

the dawn of a new millennium...

DTIC IACs

Simulation Based Acquisition (SBA) Support

**Information
Analysis
Centers**

Presented by:

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Defense Technical Information Center

IAC Program Office

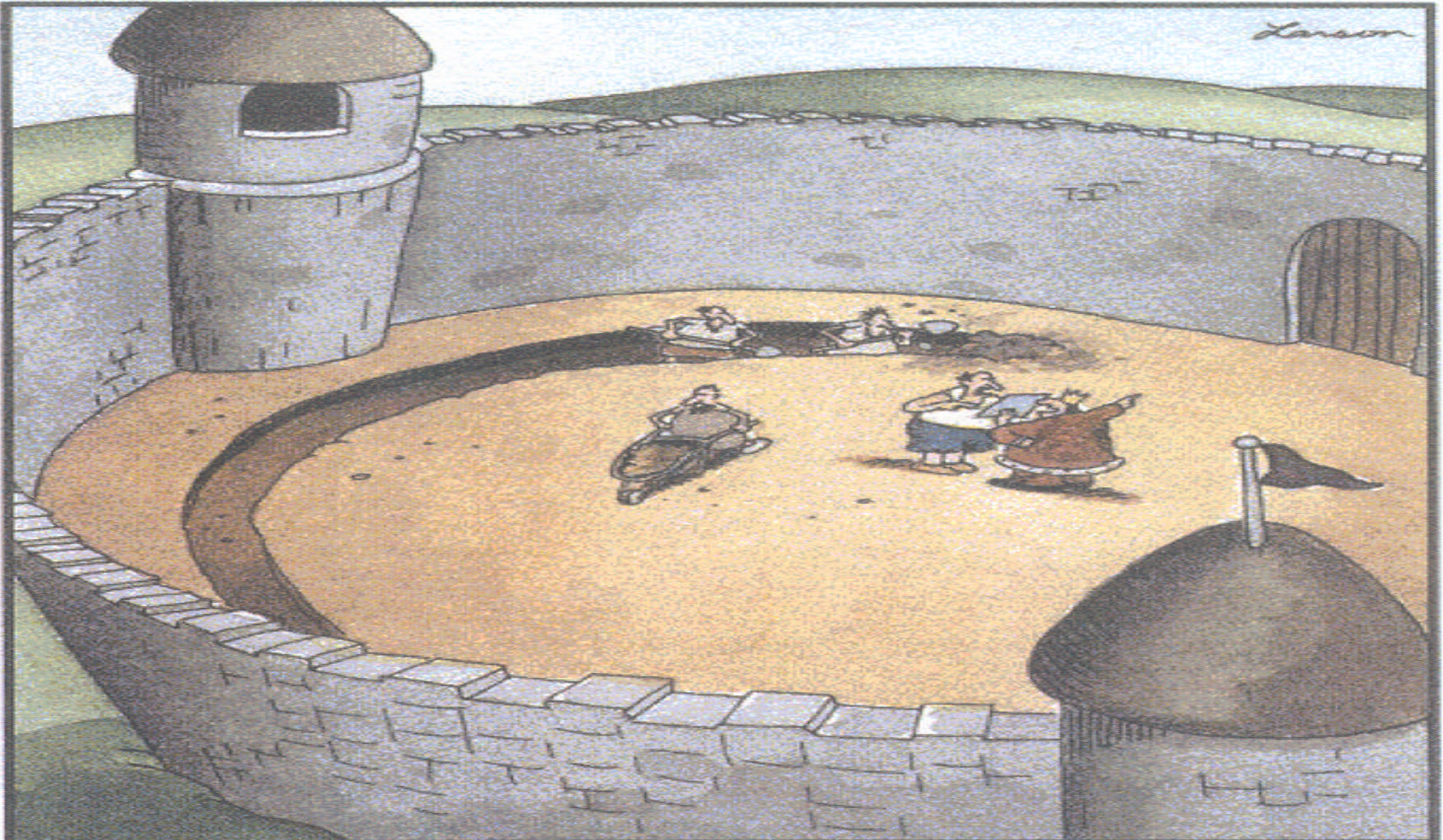
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Looking for Scientific/ Technical Information ?





Vision and Commitment



To provide quality information infrastructure that permits individual use and collaborative efforts by providing authorized access to information worldwide; to maintain a central repository of Defense information; and, working together, DTIC's staff is the momentum behind DTIC's technological advances.

Our Commitment to You. . .

*The **DTIC Code of Service** reflects our intention to make clear to you, our customers, the level of service you can normally expect from us. We want you to be completely satisfied with the service provided.*



What are IACs



- **Formal organizations chartered by DoD**
- **A value-added information exchange**
- **A central source of research, development, and testing information**
- **Our analytical services can contribute to the production of affordable systems**
- **Experts covering the full spectrum of Defense Science and Technology**



IAC Missions



- ◆ **Improve productivity of researchers, engineers, and program managers in the DoD research, development, and acquisition communities**
- ◆ **Promote standardization within specific technical areas**
- ◆ **Provide in-depth analysis services**
- ◆ **Create specialized technical information products**



DTIC Sponsored IACs



AMPTIAC	Advanced Materials and Processes Technology IAC
CBIAC	Chemical and Biological Defense IAC
CPIAC	Chemical Propulsion Information Agency
DACS	Data & Analysis Center for Software
HSIAC	Human System IAC
IATAC	Information Assurance Technology Analysis Center
IRAC	Infrared Analysis Center
MSIAC	Modeling and Simulation IAC
MTIAC	Manufacturing Technology IAC
NTIAC	Nondestructive Testing IAC
RAC	Reliability Analysis Center
SURVIAC	Survivability/Vulnerability IAC
WSTIAC	Weapon System Technology IAC



Service-sponsored IACs



APMIAC
CEIAC
CRSTIAC
CTIAC
DTRIAC
EIAC
HEIAC
SAVIAC
SMIAC

Airfields, Pavements, and Mobility IAC
Coastal Engineering Defense IAC
Cold Regions Science and Technology IAC
Concrete Technology IAC
Defense Threat Reduction IAC
Environmental IAC
Hydraulic Engineering IAC
Shock and Vibration IAC
Soil Mechanics IAC



IACs Support the Acquisition Life-cycle



IACs support the acquisition life-cycle from concept to operations

DoD 5000 Acquisition Model





IAC Support Throughout The Life Cycle



- ◆ **Scientific/Technical Information**
 - ◆ **Conceptual/research & Development**
 - ◆ **Successful Practices and Lessons Learned**
- ◆ **Activities**
 - ◆ **Technology Forecasts and Assessments**
 - ◆ **Concept Development ‘Wargames’**
 - ◆ **Concept Analysis**
 - ◆ **Joint and Service Experiment Support**

DoD 5000 Acquisition Model





IAC Support Throughout The Life Cycle



- ◆ **Scientific/Technical Information**
 - ◆ Return on Investment Information
 - ◆ Successful Practices & Lessons Learned
 - ◆ Commercial standards (e.g. factory data exchange standards, interface requirements to existing software or hardware, etc.)
- ◆ **Activities**
 - ◆ Provide Technology Forecasts & Assessments
 - ◆ Investigate commercial software (COTS) that may provide core capability for the 'to be' systems
 - ◆ Cost As an Independent Variable (CAIV) Studies
 - ◆ Provide Modeling and Simulation Support
 - ◆ Prototyping
 - ◆ Human Interaction with technology/Environment

DoD 5000 Acquisition Model





IAC Support Throughout The Life Cycle



- ◆ **Scientific/Technical Information**
 - ◆ **Reliability Studies**
- ◆ **Activities**
 - ◆ **Process Analysis**
 - ◆ **Independent Test Support**

DoD 5000 Acquisition Model





IAC Support Throughout The Life Cycle



- ◆ **Scientific/Technical Information**
 - ◆ **Reliability Information**
- ◆ **Activities**
 - ◆ **Support for Engineering Changes**
 - ◆ **Configuration Management**
 - ◆ **Reliability Studies**
 - ◆ **Human Systems/Environmental Studies**

DoD 5000 Acquisition Model





IAC Support for SBA





Advanced Materials and Processes Technology IAC



AMPTIAC

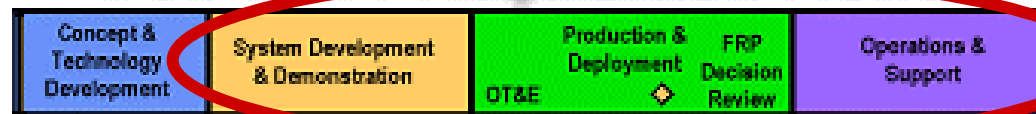
- CBIAC
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- DACS
- HSIAC
- IATAC
- IRAC
- MSIAC
- MTIAC
- NTIAC
- RAC
- SURVIAC
- WSTIAC

AMPTIAC



- ◆ MatPro Database
- ◆ Corrosion Predictive Modeling for Aging Aircraft - Critical Review & Technology Assessment
- ◆ Life Prediction and Performance Assurance of Structural Materials in Corrosive Environments

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Chemical Warfare and Chemical Biological Defense IAC



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**Chemical-Biological Weapons of
Mass Destruction:
Understanding the Problem.**



(Need more detail)

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Human Systems IAC



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Human Systems Information Analysis Center



- Evaluation of the B-2 engine repair facility and process.
- Cost-benefit analysis for the Army's Air Warrior Program (life support gear for aviators).

(Need more detail)

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Modeling and Simulation IAC



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Solutions

- Air Force Electronic Systems Command
 - Joint Synthetic Battlespace development
- Naval Air Systems Command
 - wake turbulence models for KC-135 and KC-10 aircraft.
- US Army Night Vision Lab
 - info on M&S of tactical night vision sensors.
- Joint Strike Fighter Program
 - M&S configuration management
- CIA
 - information on models that predict aspects of missile performance.

Services

Education

- ◆ Program Manager's Workshop
- ◆ T&E Tutorial
- ◆ Sim Support Plan Tutorial

Planning and Assessing

- ◆ Simulation Support Plans
- ◆ IV&V

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Manufacturing Technology IAC

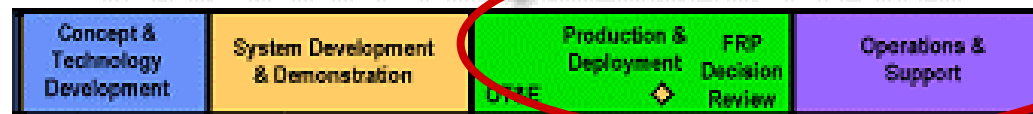


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- ◆ Manufacturing Process Flow for Patriot Advanced Capability (PAC-3) missile -- MTIAC developed a high level model of the manufacturing process flow at Communications and Power Industries (CPI) to support the manufacture of microwave power tubes.

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Nondestructive Testing IAC



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- Conducting a Technology Assessment on computer simulation of nondestructive inspection techniques
- Developing a program plan for Probability of Detection of Nondestructive Evaluation techniques and applications

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Reliability Analysis Center



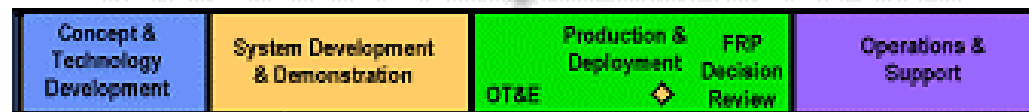
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◆ Waiting for Input

RAC



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Survivability/Vulnerability IAC

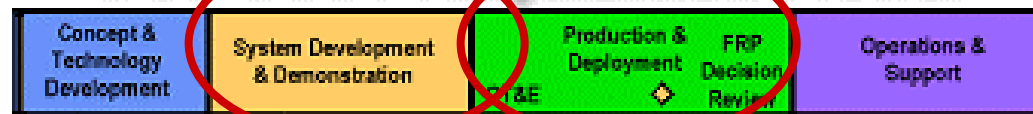


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- **A-10 Program**
 - analysis of armor required to improve survivability for the warfighter.
- **Joint Strike Fighter**
 - computer analysis of survivability tradeoffs.
- **DOT&E Live Fire Test**
 - Front-end simulation in support of live fire testing.

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Weapon System Technology Analysis Center



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- VV&A of the Genesis BAT Area denial (modeling of performance and characteristics of minefields)
- Modeling of the SWORD Interferometer (ground-base air defense radar)
- Air and Missile Defense Experiments and joint exercises.

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Obtaining IAC Services



Basic IAC Services

Available at little or no cost

Technical Area Tasks

Separated funded work efforts

Very flexible

Simple contracting process



Contact Information



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We are the answer people



- *Providing* easy access to essential, timely information.
 - *Solving* complex problems.
 - *Reducing* duplicated efforts.
 - *Identifying* and applying best practices.
 - *Saving* you time and money.
 - *Boosting* collaboration.
 - *Delivering* innovative solutions.
-
- We've made finding the right information, at the right time, fast and easy! See what we're doing now. Imagine what the IACs can do for you!



Questions?



Backups



Modeling and Simulation IAC



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MTIAC
NTIAC
RAC
SURVIAC
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- **Planning & Employing**
 - M&S Master Plans
 - Sim Support Plans
- **VV&A – Experts, SOAR**
- **On-site liaisons**
 - Hanscom AFB
 - Norfolk
 - Orlando
 - Wright-Patterson AFB
- **Education**
 - Acquisition M&S Workshop
 - RDA Tutorial
 - T&E Tutorial



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HELP DESK

M&S FAQs

M&S CALENDAR

M&S NEWS

M&S JOURNAL

M&S EDUCATION

M&S LINKS

MSRR

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DTIC

Special Interest Areas

Special Interest Areas (SIA) are a place for people interested in specific areas of M&S to exchange information.

- [Acquisition](#)
- [DoD M&S Master Plan Revision \(MSMP\)](#)
- [Experimentation](#)
- [Human and Organizational Behavior Modeling \(HOBM\)](#)
- [Impact Assessment \(IA\)](#)
- [M&S Needs](#)
- [MSRR Board of Directors](#)
- [Operations Other Than War \(OOTW\)](#)
- [Simulation Based Acquisition \(SBA\)](#)
- [Training](#)
- [Weapons of Mass Destruction \(WMD\)](#)

www.msiac.dmsso.mil



Summary



IACs provide:

- **Valued added information exchange among researchers, developers and warfighters**
- **Central source of research, development and testing information**
- **Program managers with affordable short- and long- term analytical services**
- **Access to the full spectrum of Defense S&T information**