency Identification (RFID) tags.

• Item detail shipping information from Standard Asset Tracking System (SATS) is not transferred to CMOS for transportation booking.

• Automated Airload Planning System (AALPS) not used for USAF load planning due to software conflicts with Microsoft Windows.

Sub-gaps:

Common Data Governance	1
Common Architecture/Single Aggregate View	2
Shipment Detailed Information	3
Parent-Child Shipment Information	4
Joint Retail Inventory Interoperability	5
AALPS Software Conflicts	6
CMOS and GATES Communication	7
GATES RF Tags	8
Distribution Network Analysis	9

3. Distribution Planning and Forecasting

There is a lack of collaborative distribution planning, based on an understanding of aggregate customer requirements, for optimizing the End-to-End (E2E) distribution process. E2E distribution planning and forecasting efforts are not synchronized. There is a lack of properly trained personnel, established procedures, and transportation/materiel assets to execute the distribution plan. There is limited ability to conduct synchronized strategic and theater deployment and distribution planning/optimization employing demand forecasts. There is a limited E2E requirements process for the movement of sustainment cargo. There is a limited ability to discern and act on theater capacity-based movement demands.

• Warfighters have no single, integrated view(s) of force movement and sustainment planning requirements.

• Originating, intermediate, and final destination transportation nodes are unable to optimize outbound distribution due to insufficient advanced inbound notification.

• Poor synchronization, lack of ITV, and stove-piped Command and Control (C2) exists at the Aerial Port of Debarkation (APOD) and Sea Port of Debarkation (SPOD) where transition occurs from strategic movement to theater movement.

• Transportation forecasts are inaccurate and do not include near-term and future customer requirements; instead, forecasts rely too heavily on historical transportation demand. Forecast accuracy is not validated or measured.

• Intermediate distribution nodes do not have the trained people, capabilities (refrigeration), and capacities needed to support the distribution of medical materiel. The Distribution and Transportation Management organizations and units (including the Deployment Distribution Operation Center (DDOC) and the Joint Deployment Distribution Operation Center (JDDOC) do not collaboratively plan with Class VIII subject matter experts for E2E routing, transportation, handling, and delivery of medical materiel. This collaboration specifically includes the consideration of intermediate distribution and transshipment node capabilities and limitations when planning the routing of forward, return, and retrograde movements.

• Planning and coordination of the Class VIII distribution and transportation activities is not performed under a synchronized concept of operations with the input of Class VIII subject matter experts.

• Individual transshipment nodes in the supply chain, including intermediate APODs and transportation transfer points, are accountable to separate organizational Commands and/or Service Components. Each of these Commands/Components maintains individual performance objectives and incentives that are not synchronized with the unique needs of the commodity's distribution requirements.

• Medical Transportation Managers are not able to synchronize load movement with available air capacity when scheduling loads, though they are able to review pipeline capabilities. The process to influence and optimize movements, which is used on a recurring basis, requires multiple layers of approval authority. This causes the Medical Transportation Manager to miss opportunities to utilize the available capacity.

Sub-gaps:

Sustainment Planning and Forecasting	1
Force Movement Planning and Forecasting	2
Integrated Theater Multi-Modal Capability	3
Multi-Modal Priorities	4
Theater Movement Capability Demand	5
Theater Lift Capability Forecast	6
Enterprise D2 Demand Forecasting Optimization	7
Transportation Node Optimization	8
Class VIII Planning and Coordination	9
APOD and SPOD C2	10
Retrograde Scheduling and Preparation	11
Predictive Equipment Failures Forecasting	12
Management of Integrated/aggregated joint D2 Requirements	13
Synchronized Medical Load movements	14

4. Requisition Priorities
Current processes and systems permit nearly unconstrained use of high movement priorities, which in turn gives the requestor (customer) unrealistic expectations and an invalid Required Delivery Date (RDD). There is limited ability to identify priority of movements across movement categories, modes and levels/echelons. The JDDE needs a more accurate and realistic process for the assignment of customer priorities.

Sub-gaps

RDD Constraints	1
Priority System Service Level of Differentiation	2
Customer Feedback on Changes	3

5. Process Management and Business Rules
Joint process descriptions and business rules either do not exist or are unclear for many key deployment and distribution processes. A lack of well-defined, integrated process descriptions cause shipment delays, waste resources and undermine efforts to streamline the supply chain. Unclear or non-existent business rules lead to breakdowns in organizational lines of communication.

Sub-gaps:

Process Description and Business Rules for Movement	1
Cargo Booking	2
Commercial Cargo Integration	3
Movement of Non-DOD Goods	4
Customer Returns	5
Legal, Regulatory Updates/Customs Clearance Procedures	6
DOD Activity Address Codes Management	7
Cargo Screening	8
Pallet Build Business Rules	9
CL VIII Material Handling	10
JDDOC Authorities	11
Determine and Coordinate Convoy Security	12
Mail Delivery	13
Receipts and Accountability	14
Defense Transportation System (DTS) Expansion	15

6. Distribution Performance Metrics Strategy
Distribution performance metrics are inconsistent, unclear, and insufficient. There are insufficient shared data sets, collaborative capability, or common metric scorecards. Different stakeholders require various levels of precision. No standard metrics or methods exist across supply chain organizations to evaluate performance.

Sub-gaps

Performance Measurement	1
D2 Performance Assessment	2
Collaborative Capability	3
Carrier Performance and Availability	4
Customer Service	5

7. Container Management

The JDDE has a requirement to control and track containers and minimize detention fees globally. Current processes, systems, tools and/or performance metrics are not sufficient.

Sub-gaps:

Global Container Management Policies	1
Common Information Management	2
Global Organizational Plan	3
Marking, Labeling, and Tagging Processes	4

8. Contracts/Acquisitions Methodology

Certain contract mechanisms and acquisition methods are inappropriate and unreliable.

Sub-gaps:

Heavy Weight Commercial Tender	1
CL III Transportation Responsibility	2

9. Coalition/Multi-National Interagency Capabilities

The JDDE community limits participation of other US government agencies and the transportation industry when conducting Joint and Combined exercises and simulation planning. Interaction with key national partners is seldom practiced during exercises. Key partners such as Department of State, MARAD, DLA, DESC, and the transportation industry are often excluded from exercise and simulation planning resulting in missed opportunities for valuable interaction and insight. The JDDE lacks the capability to generate, manage, share and distribute coalition/multi-national/inter-agency movement requirements.

Sub-gaps:

Coalition/Multi-National/Interagency movement requirements	1
Coalition/Multi-National/Interagency movement visibility	2

10. Professional Joint Logistics Workforce Development

The DOD does not have the requisite cadre of joint logisticians who understand the E2E deployment and distribution process necessary to execute desired joint effects. There are no specific requirements for joint logisticians including competency models, career paths, and training requirements. The JDDE must expand the definition of joint logistics training to one that includes interagency, intergovernmental and multinational partners and more effectively uses innovative technologies.

Sub-gaps:

Career Paths and Skill Specialty Designators	1
COCOM E2E Competency Models and Bullets	2
Knowledge Management	3
Core and Specialty Training Curricula	4
Operators' Motivation and Rewards	5

11. Supply Chain Simulation Tools

Joint simulation tools are rarely used and poorly equipped or integrated into sustainment flow modeling at the strategic and operational levels (wholesale and Service-level retail). The Joint and Combined Forces have a requirement for simulation tools for sustainment flow modeling at the strategic and operational levels (wholesale and Service-level retail). Current tools are rarely used and poorly equipped or integrated. There is little capability to do unconstrained "what-if" supply scenarios without manual effort. Operational Planners at Regional Combatant Commands (RCCs) have Force Flow modeling / simulation capabilities, but lack this capability for sustainment planning.

Sub-gaps:

Organizational Constructs	1
Supply Chain Sustainment Simulation Tools	2
Supply Chain Simulation Tool Simulation Capability-Solutions	3
Process and System Training	4

APPENDIX 3

USTRANSCOM Research, Development, Test, and Evaluation Program
Project Selection Criteria

Award decisions will be based on a competitive selection of white papers and (follow-on full proposals) resulting from a scientific/technical review, all of which are of equal importance.

1. DPO GAPS, areas of interest, and focus areas that this proposal targets.
    a. Were high priority gaps targeted as listed in Appendix 1?
    b. What are the target DPO GAPS, areas of interest, or focus areas?
    c. How do specific technological capabilities enhance distribution, transportation, planning/execution, and decision support processes?

2. Applicability to Joint Deployment Distribution Enterprise
    a. Transformational potential (versus "modernization")
    b. Joint capability crucial to DOD supply chain
    c. Not associated with major weapon system or end item acquisition program

3. Potential ROI and Affordability
    a. Shows significant positive ROI in lifecycle of application
    b. Demonstrates a compelling business case for use

4. Technical Merit: Utilizes sound scientific/engineering principles, assessed by pertinent experts.

5. Technical Maturity
    a. Project demonstrates Technology Readiness Level 4-6 at startup
    b. Project demonstrates TRL advancement commensurate with funded level of effort, but not beyond TRL 8 at conclusion

6. Programmatics
    a. Project plan demonstrates well-defined, defendable, and properly interrelated cost, schedule, and performance objectives
    b. Project is structured in achievable phases or spirals with clear deliverables
    c. Project demonstrates well-defined exit criteria, performance goals, and well-defined deliverables (studies, hardware or software prototypes, experimentation results, etc.

7. Technology Transition Potential
    a. Project has committed transition/integration agency, defined by provision of project manager or owning agency and identifies committed funding for next steps or transition to further development work.
    b. Project plan demonstrates adequate understanding of integration requirements if intended to transition to operational use, or presents clear methodology for determining those requirements during the course of research

APPENDIX 4

USTRANSCOM RDT&E Two-Phase Project Selection Process

Formats and Content for Proposals

Likelihood of success of proposals in both phases will be increased by clearly identifying the outputs/deliverables at the end of the project, demonstrating that the capability to be researched/developed covers an important need, that the proposer understands the Joint Deployment and Distribution Enterprise domain and its challenges, the technical, programmatic, integration and sustainment challenges of the proposed capability, can demonstrate a positive return on investment for the effort, and has an experienced/skilled team of researchers who will be assigned to do the developmental work. Success is also enhanced by demonstration of a clear and logical transition path supported by a target system/program of record.

Phase I requires submittal of a "white paper." White papers are maximum 4 pages in length with an optional appendix and are intended to preclude undue effort by a proposer. White papers will be evaluated against the evaluation criteria stated in this announcement; a determination will be made by the government whether to pursue the proposal further under Phase II. The white paper should generate interest, summarize the full proposal, clearly describe the "deliverables" and their maturity and demonstrate succinctly that the concept is worthy of additional consideration for funding by the government.

Phase II requires submittal of a "full proposal" of not more than 20 pages with optional appendix which amplifies the information summarized in Phase I white papers. This portion of the process is only for successful proposers selected from Phase I.

Phase I - White Paper (4-page limit)

The white paper must be formatted as stated below. Submittal shall be in Times New Roman font of at least 12 points printed in portrait format. Pages shall include a 1-in margin at top, bottom, and both sides. A footer within the 1-inch bottom margin containing page number, submittal title, proposer's organization name, and appropriate classification or proprietary notice shall be included and must be in least 8-point Times New Roman font. The cover page and optional 2-page appendix are not included in the 4-page limitation.

Section A: Cover Page (not included in 4-page limit)

Include title of proposed project and acronym if appropriate, period of performance, estimated cost, technical and contracting point(s) of contact, phone, fax and e-mail, date, company or agency name and address, and notice of intellectual property content, security level, and other necessary markings, plus illustrations or logos as chosen by the proposer. This cover page itself should not contain proprietary or otherwise sensitive information.

Section B: Project Description (content by numbered paragraph or section):

1. Write a brief introduction describing what the project will deliver; clearly describe the deliverable(s) and their maturity. Acronyms spelled out on the cover page do not have to be repeated, but all other acronyms should be spelled out at first use (here and throughout document).
Use this example format to summarize deliverables and time spans for their development.

2. Describe the need being addressed/capability to be researched to demonstrate the proposer knows the domain and its challenges. Cite pertinent formal requirements documentation if it exists.

3. Describe the maturity of the technology, including Technology Readiness Level (TRL) at project startup and intended TRL at conclusion of the described RDT&E effort to describe the scope of the research effort and its maturity at the end of the project.

4. Describe expected Return on Investment for acquiring the capability, if fielded. A quantified ROI is preferred if it can be calculated without excessive assumptions prior to the RDT&E effort; otherwise, a qualified ROI should be described. "TBD" is not an acceptable response to ROI.

5. List the science/engineering/supply chain or other principles which demonstrate that the proposal has technical merit and is likely to be able to solve the problem being addressed.

6. List the performance metrics by which the RDT&E effort will be measured. This demonstrates the proposer comprehends the factors which dictate success for the RDT&E effort.

7. Describe instances where the technical approach has been used in industry or other non-DOD government organizations.

8. List the systems or programs of record with which this capability must be integrated. If there is already commitment by the system or program of record to incorporate the capability, once fully developed, so state. This demonstrates that a transition destination has been considered early and increases chances of selection/funding.

9. List the numbers and experience of the designated researchers or other individuals who will perform this work and the location(s) where work will be done. This demonstrates the likelihood and level of expertise which will be applied. List the projects completed previously by the assigned researchers, providing telephone and organizational points of contact for the customer and/or user of the capability.

10. List a high-level schedule which includes major deliverable and the funding proposed for each phase of the effort (including by each fiscal year of the project's span). This demonstrates the proposers' technical/programmatic planning capabilities and understanding of the scope of the effort required.

Appendix (not included in 4-page limit)

The proposer may include a 2-page diagram, not included in the body page count, consisting of an appendix, photograph, or other visual aid to further describe the proposed RDT&E project and its deliverables, understanding of the domain and the place the technology will have in it, or other illustrative facts. This appendix is meant to be a visual aid or place for tables or lists, not additional room for the text of the proposal.

Phase II – Full Proposal (20-page limit)

This document is only required from proposers who are notified of the government's selection of their Phase I proposals. Proposals do not have to consume the entire 20-page limit; page limits listed in parentheses for the following sections are recommendations, and may be reallocated by the proposer as necessary.

The proposal shall be formatted as stated below. Proposals not submitted in designated format may be rejected without complete review. Submittal shall be in Times New Roman font of at least 12 points printed in portrait format. Pages shall include a one inch margin at top, bottom, and both sides. A footer within the 1-inch bottom margin containing page number, submittal title, proposer's organization name, and appropriate classification or proprietary notice shall be included and must be in least 8-point Times New Roman font. Page limits within each element of the body of the proposal are recommendations; the proposer may allocate the 20 pages allowed as deemed best to describe the proposed project. The cover page and optional appendix are not included in the 20-page limit.

Cover Page

Include title, point(s) of contact, phone numbers, fax and email, date, company or agency name, and notice of intellectual property content, security level, and other necessary markings, plus illustrations or logos as chosen by the proposer. This cover page itself should not contain proprietary or otherwise sensitive information.

1. General Project Summary (1 page):

a. Describe the critical USTRANSCOM Joint Deployment Distribution Enterprise capabilities which the project addresses and how the project responds to validated technology gap (either gaps identified in Appendix 1 {preferred} or additional gaps found at http://rdte.transcom.mil/). Describe the current system, capability, or process which is deficient and which this proposal addresses. Describe the operational gap or issue addressed and how the development effort contributes to the solution. Clearly describe the specific deliverables and maturity of the RDT&E effort (for example, analysis, report, prototype, experimental results of demonstration, etc.)

b. Identify the technologies to be explored/developed, the end user, and how the technology will enhance that user's capabilities. Consider including a mission scenario, vignette, or Operational View (OV-1) illustration here.

c. List the information technology and/or hardware/platform/vehicle systems (potential programs or systems of record) with which the technology must be integrated.

2. Requirements Traceability (1 page):

a. Identify the formal requirements, program directives, Joint Capabilities Integration and Development System (JCIDS) products, Distribution Process Owner gap, technical focus areas

or needs as listed and addressed in Appendix 1, or other formal source of requirements for the effort at the joint or Service level. If none, clearly describe the vision and/or a proposed Functional Area Analysis/Net Assessment that is being addressed. Cite any pertinent exercises, operational experience, and/or experimentation. Definitions of analysis can be found in CJCSI 3170.01series, Joint Capabilities Integration and Development System.

b. Alternately, if no formal requirement can be identified, demonstrate linkage to capability shortfalls from the USTRANSCOM Transformation Technology Plan (T3P), located at http://www.transcom.mil/rdte that this project will address. Note: If there is no traceability to any of these documented sources, describe why the technology is so compelling as to warrant further consideration. Lack of clear requirements traceability puts the project at a considerable competitive disadvantage.

3. Project Suitability (2 pages):

a. Describe the anticipated results and the manner in which the work will contribute to enhancing joint defense distribution and/or transportation capabilities. Describe why the technology/capability sought is not purely a Service (Title 10) responsibility and, therefore, is qualified for joint USTRANSCOM Research, Development, Test, and Evaluation (RDT&E) funding.

b. Demonstrate why the project is innovative/transformational, therefore, worthy of Joint RDT&E funding and not simply an upgrade or modernization of an existing capability. Show the Technology Readiness Level (TRL) at project start and anticipated TRL and project conclusion.

c. Describe what steps were taken to ensure the effort is not duplicative.

4. Return on Investment, Affordability, and Business Case (5 pages): Although project is a developmental effort, the proposer must be able to demonstrate, at least quantitatively, that a favorable rate of return for the fielded capability is likely. A quantified ROI is more compelling than a subjective one. For projects of lower technological maturity, ROI/affordability can be based on broader assumptions and less-stringent criteria than would be expected for a go/no-go acquisition decision--as long as these assumptions are stated clearly. Where ROI/affordability of the fielded capability is uncertain at the outset, the research plan should explicitly contain activities to refine these measures and refresh the estimates at project completion. A business case for use should be described.

a. **Assumptions:** List assumptions which are being made about the project which affect (or make possible) the calculation of ROI and affordability.

b. **Evaluation of Alternatives:** Describe why this RDT&E effort is preferable to non-RDT&E approaches; list other courses of action (including non-materiel solutions) considered and why they are not recommended.

c. **Business Case for Implementation/ROI:** If possible, quantitatively estimate cost to implement the proposed capability (lifecycle cost includes RDT&E, procurement, and sustainment) as well as return on investment. Describe any existing systems which may be retired or personnel support which may be reduced (and thus operating costs saved) by use of the technology. Also describe estimating methods or data sources which were used and how they contributed to the credibility of the cost estimate.

d. **Applicability to Industrial Practices and Partnerships:** Describe, if possible, instances where the proposed technical approach has been used by industry (e.g., best or innovative practices) and how the capability, if developed and fielded in USTRANSCOM's enterprise, may assist the DOD in working more economically or seamlessly with its commercial and other supply chain partners.

5. Technical Merit and Maturity (4 pages):

a. Describe the technologies to be developed, their risks for fielding, and methods of better understanding or reducing those risks during RDT&E.

b. State the assessment of experts regarding technical merit of the approach. Is the approach based on sound scientific/engineering principles likely to succeed in achieving stated capabilities? What are the qualifications of the experts who make that judgment?

6. Programmatics (4 pages): Cost, schedule, and performance are interrelated. This section is meant to show the schedule of activities for the RDT&E effort with accompanying funding requirements for each segment of the project and its deliverables.

a. Provide a list of major project deliverables and dates. Recommended format (entries are examples):

In addition, provide a detailed schedule, with start and end dates for major activities, appropriate decision points/milestones, and completion dates for deliverables such as studies, prototypes, and other outputs of the research, for the entire project. Show links to other development efforts and to Systems/Programs of Record to illustrate transition paths. If a project has already started, include any activities already completed. Include activities which support transition to further development, demonstration or acquisition, as appropriate.

b. Describe prior expended and requested funding for the RDT&E effort in then-year thousands. Include an estimate of follow-on development, production and sustainment costs. Recommended format (which may be included in the appendix):

c. Describe the team of experts which will be dedicated to conducting project technical/management activities, citing prior experience and qualifications.

e. Describe performance metrics (see table below) to be used during conduct of the research and development effort. The RDT&E program is also required to report these metrics on each project in annual DOD-required budget documents. These metrics should be **quantitative if at**

all possible or qualitative only by exception, and should be measurable at milestones during the course of the research with enough confidence to determine suitability for further research and development work and/or transition to additional development or even to the user. Describe the performance thresholds and/or exit criteria for each phase and end of the project, and TRL levels at beginning and conclusion of the RDT&E effort. A recommended format is shown here:

7. Technology Transition Planning (3 pages)

a. Describe steps the government must take to allow the timely transition and fielding of the capability once project is complete. Describe interfaces with existing systems. Name the type of organization (lab, contractor, or System Program Office (SPO)) to which this technology should be transitioned for further development or fielding and System or Program of Record (POR) which will accept, integrate, and sustain this technology. Describe the level of commitment (if any) of that agency to accept the technology for transition/integration or sustainment purposes to include dedicated funding.

b. Identify the organization(s) and address/point of contact to which project funds, once approved, should be forwarded for management/execution of technology proposal.

8. Appendix (4 pages)

The proposer may include a 4-page diagram, appendix, photograph, or other visual aid, not included in the body page count, to further describe the proposed RDT&E project and its deliverables, demonstrate understanding of the domain and the place the technology will have in it, or other illustrative facts. This appendix is meant as a visual aid or place for tables or lists, not as additional room for the text of the proposal.