DOD INFOS EC
Education, Training, Awareness & Products (ETA&P)

Joan M. Pohly, DISA/IPMO, (703) 681-1346, pohlyj@ncr.disa.mil

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Approved for public release, distribution unlimited

### Supplementary Notes

### Abstract

### Subject Terms

### Document Classification
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### Limitation of Abstract
| unlimited |

### Number of Pages
| 56 |

**DoD INFOSEC Education, Training, Awareness & Products (ETA&P)**

**Joan M. Pohyl,**

**IATAC**
Information Assurance Technology Analysis Center
3190 Fairview Park Drive
Falls Church VA 22042

**Defense Technical Information Center**
DTIC-IA
8725 John J. Kingman Rd, Suite 944
Ft. Belvoir, VA 22060

**INFOSEC training**

**Unclassified**

**UNCLASSIFIED**

**UNCLASSIFIED**

None
Operations
Training & Awareness Mission

DOD Mission & Functions

Vital link in securing the information infrastructure

- Support ASD/C3I
- Facilitate development of standardized DOD-wide INFOSEC training
- Develop products for use in a comprehensive DOD INFOSEC awareness program
- Promote training & awareness products for use DOD-wide
- Promote development of curriculum to support an INFOSEC career field/professional program
- Influence national-level INFOSEC education, training and awareness
Champion products
Promote
Produce

Leverage INFOSEC ETAP forums
DOD (DII)
Federal/National (NII)
International (GII)

Rely on existing ETAP infrastructure
CINCs
Services
Agencies
Key Working Groups & Forums

Classified Community
- Security Policy Forum
  - Training and Professional Development Committee (TPDC)
  - INFOSEC Working Group (ISSWG) (IPMO chairs)
- NSTISSC
  - INFOSEC Education, Training and Awareness Issue Group
- MISSI Life Cycle Logistics Working Group

Unclassified Community
- NIST Computer Security Program Managers Forum
  - Federal Information Systems Security Educators Association (FISSEA)
- Association of Computing Machinery (ACM) (via NPS)
- National Colloquium for INFOSEC Education
- Army C2 Protect Training Working Group
DOD IA ETAPWG: Overview

Education, Training, Awareness and Professionalization Working Group

- ETAPWG Charter under ASD/C3I Information Assurance Group (IAG)
- Address IA/INFOSEC ETA issues on behalf of ASD/C3I

- CINC, Service and Agency membership
  - ETA providers
  - ETA program managers
- Purpose is to:
  - Identify gaps in instruction
  - Recommend/develop solutions
  - Determine champions for initiatives
  - Eliminate duplication of effort
  - Standardize what is being taught

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INFOSEC Training Facility (ITF)

DODIAET@ncr.disa.mil

- Provides capability for delivering INFOSEC courseware in NCR
  - 2 computer classrooms (1 PC; 1PC & UNIX)

- Validate content and pilot/evaluate courseware

- Supports non-IPMO developed courses
  - Operational Computer Security (ND225)(NSA)
  - INFOSEC Basics (ISSB)(formerly DODSI)
  - DII COE (DISA)
  - ARMS (DISA)

- Available to DOD and others
  - User provides instructor; ITF provides support @ no cost
  - Army requesting use as 2nd site for System Admin training
  - Navy using for training in NCR

- INFOSEC training to DISA/GOSC reservists on weekends
ETA Products: Current and On the Horizon
INFOSEC Post Graduate Education

- Joint IPMO/Navy/Navy Postgraduate School (NPS) initiative

- Goal: Infuse INFOSEC into appropriate curriculums at DOD degree granting institution

- NPS is joint institution: CINCs, Services, Agencies

- NPS lead development w/IPMO
  - Introduction to Computer Security (completed)
  - Management of Security in Information Systems (current)
  - Secure Systems (planned)
  - Network Security (planned)

- NPS taking lead to transfer course materials to DOD and private sector academic institutions
  - ACM (Association for Computing Machinery)
  - Other academic forums
INFOSEC Courseware

IPMO sponsored: no cost/low cost

Computer Based Training (Unclassified, DOS based 286)

- DOD CS 100: Introduction to Computer Systems Security
  - Targets unclassified environment (DOD version of NSA IN-170)
  - 8 hours

Platform Instruction (ITF or MTT)

- INFOSEC 101: INFOSEC for End Users (1 day)
- INFOSEC 300: INFOSEC for ISSMs & ISSOs (5 days)
- INFOSEC 315: DITSCAP (2 days)
- INFOSEC 310 Windows NT Security for SAs (5 days)

Training Materials (PowerPoint)

- INFOSEC 201: INFOSEC for Managers (web only)
- INFOSEC 205: Malicious Logic (web only)

Available at no cost via WWW or from DISA/IPMO upon request
DOD Information Technology Security Certification & Accreditation Process

- **IPMO role**
  - Develop DOD level modules; validate DOD-wide
  - Front end for Service/Agency detailed training
  - Awareness/literacy level
    - Overview of DITSCAP (.25 day)
      - initial Effort Required
      - Long Term Benefits
    - DITSCAP Task & Step Review (1.75 day)
      - Review DITSCAP process by phase
      - DITSCAP templates & “boilerplate”
      - Identify places to go for additional assistance
- **Audience**
  - Primary: ISSO, Mid-Management
  - Secondary:
    - Sr Management
    - Personnel w/ C&A as part of their job
- **Delivery**
  - Platform (available @ ITF)
  - Train-the-Trainer (w/Services/agencies)
  - Convert to interactive multimedia CBT (3 QTR FY98)
INFOSEC Courseware

On the Horizon

- IPMO: Designated Approving Authority (DAA)
  - Based on GSA and DODSI materials
  - Updating course; adding practical exercise
  - Prepare classroom course (3rd QTR FY98)
  - Convert to CBT (4th QTR FY98)

- IPMO: Information Assurance for Auditors and Evaluators (w/DODIG)
  - DODIG lead for military IGs
  - DODIG leading coordination to transition to Federal-wide IG audience
  - Pilot held 3-4 March 98 @ ITF
  - Convert to CBT (3rd QTR FY98)

- Defense Acquisition University (DAU): Information Resource Management (IRM) 101
  - INFOSEC inputs provided to DAU for web based course
  - POC: Norline Depeiza (depeizn@acq.osd.mil)
  - Web site: http://192.239.92.37/IRM101_project_web/welcome.html
Public Key Infrastructure (PKI)

- IPMO role
  - Develop DOD level modules; validate DOD-wide
  - Front end for Service/Agency detailed training

- Audience
  - Users
  - Local Registration Authorities (LRAs)
  - Registration Authorities

- Initially in conjunction with Defense Travel Service (DTS)
  - Piggy-back on DTS training strategy

- Delivery medium
  - Awareness Video: June 98
  - Platform course: July 98 (pilot)
  - Train the trainer program
  - Convert to interactive multimedia CBT (4 QTR FY98)
Windows NT Security for System Administrators (INFOSEC 310)

- Drawn from Army and Navy Systems Administrator courses
  - Army, 5th SIG CMD: 5 days
  - Navy, CNET, Corry Station: 8 weeks (Multi-platform)

- DISA/IPMO course: Windows NT, 5 days
  - Roles & responsibilities, policies & procedures (.5 days)
  - Operating system security overview (4.5 days)
    - Threats and vulnerabilities
    - Countermeasures
    - Tools/firewall lab planned for future (FY99)

- Schedule: 1-2 classes/month for remainder of FY98
## Current INFOSEC Courses

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<th>Sys Admin</th>
<th>Network Security</th>
<th>ISSO ISSM</th>
<th>TASO</th>
<th>IRM</th>
<th>End User</th>
<th>Mid-Mgr</th>
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* For ITF courses, go to: http://www.disa.mil/ciss/cissitf

** For info on source ratings & prerequisites go to: http://www.cnet.navy.mil/netpdtc/cantrac/cantrac.htm
# INFOSEC Courses on the Horizon

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INFOSEC CBTs & Videos

*IPMO championed/community validated*

- **Computer Based Training** *(Unclassified; DOS-based 286)*
  - ND-170: Introduction to Computer System Security *(NSA)*
    - Targets Classified environment (basis for DOD CS-100)
  - ND-150: Introduction to Information Systems Security *(NSA)*
  - OP-301: OPSEC Fundamentals for Managers and Supervisors *(NSA)*

- **Videos** *(VHS, Unclassified)*
  - Networks at Risk *(NCS)* *(10 min)*
  - Protect Your AIS *(USGov)* *(6 vignettes)*
  - The Information Front Line *(IC)* *(10 min)*
  - Bringing Down the House *(IC)* *(11min)*
  - Exploring MISSI *(IPMO w/NSA)* *(10 min)*
  - Computer Security 101 *(DOJ)* *(~10 min)*
  - Computer Security: The Executive Role *(DOJ)* *(~10 min)*
  - Protect Your AIS *(FAA Version)* *(48 min)*
Current

- INFOSEC Awareness (Unclassified, Windows, 486)
  - DISA specific/DOD useable
  - Fulfills Public Law 100-235 requirements
- IW Basics
- DOD INFOSEC Awareness

On the Horizon

- Federal INFOSEC Awareness (w/TPDC, NSTISSC ETA Issue Group)
- Operational Information Systems Security (OISS)(2 vol)(WC)

*WC - web connected
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INFOSEC CBTs & Videos
Current
INFOSEC Awareness Products
Training Resources Electronic Catalog (TREC)

Multi-disciplinary: INFOSEC & related disciplines
- IW
- C2W
- EW
- PSYSOPS
- Physical Security
- Info Assurance
- Info Protect
- Info Operations
- OPSEC
- COMSEC
- COMPUSEC
- TEMPEST

Centralized source of security ETA “products”
- Government owned/sponsored
- Courses, CBTs, Training aids, Posters

Shared responsibility:
- IPMO manages configuration/dissemination
- Providers/providers “own” their data; provide updates

Cooperative effort w/CINCs/Services/Agencies & Federal Depts & Agencies
- Promoted at national level as Federal solution
- Interim version (Access) available via DISA v web site

Transitioning to Web based product (2nd QTR FY98)
- Search and sort capabilities using browser
- Hot links to provider web sites for registration
- Provider update on web
INFOSEC Awareness Products

- DOD’s INFOSEC newsletter
- Unclassified
- Availability
  - ASSIST BBS
  - Web sites (DISA, NSA/SIPRNET)
  - Paper copies (8000+ issues distributed)
- DOD & Federal wide
- Content
  - Focus article
  - Resources (products & courses)
  - Events (conferences/symposia)
  - Where to get more information
  - Service/Product POCs
Training Delivery to the Desktop
Developing Interactive Multimedia Training & Awareness Products

Systematic approach to efficiently provide high quality ETA products at reasonable cost

- Apply National Institute for Standards and Technology (NIST) ETA levels
- Map course content; identify applicability to each level
- Build modular; -- “plug & play”
- Focus on delivery to the desktop
  - Computer-based training (CBT)
  - Network-based, Web-updateable (Connected CD-ROM)
- Integrate CBT with classroom instruction; payoff in
  - Reduced time in class, or
  - Additional topics covered/hands on provided, and
  - Post-refresher/reinforcement
- Ensure all courseware is
  - Free of copyright restriction
  - Government owned
  - Available at no cost to DOD
Training Delivery to the Desktop

“Connected” CD-ROM

- Full interactive, multimedia functionality on CD-ROM
- Run on network (intranet) or individual workstations w/CD-ROM readers
- Linked to web site for updates to training content (text files)

- Numerous features:
  - Metrics collection
  - Testing
  - Book marking
  - “Closed caption”
Training Delivery to the Desktop

Advantages/Disadvantages

**Advantages**

- Standard course content and delivery
- Reduce time in classroom OR Realocate time in classroom to
  - Add new topics
  - Increase hands on portion
- Use web-site to provide updates to training content
- Reduce need to conduct refresher training in classroom setting
- Lower cost

**Disadvantages**

- No direct, immediate interaction with instructor....but can
  - Reduce need by using prerequisites to bring students to desired level
  - Web based “Ask the Professor”
- Identity of student taking the course...
  - No different than correspondence course
  - Use existing infrastructure
Developing Interactive Multimedia Training & Awareness Products

Deliverable to the desktop--
via CD-ROM reader or network... & web updateable

**Example: INFOSEC Awareness CD-ROM**

<table>
<thead>
<tr>
<th>Cost</th>
<th>CD-ROM</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Cost to develop CD-ROM master</td>
<td>$35,000.00</td>
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<td>8647</td>
<td>Number does not include DISA personnel who have accessed the presentation via the DISANET</td>
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<td>Cost to produce 8647 CD-ROMs @$1.85 each</td>
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<td>Cost per student</td>
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</table>
When user criteria are finalized, a course test will be included.
INFOWAR Basics
Course Content Map

- Definitions
  - Basic Principles
  - You Are A Critical Link

- The Information Age
  - Electronic Revolution (Technology Explosion, Information Vulnerabilities)
  - Global Connectivity
  - Revolution in Military Affairs (The Old Situation, The New Situation)
  - An Actual Incident (Rome Labs)

- Components of INFOWAR
  - The Value of Integration
  - Information Superiority

- DOD's Responsibility
  - Command Responsibility
  - Your Role

- Deception
  - Information Attack
  - Psyop
  - Destruction (Lethal, Non-Lethal)
  - Info Ops
  - Electronic Warfare (Jamming)

- Security Measures
  - Computer (Hanover Hacker)
  - Communications
  - Physical
  - Information
  - Emanations
  - Operations (Pizza Storm)

27 March 1998
*When user criteria are finalized a course test will be included.
The first time through Module 5, the Topics are run in sequence as shown. Upon completion, the user may access the topics in any order.
These lessons are to be taken sequentially.

These topics are to be taken sequentially.
Certificate Authority Workstation (CAW) Course Map

Module 1: Security Basics
- MISSI & DMS
- Encryption
- X.509 Certificate
- Forteza Cards

Module 2: Roles & Responsibilities
- Certification Authority (CA)
- System Administrator (SA)
- Info. Sys. Security Officer (ISSO)

Module 3: CAW System Components & Hardware
- System Components
- CAW Hardware Overview

Options
- Glossary
- Course Map
- Resources

Key:
- Module
- Topic
- Sub Topic
- Sub Topic
- Sub Topic
- Forward
- Replay
- Back
- Main Menu
- Show Text
- Glossary
- Resources
- Course Map
- Exit
Information
Assurance Support Environment (IASE)
Information Assurance Support Environment (IASE)

ASD/C3I directed; for use DOD-wide

- Web-based DOD Help Environment for INFOSEC/Information Assurance professionals

- Functional Areas
  - ETA
  - SABI/MLS
  - DITSCAP
  - Policy
  - C&A/ST&E
  - ITSC Contract
  - Tools
IASE Features

- Person to receive request/provide information requested
- Request for Information Ticket System
- Frequently Asked Questions (FAQ)
- Solutions Database
- Chat/Discussion Rooms
- Whiteboard
- Mail List
  - Subscriptions
  - By Topic
- Bulletin Board System
- “Search our Site”
How to Access the IASE

- Unclassified Site:
  - NIPRNet: .mil and .gov accounts required
  - URL: http://mattche.iiie.disa.mil/
  - Information Desk Unclassified E-Mail: IASE@ncr.disa.mil
  - IP Address: 199.208.247.11

- Classified Site:
  - SIPRNet accounts required
  - URL: http://cassie.iiie.disa.smil.mil
  - Information Desk Classified (SIPRNet) E-Mail: iase@iiie.disa.smil.mil

- Hours of Operation:
  - Information Desk: M-F, 8-5
  - IASE Web Site: 24 x 7
  - Telephone: 703-681-IASE
SA & User licensing
Series of high-level reports and assessments highlighting need for “professionalization” of military, civilian and contractor personnel performing systems administration functions

- DSB Report, Nov 96, Finding #10
- GAO Report, May 96

- Recent events demonstrate need for skilled system administrators to maintain configurations
  - Eligible Receiver ‘97

- Requirement for DOD SA Licensing Program briefed to MCEB Sep 97
  - SIPRNet SA licensing to be completed NLT Jan 99
Licensing Focus

- Information Systems Security Officers/
  Information System Security Managers
- Network Managers
- Certifiers
- Incident Response Teams
- Data Base Administrators

- Action Officers
- Crisis Managers
- Data Automation Authorities

"Other System Professionals"

"Other Users"
DOD Notional Sys Admin Criteria
(Government System-OSD)

Operating System
Microsoft Windows NT certificate
20 working days
$6,000

Security Features
INFOSEC for System Administrators (Windows NT)
10 working days
TDY costs

Environment
OSD System Operations (OJT)(local implementation)
10 working days
Time vs $
DOD Notional Sys Admin Criteria (GCCS)

Operating System
UNIX System Administrator
15 working days
$3,800

Security Features
INFOSEC for System Administrators (UNIX)
10 working days
TDY costs

Environment
GCCS System Operations (OJT)(local implementation)
10 working days
Time vs $
System Administrator Licensing

**DISA Approach**

**Level 3**
- Level 2 licensing AND
  - Knowledge of multiple OS
  - 5+ years experience

**Level 2**
- Level 1 licensing, AND
  - INFOSEC 310 (Windows NT Security for System Administrators), OR Equivalent (for specific operating system)
  - 3+ years experience

**Level 1**
- OS knowledge (commercial)
  - 0-3 year experience
  
  And ONE of the following:
  - INFOSEC Basics (CBT) and CISS (Operational Information System Security) (Vol 1 & 2) (CBT), OR one of the following classroom courses
    - INFOSEC 300 (INFOSEC for ISSOs/ISSMs) (Classroom)
    - ND-225 (Operational Computer Security) (Classroom), OR
    - ISSB Information System Security Basics (Classroom)
    - Equivalent course
User Licensing

Army Approach

- Issue password AFTER successful completion of initial awareness indoctrination

- Vehicles for user licensing
  - DISA INFOSEC Awareness CBT
  - DOD INFOSEC Awareness CBT
  - Equivalent
IPMO MISSI ETA Strategy

FORTEZZA & CAW

• Apply general strategy
  • Champion products
  • Leverage existing forums
  • Rely on existing infrastructure

• Leverage MISSI Life Cycle Support Working Group

• Transition to Government “owned” courses w/delivery by existing training infrastructure

• Develop CBT products to minimize time in classroom

• Service/Agency
  • Deliver training via existing infrastructure
FORTEZZA Installers Course

FORTEZZA for Win 3.1

- Platform (3 days): Focus on applications & trouble shooting

- Computer-based Training (CBT) (9 hours)
  - Covers entire course
  - Documentation
  - Practical Exercises
  - Web-sites for more information

- MISSI Familiarization Video (Exploring MISSI)(10min)
  - Standalone
  - Insert in all System Admin training courses

- Tobyhanna Army Depot: DOD Trainer for FORTEZZA Installers Course
  - DISA provided exportable package; NSA provided equipment
  - NSA to ensure “hot line” for training technical assistance (1-800-GO MISSI)
  - Cost per course @ Tobyhanna (up to 15 students): ~$4,500
Approach to CAW Training

- Start with NSA developed course materials
  - CAW 4.2; platform course
  - Identify portions suitable for transitioning to CBT/video

- Develop associated “connected” CBT
  - Full interactive/multimedia functionality on CD-ROM
  - Run on network or individual workstations with CD-ROM readers
  - Linked to web site for training updates

- Use
  - Reduce time in classroom
  - Reference
  - Refresher
Summary
## Completed/nearing completion

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<th>Products</th>
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## Underway

- FORTEZZA Installer for Windows NT
- CAW (4.2)
- SABJ Awareness
- Information Operations Awareness
- IW Attack-Defend Desktop Exercise
- Web Site Security
- Designated Approving Authority (DAA)
- INFOSEC Basics
- Certification/Licensing Review Course
- Incident Handling Procedures
- Certifier Course
- PKI
- INFOSEC for System Administrators
- Secure Systems (NPS)
- Network Security (NPS)
- ETA Requirements Database
DOD INFOSEC ETA&P POCs

http://www.disa.mil/infosec
http://mattche.ieee.disa.mil (.mil & .gov only)

- Marjorie York
  - 703-681-I 323
  - yorkm@ncr.disa.mil

- George Bieber
  - 703-681-I 324
  - bieberg@ncr.disa.mil

- Joan Pohly
  - 703-681-I 346
  - pohlyj@ncr.disa.mil

- For Products
  - 703-681-7944/1344
  - Fax: 703-681-I 386
  - DSN: 761-xxxx
  - cissa@ncr.disa.mil