Data & Analysis Center for Software

DACS Overview

http://iac.dtic.mil/dacs

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Information for the Defense Community DTIC®

Report Documentation Page

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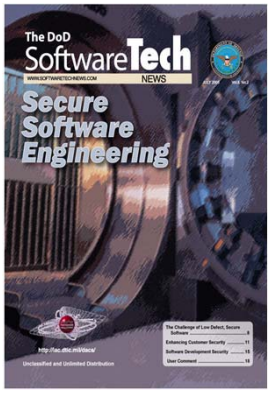
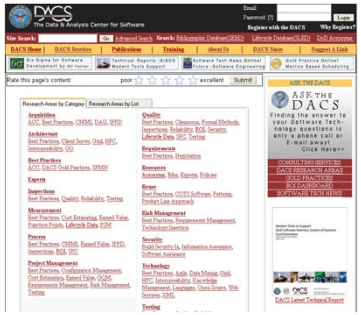
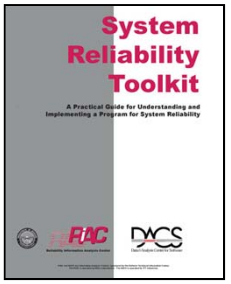
DACS Overview

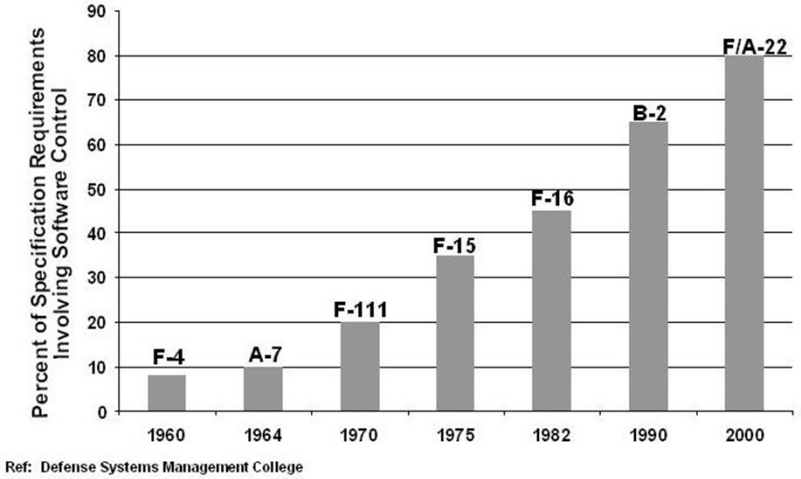
- The DACS technical area of focus is Software Technology and Software Engineering, in its broadest sense.
- Central distribution hub for the latest software technology information sources.
- Wide variety of Technical Services to support the R&D, development, testing, validation, and transitioning of Software Engineering technology.







DACS STINFO Addresses Current Software Challenges



Ref: Defense Systems Management College

System Characteristics
- **10-100 MLOC**
- **30-300 Ext. I/F**
- **Depth of Supplier Tier: 6-12**
- **20-200 Coordination Groups**

Future Combat Systems:
- **12,000 SoS Requirements - > 90,000**
- **50 Critical Technologies**
- **52 Complimentary Programs**
- **40 Million Lines of Code**

- **Software Context in 2008**
  - **Model Based Development Paradigm**
  - **Net Centric Integration of Existing Systems**
  - **COTS Integration**
  - **Systems of Systems**
  - **Ultra Large Systems**

DACS STINFO Addresses DoD Software Needs

- **Technology**
  - **Lifecycle Development**
  - **State of the Art**
  - **Trends**
- **Best Practices in Software Engineering**
- **Emerging Practices**
- **Acquisition Issues**
- **Software Project Management**

Customers

- JIEDDO
- AFRL
- DARPA
- ODUSD(A&T)
- AAMDC
- DDR&E
- NSWC
- USACE
- ONR
- MDA

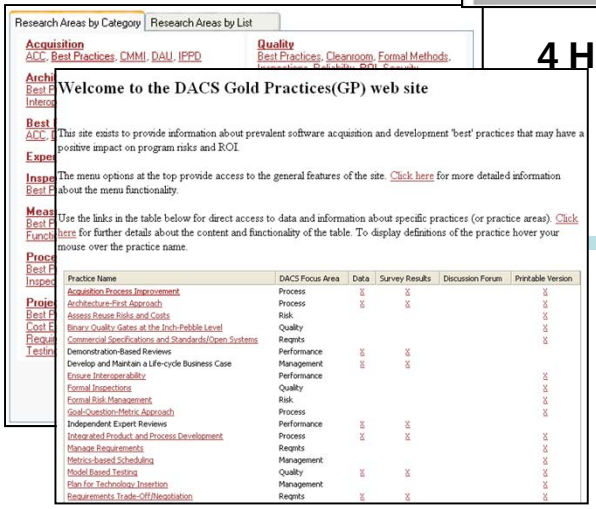
Classes of Users

- Developers
- Researchers
- Acquirers
- Managers

Rich Resources for Users from the DACS

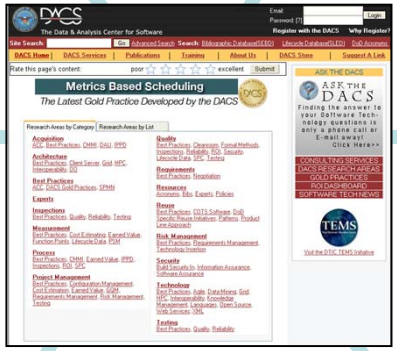
Hundreds of Resources

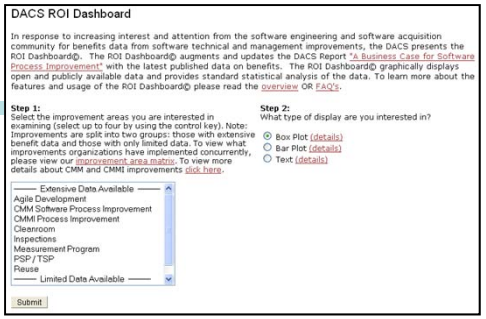
Download DACS Tech Journal



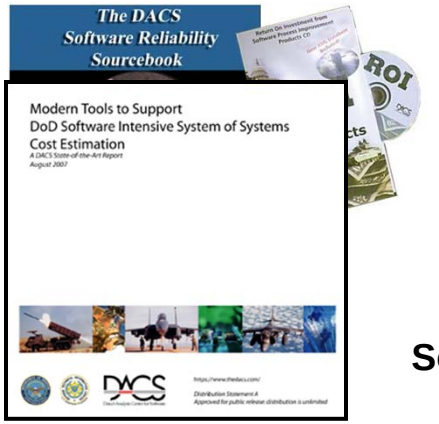
Gold Practices – Practical Guidance

4 Hours Free





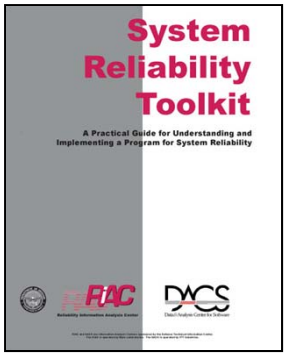
Benefits of SPI



Software & Web Development Online Training

Complete Reports	
Agile Software Development (Abstract and PDF)	A Business Case for Software Process Improvement REVISED (HTML and PDF)
A History of Software Measurement at Rome Laboratory (HTML)	A Review of Formal Methods (HTML)
A Review of Non-Ada to Ada Conversion (HTML)	A Study of Software Management: The State of Practice in the United States and Japan (HTML)
An Analysis of 2 Formal Methods: VDM and Z (HTML and PDF)	Analyzing Quantitative Data Through the Web (HTML)
Artificial Neural Networks Technology (HTML)	COTS Based Software Development and Integration (HTML and PDF)
Embedded Software Maintenance (Abstract and PDF)	Mining Software Engineering Data: A Survey (HTML and PDF)
Knowledge Management in Software Engineering (Abstract and PDF)	Software Tools for Knowledge Management (Abstract and PDF)
Modern Empirical Cost and Schedule Estimation Tools (HTML and PDF)	Object-Oriented Database Management Systems Revisted (HTML and PDF)
Present Value of Software Maintenance (HTML)	Rome Laboratory Research in Software Measurement (HTML)

Reports on Topics of Interest



Information for the Defense Community DTIC®

STINFO Resources of Interest to Software Acquisition Community

- Reports
  - System of Systems Cost Estimation
  - Software Reliability
  - ROI of Process Improvement
  - Gold Practices
    - Formal Risk Management
    - Standards/Open Systems
    - Manage Requirements
    - Metrics Based Scheduling
    - Track Earned Value
- Training
  - Software Affordability
  - On-Line Training

- Newsletters
  - IP and Software
  - Service Oriented Architectures
  - Open Source
  - Performance Results from CMMI
  - Measurement
  - many more…

DACS Expertise

Focus Areas

- Software Testing
- Software Quality
- Software Reliability
- Agile Development
- Software Architecture
- Process Improvement
- Measurement
- Cost Estimation
- Information Technology
- Software/IT Training
- Net Centric Operations
- Software Economic Analysis
- Information Fusion
- Software Producibility
- Software Intensive Systems Engineering
- Software Assurance
- Advanced Computing Architectures
- System Modeling and Simulation

Established Relationships with World Class Experts Provides State of the Art and Timely Scientific and Technical Information

ADA School, FCS, and Warfighter Support

Combat Architectures

- Supported Multiple Major Army Studies over 25 Years
- Supported Development of Requirements / JCIDS Documentation for Major Army Combat and C2 Systems
- Supported Organizational Design
- Support Future Army BMC4I Architecture / Concepts Design
- Performed Integrated Systems Analysis
- Performed Regional Coverage Analysis

FUTURE FORCE ARCHITECTS

Training Development

- Support Development of Training and Doctrinal Products:
  - Field Manuals
  - Graduate Level Training Courses
  - OIF Lessons Learned Database / Tracking
  - Training Plans and Support Packages
  - Scenario Generation for Multi-Echelon Training
- Web page design and implementation

FUTURE / CURRENT FORCE TRAINING PRODUCTS

Operational AMD Unit

- Support to 32d AAMDC and ADA Brigades / Battalions in:
  - Training, Operations, Personnel, Communications (JTIDS), and Logistics
  - Executed AMD Training -30 exercises per year at Drive Up System Training Facility
  - Contingency Operations
    - OIF (Deployed)
    - ONE (Deployed)
    - OEF
  - Provide Information Technology services

SUPPORTS THE WARFIGHTER

For More Information…

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