



Welcome
The Distributed Analytics & Information Science
International Technology Alliance

Opportunity Day

ARL [dstl]



Agenda

0900 - 0915	Welcome <i>Dr. John Pellegrino and Mrs. Helen Carlton</i>
0915 - 1000	Global Objectives & Vision of ITA <i>Dr. John Pellegrino and Mrs. Helen Carlton</i>
1000 - 1030	Technical Area 1 Presentation <i>Dr. Ananthram Swami and Dr. Chris Williams</i>
1030 - 1100	Break
1100 - 1130	Technical Area 2 Presentation <i>Mr. Gavin Pearson and Dr. Tien Pham</i>
1130 - 1215	Business Information <i>Ms. Patricia Fox and Ms. Sarah Fitzgerald</i>
1215 - 1300	Networking Lunch
1300 - 1400	Reconvene Plenary Questions and Answers Final Wrap Up <i>Dr. John Pellegrino and Mrs. Helen Carlton</i>
1400 - 1700	Technical and Business Meetings (Sign Up Required)



Today's Opportunity Day Meeting

Describe the DAIS ITA opportunity to:

- **Encourage dialogue & interchange on the Program Announcement**
- **Address both proprietary & non-proprietary questions**
- **Encourage team formation**

Agenda:

- **Overview**
- **Technical Area 1**
- **Technical Area 2**
- **Business Information**
- **Questions & Answers**
- **Technical & Business One on One sessions**

The DAIS ITA is a flagship program for both the US & UK Governments



Reminder

- **NOTHING** said during the Opportunity Day meetings changes the PA
- Any conflict between what is said today & the PA will be resolved **in favor of the PA**
- Any changes to the PA will be issued as an **amendment to the PA posted in grants.gov**



- **An International Technology Alliance in Network & Information Science was initiated in 2006**
- **Coalition operations increasingly prevalent & complex → technologies to support dynamic coalitions are vital**
- **The Governments strongly believe that a joint collaborative approach by diverse multi-disciplinary researchers is required**
- **The DAIS ITA is intended to create a collaborative environment to advance the state-of-the-art**



Distributed Analytics & Information Sciences (DAIS) ITA

A Collaborative Venture between
UK Dstl, US ARL, Academia, & Industry
to advance the theoretical foundations
of coalition operations

DAIS ITA

Develop fundamental underpinnings to enable:

- **Adaptive, goal-driven, semantically-aware, distributed analytics for situational understanding in coalitions**
- **Adaptive context-aware coalition information systems**
- **Rapid & secure formation of ad hoc teams for dynamic coalitions with multiple partners**
- **Flexible & secure sharing of information distributed amongst multiple disparate teams**



Strategy & Key Attributes

- **Alliance** of Government, Academia, & Industry in the US & UK to advance distributed analytics & information science
- **Collaboration** between Government & Consortium integral to success
- Emphasis on developing **theoretical underpinnings** in the Basic Research Component
- Integrated multi-disciplinary research program **substantially advancing the state of the art**
- **Rapid transition of research results** to significantly improve coalition forces in the Technology Transition Component



- **Joint study** of interrelated aspects of DAIS
 - **Dynamic** adaptation of **secure, resilient context-aware** information systems
 - **Distributed integration & exploitation** of coalition data & information across **heterogeneous** information infrastructures
 - Derivation of situational understanding of complex situations by **human user synergistically supported by machines**



Coalition Needs

Coalition operations are increasingly prevalent & complex

Dynamic Coalitions:

- **Rapidly forming teams with a number of different partners**
- **Adapting to changing missions, tempo, mobility, environment, & membership**
- **Teams with different cultures, policies, systems, networks, & technologies to achieve common goals**
- **Future conflicts will occur in congested, contested, connected, & constrained battlespace**



Challenges:

- **Ad hoc coalition teams**
- **Distributed operations**
- **Resource-constrained**
- **Data complexity**
- **Heterogeneity**
- **Dynamics**
- **Understanding complex situations**



Technical Areas (TAs)

Interrelated Technical Areas to be jointly studied:

TA1: Dynamic, Secure Coalition Information Infrastructures (DSCII):

- **Content-based Software Defined Networking**
- **Policy-Based Secure Coalition Information Infrastructures**
- **Composability, Positioning, & Adaptive Distributed Data Services**

TA2: Coalition Distributed Analytics & Situational Understanding (CDASU):

- **Modeling and Interaction for Situation Understanding**
- **Dynamic Context-aware Gathering & Information Processing Services**
- **Distributed Processing & Analytics**



Technical Areas Described in the Program Announcement (PA)

- The PA highlights **required topics** to be addressed & some **suggested topics** & issues for consideration
- Based on available resources **it is not expected that Offerors address all suggested topics**
- The research shall be **balanced with appropriate depth & breadth** across the two TAs
- Rather than being definitive or exhaustive, the suggested PA topics **should be understood as suggestions** and issues for consideration
- Indeed, it is expected that **competitive Whitepapers & Proposals will contain other innovative topics** and approaches, and may identify other gaps
- However, all proposed **research must fit together coherently**
- Offerors must carefully choose research topics to **ensure a critical mass of researchers** addressing the challenges proposed



Collaboration

Creating an Alliance (Governments & Consortium) to:

- **Facilitate a close collaborative relationship between academia, industry, & government in both countries**
- **Enable deep & persistent collaborations to enhance innovation**
- **Exploit multi-disciplinary advances that arise from staff rotation & exchange**
- **Supported by an environment that promotes collaborative research & management**



Collaboration is integral to the success of the DAIS ITA

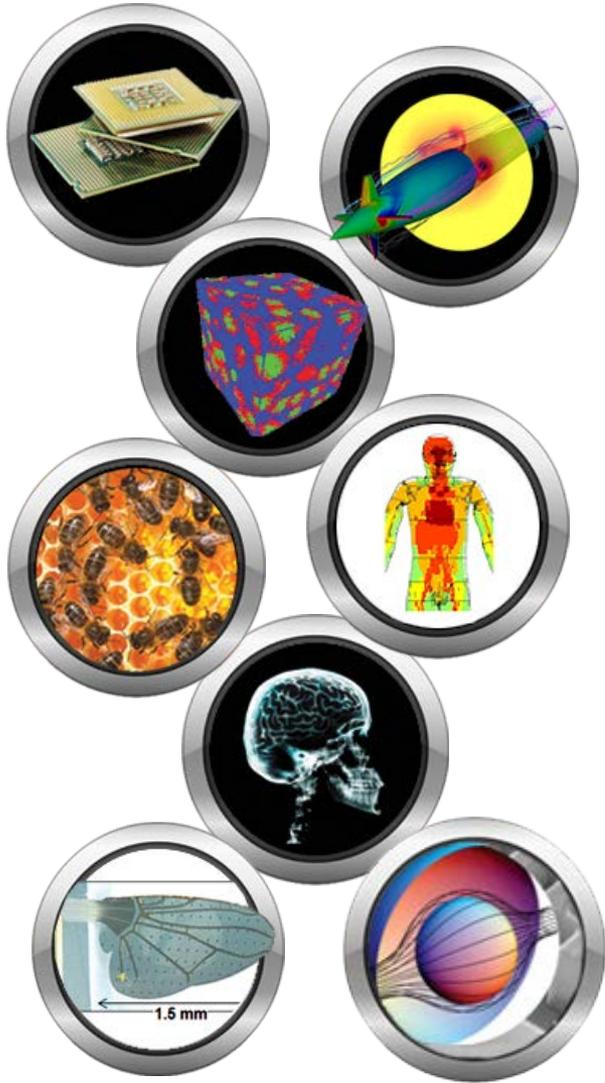


Collaborative Opportunities

- **The Consortium will work collaboratively with the internal research programs of both US ARL & UK Dstl to identify areas where joint efforts are beneficial**
- **The Consortium will work with US ARL & UK Dstl to identify where joint research with ARL- and Dstl-led collaborative ventures can advance the state-of-the-art**
- **Collaborative research, collaboration links, & transition opportunities will be jointly pursued through**
 - **Continuous collaboration, technical exchanges, site visits, & staff rotations**
 - **Mutual participation in program formulation, research, & technical reviews**



U.S. Army Research Laboratory (ARL)



Vision

The Nation's Premier Laboratory for Land Forces

Mission

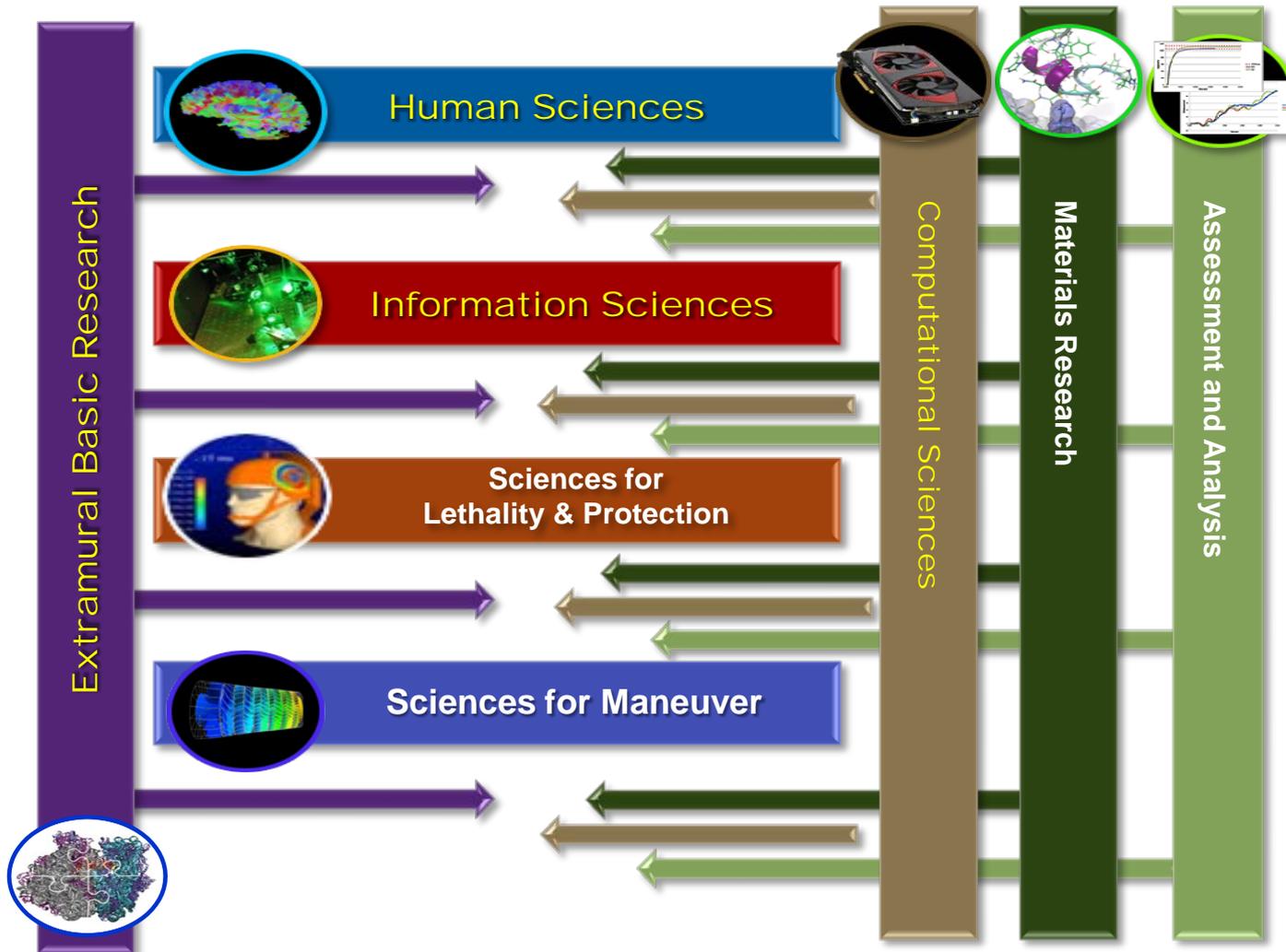
DISCOVER, INNOVATE, & TRANSITION
Science & Technology to ensure dominant strategic land power

Making today's Army & the next Army obsolete



ARL Science & Technology Campaigns

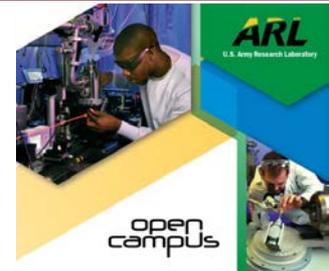
Creates new foundations for disruptive technologies & solving formerly unsolvable problems



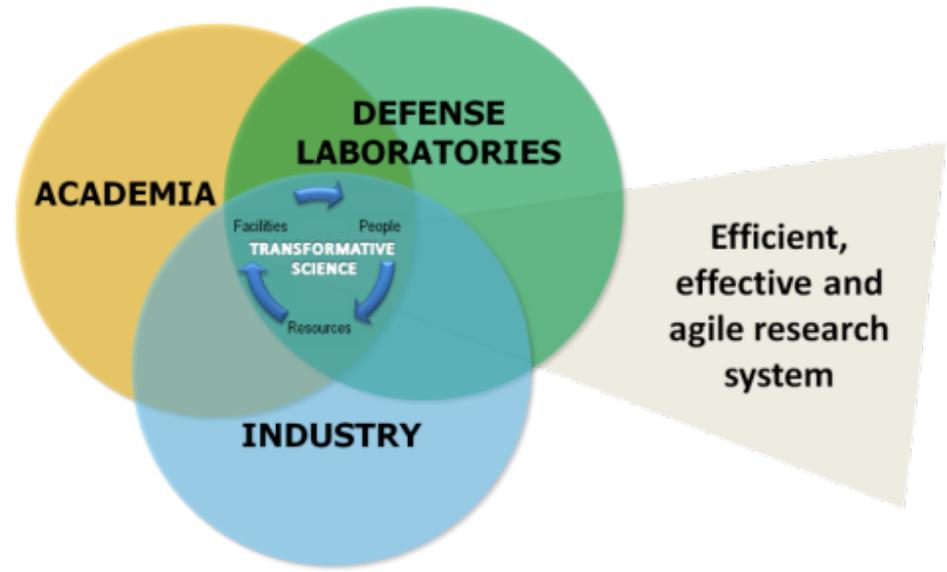


ARL Open Campus Initiative

Open Campus Business Model



Responding to the National Security Challenges of the 21st Century



Expanding & Developing Partnerships

Network Science Collaborative Technology Alliance (CTA)

Understanding complex multi-
genre networks → Interactions
& interdependencies of
dissimilar networks



Cyber Collaborative Research Alliance (CRA)

Fundamental understanding
of cyber phenomena → Risk,
detection, agility,
psycho-social effects



Cognition & Neuroergonomics CTA

Soldier-system performance →
Understanding Soldier function/
behavior to optimize information
transfer, identify mental processes &
individual differences that impact
decision making

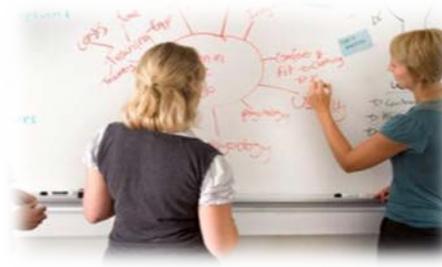


Purpose: To maximise the impact of science and technology for UK defence and security

Role:



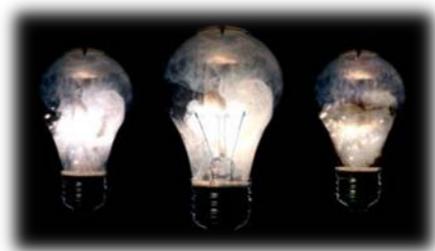
Supply sensitive and specialist services



Provide advice, analysis and assurance



Lead formulation, design and delivery of research programme



Manage and exploit knowledge



Act as a trusted interface



Champion and develop S&T skills



DstI Capabilities



ANALYSIS



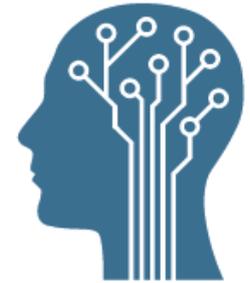
SYSTEMS



WEAPONS



C4ISR



HUMAN
CAPABILITY



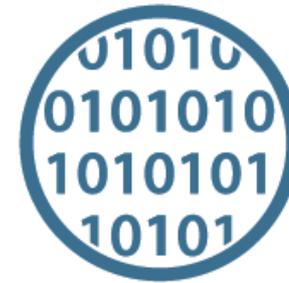
COUNTER-TERRORISM
& SECURITY



CBR



INTEGRATED
SURVIVABILITY



CYBER



Dstl Science Strategy: Headline Trends

Democratized innovation

Globalised R&D
...monopoly on knowledge is weakening.

Widespread computational power.

Innovation may occur from unexpected or unfamiliar places

Our dependence on information will grow

Growing info-structure...Growing inter-connectedness
More data & smarter analytics...Better control & optimisation
Increased dependence...greater vulnerability

Comms
Big data
Cyber

The Humans' role will remain central but change

Human-and-military productivity increases
Decision-making shifts towards machines
Span of human control increases

Unmanned systems
Human enhancement
Social & behavioural sciences
Medical
Autonomy, Artificial Intelligence

Distributed infrastructures will build the 21st century

Distributed grids/networks for info,
Communications, energy etc
Span of human control increases

Nanosystems
Synthetic Biology
Advanced materials & manufacturing
Energy technologies
Environmental technologies

The science of the bizarre may disrupt us

Novel, contentious, even bizarre developments may surprise and disrupt us

Quantum technologies
Directed energy & novel weapons
Strategic technologies
Use of the space environment



DstI Related Programs

University Defence Research Collaboration (UDRC) for Signal Processing

- **Signal Detection in Multi-input Networks**
- **Time-series/high-volume Signal Detection**
- **Signal processing in novel computation architectures**

Defence and Security
Data Science Centre
for Doctoral Training (CDT)
in partnership with
Turing Institute



Transition

Rapidly transitioning the research results to significantly improve coalition operations:

- **Exploit advances in the state-of-the-art in distributed analytics & information science**
- **Cover the full breadth of DAIS ITA research**
- **Involve a broad set of supply networks**
- **Impact both commercial & defense sectors in both countries**

**Transitions executed & funded through
US & UK transition instruments**



Summary

The DAIS ITA is a flagship program for both the US & UK Governments

- **We solicit the most creative, innovative, & flexible approaches to solve pressing research gaps in DAIS for coalition operations.**
- **Collaboration is integral to success of the program**
- **Emphasis on developing theoretical underpinnings to substantially advancing the state of the art**
- **Leading to the rapid transition of research results to significantly improve coalition forces**



Technical Area 1: Dynamic, Secure Coalition Information Infrastructures (DSCII)

The screenshot shows a web application interface with a yellowish-green theme. It includes a 'Database Settings' section with fields for 'Host', 'User', 'Password', and 'Database Name'. Below this is a table with columns for 'Database', 'Folders', 'Themes', 'Profile', and 'Web Value'. The table contains several rows of data, including 'web.app.server.host', 'web.app.server.port', and 'web.net.kernel.host'.

Database	Folders	Themes	Profile	Web Value
	Key			
web.app.server.host				inla
web.app.server.port				8080
web.net.kernel.host				2005



Technical Area 1: Dynamic, Secure Coalition Information Infrastructures (DSCII)

Fundamental underpinnings for enabling distributed, dynamic, secure coalition communication / information infrastructures that support distributed analytics to derive situational understanding

Key Challenges:

- **Assets at the tactical edge are disadvantaged by resource constraints**
- **Tactical coalition operations are often very dynamic & assets will be heterogeneous**
- **Nodes may change roles & hence the changes in services they offer or consume must adapt to changes in the environment**
- **Warfighters at the tactical edge could be deluged in data**
- **Appropriate data analytics & delivery mechanisms must cope with both physical & cognitive overload**



Technical Area 1: Dynamic, Secure Coalition Information Infrastructures (DSCII)

Coalition Needs:

- **Techniques for dynamic, self-configuring services that build services “on-demand,” taking into account changing mission needs, context & resource constraints**
- **Protecting information and assets**
- **Information assurance across heterogeneous networks with varying degrees of trust**
- **Operations at the tactical edge require effective protection & management of integrity & availability**

Topics:

- A. **Content-based Software Defined Networking**
- B. **Policy-Based Secure Coalition Information Infrastructures**
- C. **Composability, Positioning, & Adaptive Distributed Data Services**

The ability to flexibly and securely share and process data and information distributed amongst multiple disparate ad hoc teams, and perform distributed analytics, are critical.



Technical Area 1A:

Content-based Software Defined Networking (SDN)

Goals:

- Principled approaches to ease complexity of dynamic network management
- Ability to discover, assess, & process distributed information sources so that networks are context & content-aware, and not independent, data-agnostic bit pipes
- Low-complexity agile approaches for establishing, controlling, & securing complex disparate coalition information infrastructure arrangements
- Underpinning knowledge leading to principled methods that enable the trade between centralized & distributed control planes, & optimal policies for creation, management, & communication between control planes

Key Challenges:

- Coping with limited knowledge of topology, heterogeneity of protocols & policies, differing time-scales, security concerns, decentralized distributed operations, & latency between the controller & the controlled assets
- Decentralized control of disrupted networks under adverse conditions



Technical Area 1A: Content-based Software Defined Networking (SDN)

Research Issues:

- A1: Control Plane Configuration Across Coalition Networks **[REQUIRED]: Software-defined information-centric networking that supports secure coalition operations via logically distributed & decentralized control plane architectures across heterogeneous networks**
- A2: CBN-enabled Network Management **[SUGGESTED]: Abstractions, models, mathematical frameworks, & tools for content-based networking (CBN) that enable discovery of, access to, & processing of information sources in environments with highly variable tempo**
- A3: Measurement & Control **[SUGGESTED]: Appropriate definitions of network state & approaches, algorithms & tools to infer network state & topology/connectivity, & development of appropriate (state) consistency models & trust models**



Technical Area 1B: Policy-Based Secure Coalition Information Infrastructures

Goals:

- **Information processing in support of collaborative coalition decision making requires methods to provably show that content information and services are only used as agreed by coalition policies**
- **Analytical frameworks, simulation techniques, & experimental methods that can assess the effectiveness of the security mechanisms, together with its impact on decision making in a complex dynamic hostile environment**
- **This security analysis should cover scalability issues, security proofs, & security tradeoffs under a variety of network and user constraints**

Key Challenges:

- **Policy mechanisms must ensure that the required level of security is achieved without reliance on centralized security services**
- **Security must be maintained under significant risk of compromise**



Technical Area 1B: Policy-Based Secure Coalition Information Infrastructures

Research Issues:

- B1: Dynamic Policy-Based Autonomous Management **[REQUIRED]:**
of both coalition information & infrastructural services that dynamically adjust to mission changes, network dynamics & policy changes
- B2: Policy Analytics **[SUGGESTED]:**
Foundational techniques to model, analyze & formally verify policy managed secure adaptive coalition information infrastructures
- B3: Security for Distributed Information Services **[SUGGESTED]:**
Develop fundamental models & mathematics to describe key aspects of Information Assurance (& their impact on each other), & develop foundational techniques for balancing & integrating security features
- B4: Security Metrics **[SUGGESTED]:** **Lack of a set of adequate, sound & underpinning set of security metrics hampers effective quantification of security, understanding of fundamental limits & tradeoffs in the design of security countermeasures, choice of security architectures, & optimization of security in the design & operation of information technology infrastructures**



Technical Area 1C: Composability, Positioning, & Adaptive Distributed Data Services

Goals:

- **The ability to fight through in a degraded dynamic networking environment requires composability & positioning of distributed coalition data & information services for & on disadvantaged nodes at the tactical edge**
- **Data and information services of interest include aggregation, summarization, fusion, computing, and other services**
- **Composition of services will be goal-driven, based on the (dynamic) mission**

Key Challenges:

- **The distributed composition & federation of services across the coalition will be constrained by policies, security issues & network state, & these constraints will impact the functionality of the composed service**
- **The problem of composability of services is a joint information processing and networking problem**
- **There is a strong temporal component due to the network dynamics & changing nature of the tasks as well as with underlying information in the network which requires any solution to be dynamic & evolve over time**



Technical Area 1C: Composability, Positioning, & Adaptive Distributed Data Services

Research Issues:

- C1: Composability of Distributed Coalition Services **[REQUIRED]: Fundamental understanding of the composability of distributed services to support coalition information processing in dynamic environments with principled approaches for building composite information infrastructures**
- C2: Positioning of Services **[SUGGESTED]: Distributed methods to position, manage, & secure information services across dynamic heterogeneous coalition networks to support efficient, resilient, & distributed/collaborative decision making**
- C3: Adaptive Data Service Negotiation **[SUGGESTED]: To provably maintain, & provide assurance of, coalition security policies in resource-constrained & distributed environments for both the services to be shared and the data to be exchanged or processed**



Research in TA1 must be performed in the context of TA2 & must fit coherently together

Examples of Research Linkages:

- **Dynamic policy-based management affects how the distributed coalition services are dynamically composed based on the coalition resources available that best match the mission tasks**
- **In order to optimize the matching of available distributed sensor, data, & information resources based on user's task needs, the underlying coalition network infrastructures must adapt & provide context-aware composition of coalition services**



Technical Area 1 Summary

Fundamental underpinnings for enabling distributed, dynamic, secure coalition communication / information infrastructures that support distributed analytics to derive situational understanding



Agenda

0900 - 0915	Welcome <i>Dr. John Pellegrino and Mrs. Helen Carlton</i>
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Technical Area 2: Coalition Distributed Analytics & Situational Understanding (CDASU)

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Database	Folders	Themes	Profile	Web	Value
	Key				in/ta
web_app.server	host				0050
web_app.server	port				2005
web.net.kernel	host				0050



Technical Area 2: Coalition Distributed Analytics & Situational Understanding (CDASU)

Fundamental underpinnings for enabling distributed analytics and deriving situational understanding for distributed coalition forces operating at the tactical edge

Key Challenges:

- **Coalitions operate in Complex Situations:** Need to understand, predict and adapt to complex and dynamic multi-actor environments.
- **High tempo & time sensitivity:** The tactical environment is fast moving and subject to unexpected changes.
- **Data volume & complexity:** Need to exploit the volume and complexity of information distributed across heterogeneous Coalition information systems.
- **Human Cognitive Load:** Technical systems need to be aligned with human needs and capabilities, and support human understanding.
- **Heterogeneity:** Need to bring together information across a multiple heterogeneous domains



Technical Area 2: Coalition Distributed Analytics & Situational Understanding (CDASU)

Coalition Needs:

- **Techniques, algorithms and frameworks to enable dynamic, distributed analytics and models for situational understanding to enhance decision making for coalition operations at the tactical edge**
- **Models of the mutability of complex adaptive human systems**
- **Matching of available coalition assets that are relevant to mission needs**
- **Context-aware distributed and integrated fusion for situational understanding**

Topics:

- A. Modeling & Interaction for Situation Understanding**
- B. Dynamic Context-aware Gathering & Information Processing Services**
- C. Distributed Processing & Analytics**

Emphasis on distributed analytics on Coalition networks and situational understanding for dynamic and complex operations



Technical Area 2A: Modeling & Interaction for Situation Understanding

Goals:

- **Formal representations enabling Coalition users to understand the diverse and dynamic range of complex situations presented at the tactical edge**
- **Knowledge underpinning intuitive interaction techniques appropriate for deployed Coalition operations where the vast majority of users are generalists, and operations are highly dynamic and temporally challenging**
- **Characterize and model the Coalition users' capabilities, context and information needs**

Key Challenges:

- **How to represent and model complex adaptive multi-actor human systems**
- **How to make the best use of coalition human capabilities via interaction and visualization**



Technical Area 2A: Modeling & Interaction for Situation Understanding

Research Issues:

- A1: Modeling Mutability of Complex Adaptive Human Systems
[REQUIRED]: Model group and sub-group reactions to external and internal stimuli; model resilience/mutability and closeness to a tipping point; develop methods to recognize and discriminate particular behaviors of interest; characterise the trade-space
- A2: Problem and Goal-driven Coalition Information Processing
[SUGGESTED]: Research and develop efficient & effective methods to recognize problem type; robust approaches to match analytic methods and interaction approach to the problem type; develop efficient methods to decompose analytic and information goal into a set of prioritized and atomized queries
- A3: User Context, Interaction and Visualization **[SUGGESTED]: Model the tactical-edge users context; develop mechanisms and frameworks for intuitive iterative interactions to enable coalition users to collaboratively undertake visual analysis without need for exhaustive trials.**



Goals:

- **Formal theories and frameworks to dynamically match multiple, distributed, and competing coalition mission tasks to available information system resources**
- **Mechanisms and schema to enable the characterization and contextualization of distributed Coalition data sources and information services**
- **Robust and intuitive representations that are processable by humans and machines**

Key Challenges:

- **How to maximally exploit the heterogeneous data rich tactical edge for highly dynamic operations without cognitive overload.**
- **How to assign relevance, significance and/or value to information.**



Research Issues:

- B1: Optimising the Matching of Coalition Resources to Tasks
[REQUIRED]: Develop formal theories, frameworks and mechanisms to dynamically match operational tasks to information resources, *accounting for impact*, in a many-to-many temporally and spatially complicated and complex manner.
- B2: Contextualization of Disparate Coalition Data Sources and Services
[SUGGESTED]: Investigate information frameworks and schema that are flexible, extendable and configurable to contextualize disparate data sources and information services.
- B3: Intuitive Machine Processable Representations
[SUGGESTED]: Research into symbolic (e.g., text and diagrammatic) representations that are intuitive and machine-processable; focus on the feasibility of the representation dealing with richness and variability of encoded meaning within ad-hoc coalition teams



Technical Area 2C: Distributed Processing & Analytics

Goals:

- **Seamless task-based integration, modification, and extension of low-level and high-level information fusion mechanisms**
- **Principled approaches to the distributed analytics of the variety, veracity, volume, and velocity of Coalition data and information.**
- **Mechanism enabling analytics across dynamic, heterogeneous and resource constrained Coalition information infrastructures**

Key Challenges:

- **How to effectively exploit relevant information at the data rich tactical edge**
- **How to adapt & extend enterprise-based approaches for analytics to distributed Coalition analytics and infrastructures**



Technical Area 2C: Distributed Processing & Analytics

Research Issues:

- C1: Distributed and Integrated Fusion for Situation Understanding **[REQUIRED]: Develop formal theories, techniques and frameworks to enable multi-level integrated fusion of disparate information sources in context of decision support objectives.**
- C2: Distributed Data Analytics in Coalition Environment **[SUGGESTED]: Research into assured distributed learning of distributed coalition data in near real time; aggregation and summarisation of large distributed volumes of heterogeneous information.**
- C3: Enabling Analytics of Distributed Coalition Data **[SUGGESTED]: Investigate robust enterprise-based and novel approaches addressing both distributing the analytics to the data sources and distributing data to analytic services with dynamic resource constrained coalition networks.**



Technical Area 2 Research Linkages

Research in TA2 must be performed
in the context of TA1 & must fit
coherently together

Examples of Research Linkages:

- **Dynamic policy-based management affects how the distributed coalition services are dynamically composed based on the coalition resources available that best match the mission tasks**
- **In order to optimize the matching of available distributed sensor, data, & information resources based on user's task needs, the underlying coalition network infrastructures must adapt & provide context-aware composition of coalition services**



Technical Area 2 Summary

Fundamental underpinnings for enabling distributed analytics and deriving situational understanding for distributed coalition forces operating at the tactical edge

Model Complex Adaptive Systems

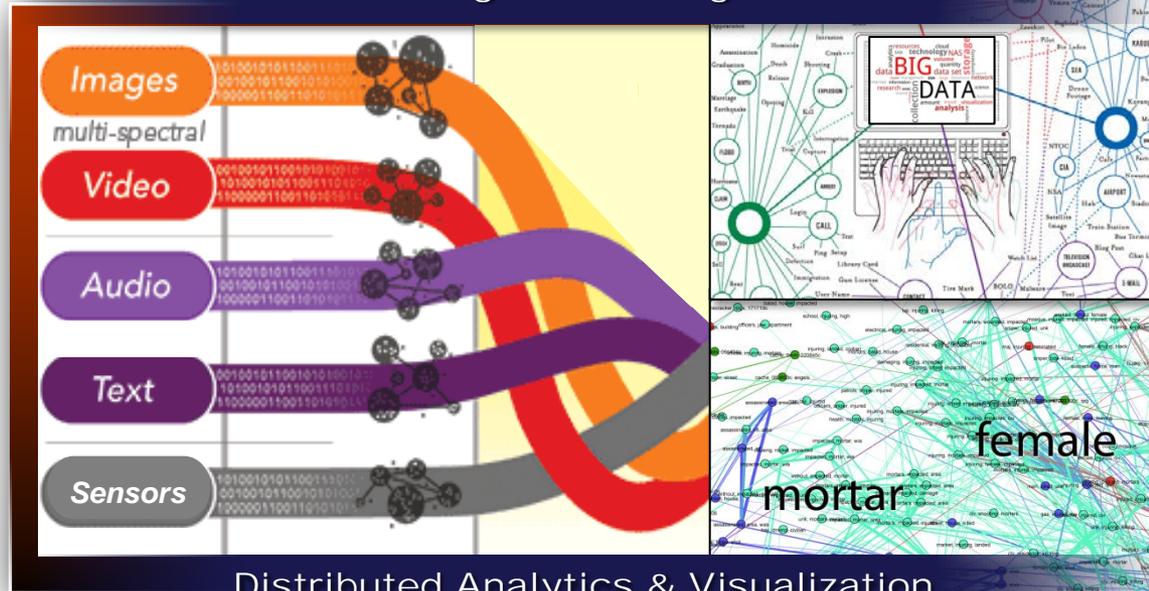
Derive User Context and Information Goals



Enable Situational Understanding in Complex Operations



Low-level & High-level Integrated Fusion



Contextualize Disparate Coalition Data Sources

Optimize Distributed Data Sources & Services relevant to Mission Tasks

Distributed Analytics & Visualization



**Business Information
Program Announcement (PA)
for
Distributed Analytics and
Information Science
International Technology Alliance
(DAIS ITA)
W911NF-15-R-0003**

The screenshot shows a web application interface with several panels. The top panel is titled 'Database Settings' and contains fields for 'Host', 'Port', 'Username', and 'Password'. Below this is a 'Database Settings' section with a 'Test' button. The bottom panel is titled 'DBS Performance (ms)' and contains a table with columns for 'Database', 'Folders', 'Themes', 'Profile', and 'Web'. The table has a 'Key' column and a 'Value' column.

Database	Folders	Themes	Profile	Web	Value
Key					
web_app.server.host					inla
web_app.server.port					8080
web_app.kernel.host					2015
web_app.kernel.port					8060



Business Offices

There are **two business offices** involved in issuing this PA and establishing the DAIS ITA:

- **US** – ACC-APG, RTP Division (*Patricia Fox*)
- **UK** – Dstl, Commercial Services (*Sarah Fitzgerald*)



REMINDER!

- **NOTHING** said during the Opportunity Day meetings changes the PA.
- Any conflict between what is said today and the PA will be resolved **in favor of the PA.**
- Any changes to the PA will be issued as an **amendment to the PA** posted in **grants.gov.**



Opportunity Days

- Opportunity Days are being held to encourage *dialogue, interchange and teaming.*
- The same presentations will be given in the US and UK.
- Presentations and the answers to non-proprietary questions posed at the Opportunity Days will be posted on the DAIS ITA Program website.



Questions

- **ALL** questions must be submitted to the website by **1 March 2015** in order to ensure an answer is provided prior to the due date for Whitepaper submissions.



Award Instruments

- As a result of this PA, **ONE** offeror will be selected for award and that offeror will receive **ALL** three award instruments!



Three Award Instruments

- **Two Technology Investment Agreements (TIAs)** *(under the authority of 10 U.S.C. 2371, in accordance with 32 CFR PART 37) for:*
 - **TIA-1** for the Basic Research Component *(US/UK funded)*
 - **TIA-2** for the Technology Transition Component *(for US and US led joint US/UK transition opportunities)*
- **UK DAIS ITA Transition Contract** *(specifically for UK and UK led joint US/UK transition opportunities) using appropriate DEFCON based agreement*



Consortium Requirements

- In order to respond to this PA, offerors are **REQUIRED** to form an integrated **US-UK Consortium** of Industry and Academia with an **equitable work-share** between the US and UK Participants.
- **Lead Industrial Partner (LIP)**, is defined as a US or UK industrial organization with existing operations in both the US and UK sufficient to support research and transitions in both countries.



Consortium Requirements

- **Consortium Members are required to have operations in either the **US or the UK**, or both nations and are expected to **substantially** participate in the **research** of the Basic Research Component.**
- **Consortium should consist of a relatively small number of organizations optimally sized with **no more than sixteen** members including the LIP.**



Three Award Instruments

- **TIA-1 and TIA-2** will be awarded to the single consortium selected to receive the awards under this PA
 - The Consortium does **NOT** have to be a legal entity.
- **UK DAIS ITA Transition Contract** will be awarded to the **UK arm of the LIP** of the Consortium selected for the awards



Export Controls

- The effort under TIA-1 is **basic research** in the **public domain** and **NOT** subject to export control laws of the US or the UK.
- Efforts under TIA-2 and the UK DAIS ITA Transition **may** involve export control considerations that will be addressed on a **case-by-case basis** as tasks are considered under these instruments.



Articles of Collaboration

- At time of proposal submission (*not with the Whitepaper*) offerors **MUST** submit a proposed **Articles of Collaboration (AoC)** that will govern various operational aspects of the consortium.
- The AoC must be **signed** by each proposed member of the Consortium
- A **model AoC** will be provided to all offerors invited to submit a proposal under this PA
- Any changes from the model AoC **MUST** be acceptable to the Governments in order for the offeror to be considered for award under this PA



Period and Place of Performance

- The period of performance for the awarded instruments will be a basic period of five years with an optional five-year extension period.
- All proposed work must be performed within the US or UK. *A Whitepaper or Proposal that includes work to be performed outside of the US or UK will NOT be eligible for award and therefore will NOT be evaluated.*



Profit/Fee

- Profit/Fee is **NOT** permitted on TIA-1 and TIA-2
(in accordance with 32 CFR 37.230)
- Profit/Fee **may** be permitted under the UK DAIS ITA Transition Contract; however Dstl seeks to **minimize** any profit/fee payable as part of the competitive process



Submission Process

- Process consists of a **Whitepaper** and **Proposal** stage
- **ONLY** the **most highly rated** Whitepapers will receive an Invitation to submit a proposal
- Offerors who do **NOT** receive an Invitation, **CANNOT** submit a proposal



Submission Process

- Offerors invited to submit proposals will receive **feedback** on their Whitepaper
- Offerors **NOT** invited to submit proposals will **NOT** receive feedback on their Whitepaper
- Offerors who have **NOT** submitted a Whitepaper **CANNOT** submit a proposal



Submission Process

- Whitepapers can **ONLY** be submitted **via email** to the email address listed in the PA
- Whitepapers submitted by any other means will **NOT** be evaluated or considered for award



Evaluation Process

- Whitepapers and Proposals received under this PA will be evaluated using **merit based, competitive procedures** including:
 - **Evaluation Factors** (*Separate/different factors for Whitepapers and Proposals*)
 - **Adjectival and Color rating system**
- Review Team of Scientists, managers and business specialists from **both the US and UK Governments**



Evaluation Process

- **PART II.E.1** of the PA includes the **identification and description** of the evaluation factors for both the Whitepaper and Proposal submissions
- **PART II.D.2** of the PA includes specific **content information** for both the Whitepaper and Proposal submissions

READ THIS INFORMATION CLOSELY!



Whitepaper Content

- **Project Summary/Abstract – 2 pages**
- **Research Program – 25 pages**
- **Collaboration, Program Management & Technology Transition – 5 pages**
- **Biographical Sketches – 1 page/individual**
- **Cost Summary Tables – 2 cost estimate tables**

NOTE: Pages in excess of these limitations will not be considered in the evaluation process!



Whitepaper Evaluation Criteria

- **Factors 1.a & 1.b: Scientific Merit & Relevance**
- **Factors 2.a & 2.b: Experience & Qualifications of Technical Staff**
- **Factor 3: Collaboration, Program Management & Technology Transition**



Proposal Evaluation Criteria

- **Factors 1.a & 1.b: Scientific Merit & Relevance**
- **Factors 2.a & 2.b: Experience & Qualifications of Technical Staff**
- **Factor 3: Collaboration and Program Management**
- **Factor 4: Technology Transition**
- **Factor 5: Cost**



Key Dates

EVENT

Questions via Website

Whitepapers due

Whitepaper Feedback

Proposals due

Award

DATE

1 March 2015

14 April 2015, 4AM

(local time in North
Carolina, USA)

June 2015

31 August 2015

May 2016



One on One Sessions

Four Sessions available:

- **Technical Area 1**
- **Technical Area 2**
- **Business Information**
- **Management, Collaboration and Transitions**

Sign Up at the registration table upon exiting the auditorium for lunch.

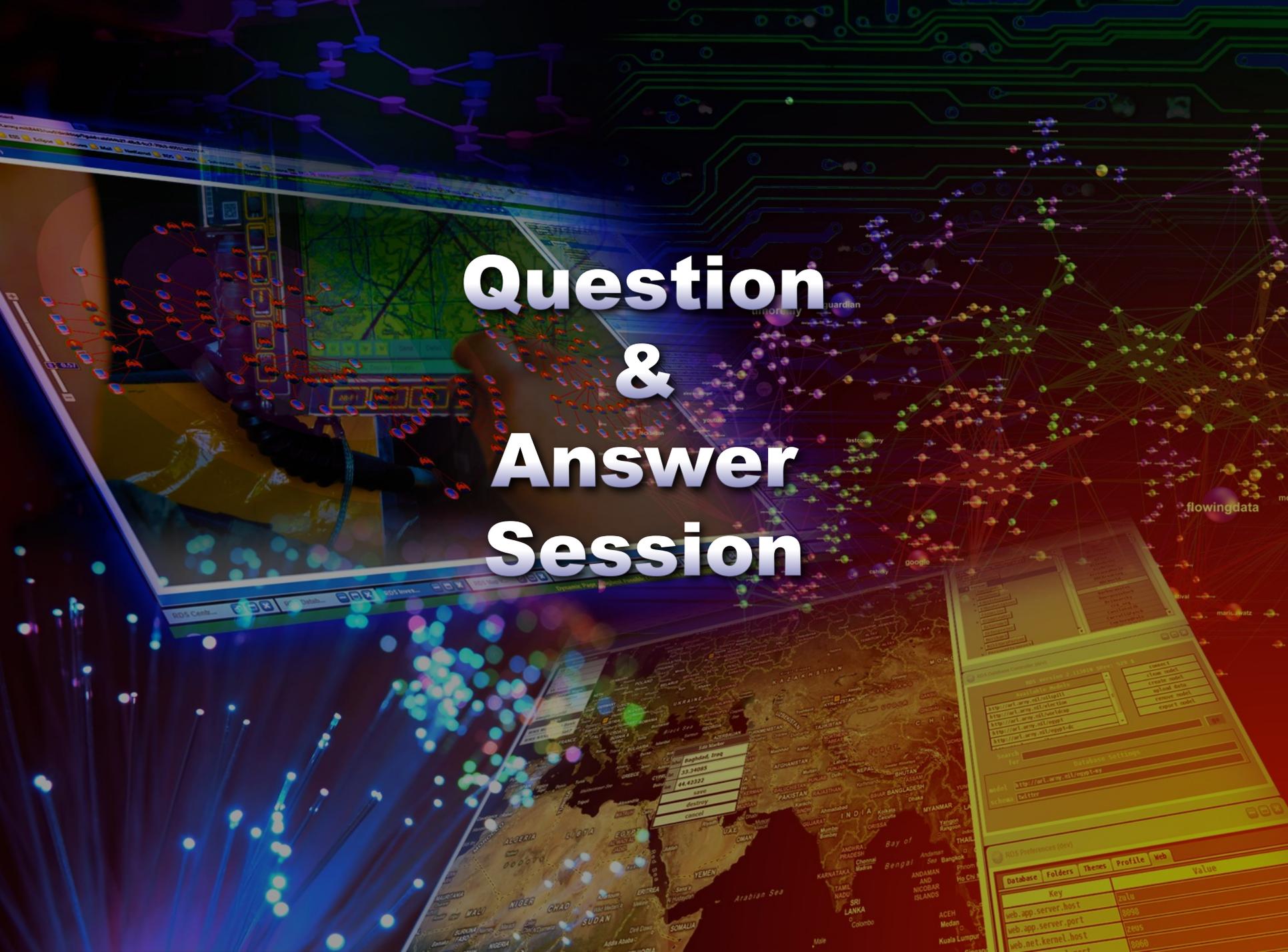
The Sign up sheets will only be available during the lunch period.



Agenda

0900 - 0915	Welcome <i>Dr. John Pellegrino and Mrs. Helen Carlton</i>
0915 - 1000	Global Objectives & Vision of ITA <i>Dr. John Pellegrino and Mrs. Helen Carlton</i>
1000 - 1030	Technical Area 1 Presentation <i>Dr. Ananthram Swami and Dr. Chris Williams</i>
1030 - 1100	Break
1100 - 1130	Technical Area 2 Presentation <i>Mr. Gavin Pearson and Dr. Tien Pham</i>
1130 - 1215	Business Information <i>Ms. Patricia Fox and Ms. Sarah Fitzgerald</i>
1215 - 1300	Networking Lunch (in the cafeteria)
1300 - 1400	Reconvene Plenary Questions and Answers Final Wrap Up <i>Dr. John Pellegrino and Mrs. Helen Carlton</i>
1400 - 1700	Technical and Business Meetings (Sign Up Required)

Question & Answer Session



Wrap-up



Database	Folders	Themes	Profile	Web	Value
	Key				value
web.app.server.host					localhost
web.app.server.port					8080
web.net.kernel.host					localhost
web.net.kernel.port					8080

City	Country	Population	Area
Baghdad	Iraq	23,340,000	44,427,722
Baghdad	Iraq	23,340,000	44,427,722

Thank You

