

Electronic Business/ Electronic Commerce

Enterprise Solutions and Opportunities Through Electronic Business



September 1, 2000
NDU Discussion

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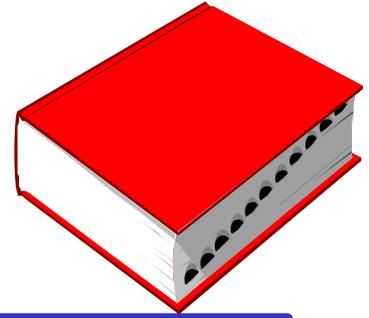
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Memorandum of Agreement DoD and GSA

- ◆ **Federal Electronic Business**
- ◆ **Federal Electronic Messaging and Directory**
- ◆ **Federal Security Infrastructure**



EB Objective Working Definition



eBusiness...

- ◆ **Exploitation of Information Technology (IT) to Improve Business Processes:**
 - IT Always involved (CIO's CCA Role)
 - Improve = Reengineer Processes
 - Performance Metrics and success criteria must be set by functional leaders
- ◆ **Broadly speaking - *doing business electronically***

Broadened EB Vision

“Big” EB

- ◆ Buying and Paying
- ◆ Public Transactions
- ◆ Electronic Delivery Orders and Invoices
- ◆ Electronic Grants
- ◆ Health Care
- ◆ Electronic Benefits Transfer
- ◆ Education
- ◆

EC Technical Tool Box

- ◆ EDI
- ◆ EFT
- ◆ Credit Cards
- ◆ Smart Cards
- ◆ Web
- ◆ Electronic Catalogues
- ◆ Message Based EC
- ◆ IDE
- ◆

Sources of Federal EB Strategy

- ◆ National Performance Review
- ◆ President's Memorandum of October 1993
- ◆ Federal Acquisition Streamlining Act of 1994
- ◆ Federal Acquisition Reform Act of 1995
- ◆ IT Management Reform Act of 1995
- ◆ Debt Collection Improvement Act of 1996
- ◆ President's Memorandum of July 1997
- ◆ EC in Federal Procurement Act of 1998 (Sec 850)
- ◆ DoD E-Mail System for Supply Purchases (Sec 332)
- ◆ Rapidly Evolving Technology



**NOTE: Changing Landscape and
Highest Level of Government Interest**

DoD Electronic Business Program

*“Even if you’re on the right track,
you’ll get run over if you just sit there”*

- Arthur Godfrey

*“It is not the strongest species
that will survive, nor the most intelligent,
but the one most responsive to change.”*

- Charles Darwin



Imperatives



- ◆ **Single Face to Industry**
 - International and Federal Standards
 - A Common Vendor Registration System
 - EDI, EFT & EBT
- ◆ **Public Transactions**
- ◆ **Improve Access for Small Businesses**
- ◆ **Commercial Products & Practices**
- ◆ **Protect Privacy and Property Rights**

Electronic Business/ Electronic Commerce

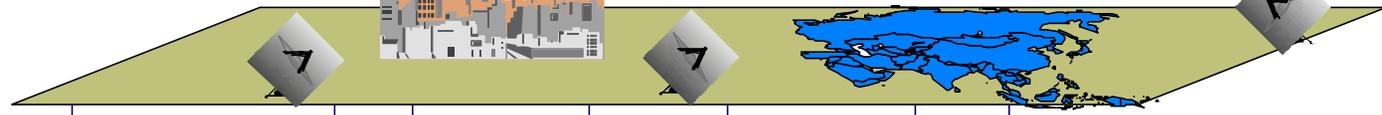
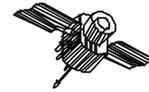
DoD EB/EC Strategic Planning



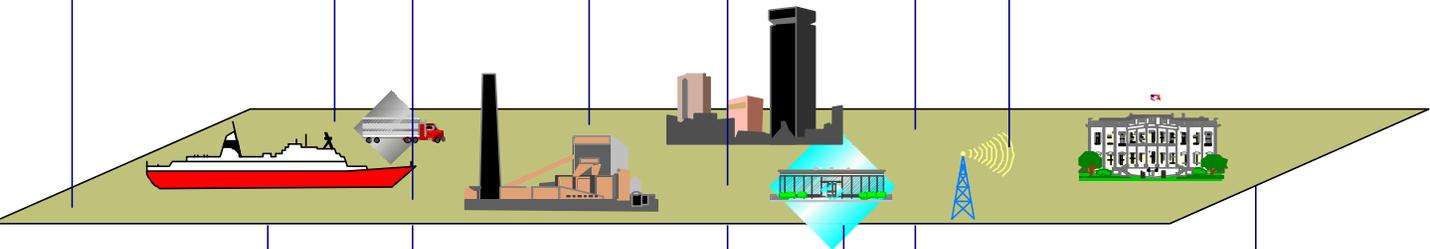


The Global Infosphere

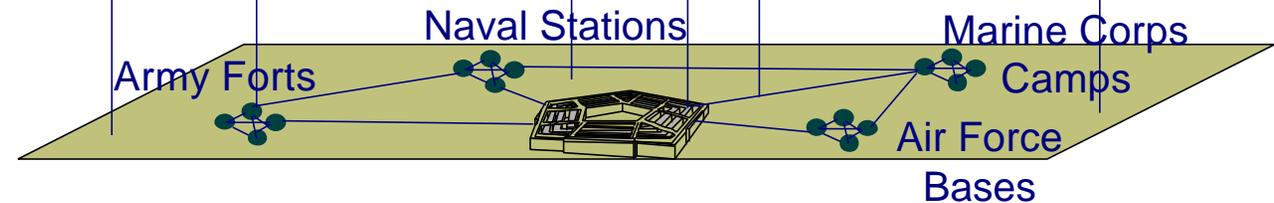
Global
Information
Infrastructure



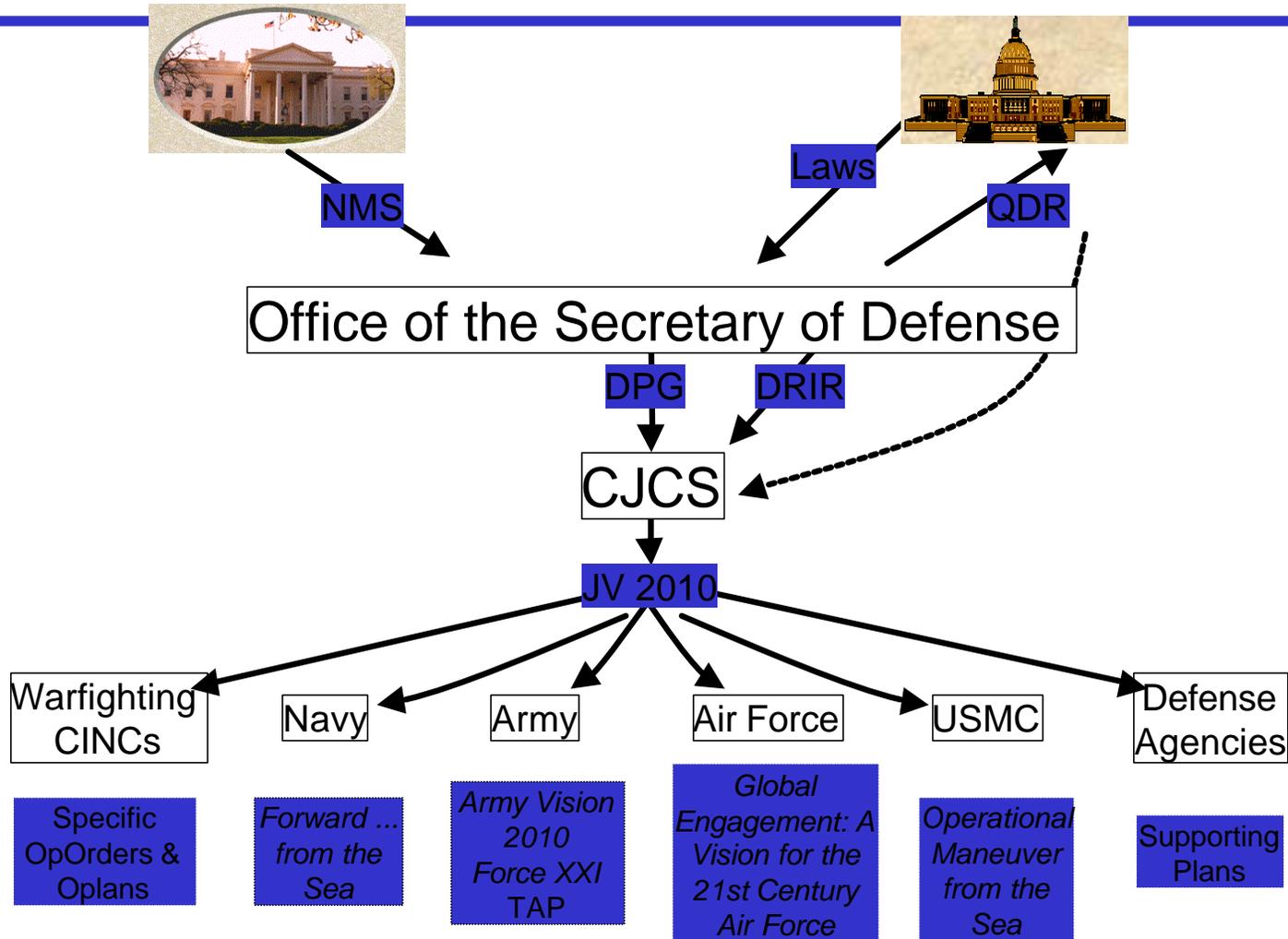
National
Information
Infrastructure



Defense
Information
Infrastructure

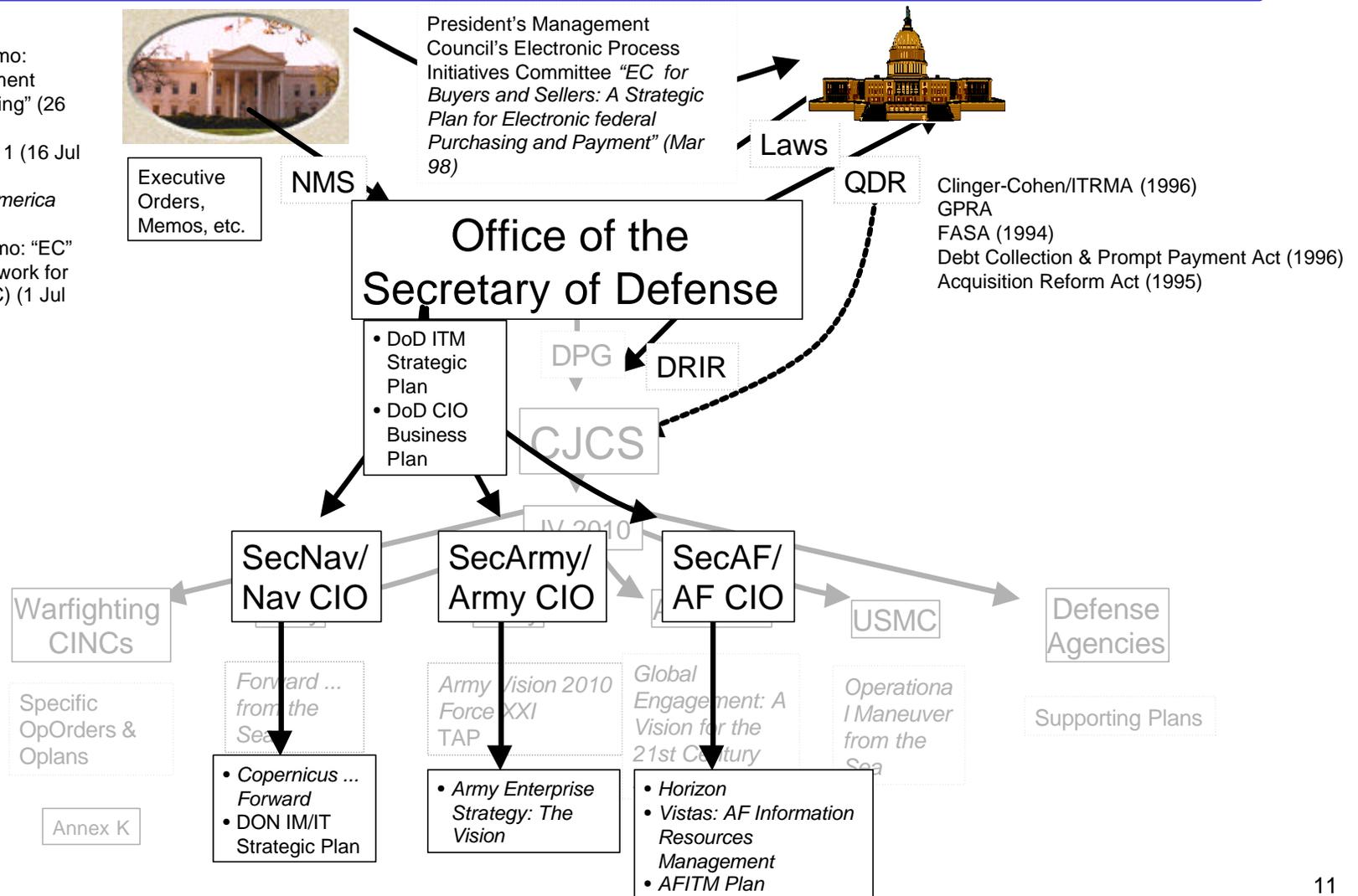


Defense Planning Relationships



Defense IT/EC Planning Relationships

- Pres. Memo: "Procurement Streamlining" (26 Oct 93)
- E.O. 13011 (16 Jul 96)
- *Access America* (Feb 97)
- Pres. Memo: "EC" (A Framework for Global EC) (1 Jul 97)





Defense Reform Initiative

November 1997

<http://www.defenselink.mil/dodreform/index.html>

- ◆ **Focus Enterprise on a Unifying Vision**
- ◆ **Commit the Leadership Team to Change**
- ◆ **Focus on Core Competencies**
- ◆ **Streamline Organizations for Agility**
- ◆ **Invest in People**
- ◆ **Exploit Information Technology**
- ◆ **Break Down Barriers Between Organizations**

Defense Reform Initiative

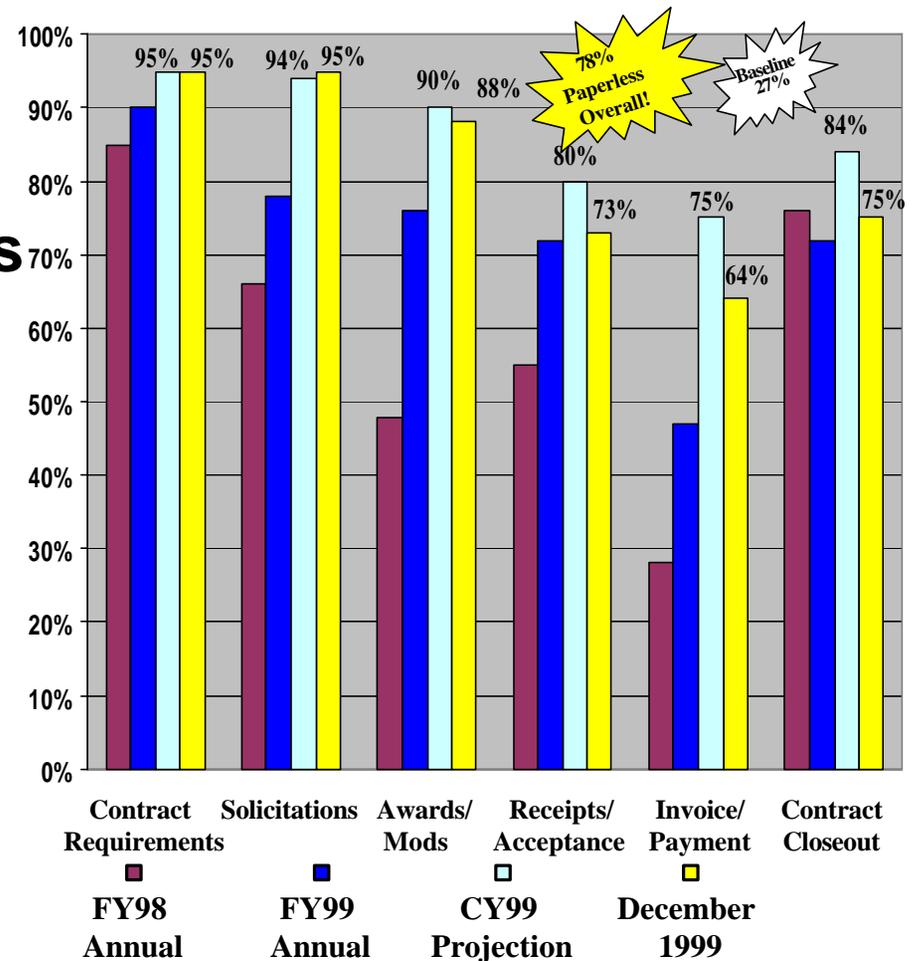
Adopting Best Practices

(Examples)

- ◆ **Paperless Contracting for Weapon Systems by Jan 2000 (Extended to Jan 2001)**
- ◆ **Purchase card for 90% of all Micro Purchases**
 - almost one half of all purchases
- ◆ **Expanded use of E-Cats to empower User-Buyers**
- ◆ **Create Paperfree System for Weapons Support and Logistics**
- ◆ **Regulations / Instructions exclusively on Web**
- ◆ **Prime Vendor Contracts for Maint, Repair, Operating Materials**
 - available for every major US Installation
- ◆ **Reengineer Travel System**
- ◆ **Replace Mindset of “Just in Case” to “Just in Time”**

Percent of DoD Paperless Contracting Transactions Achieved, by Fiscal Year

- ◆ Five primary metrics support paperless contracting assessment
- ◆ Delegated contract closeout is a sixth area being monitored for contracts delegated to the Defense Contract Management Command
- ◆ DoD has maintained steady progress each year since embarking on this effort



Electronic Business Operations

- ◆ **Term introduced in DRIR**
- ◆ **Formerly identified as “The Big EC”**
- ◆ **Encompasses EC business operations across all Defense functional and cross-functional Arenas**
 - **Expand focus: EC >> “Buying & Selling”**

Leadership:

Joint EB/EC Program Team

- ◆ **Office of the Secretary of Defense (OSD) DoD CIO**
 - CIO Leadership
 - EB Board of Directors
 - Policy Establishment in DoD Directive 8190.2
 - EB/EC Strategic Plan
 - OSD EC Office within C3I Policy to provide Oversight and Direction
- ◆ **Office of the Secretary of Defense (OSD) PSA**
 - Functional Plans / Operational Architectures
- ◆ **Joint EC Program Office (JECPO)**
 - Implementation & Common Services
- ◆ **Services & Defense Agencies**
 - Execution & Operation
- ◆ **EC Resource Centers (ECRC)**
 - Outreach

DoD EB/EC Strategic Plan

- ◆ **Viewpoint of the “Big EC”**
- ◆ **Integrated OSD and Component Working Group**
- ◆ **Presents the DoD EC Vision, Goals, Objectives & Strategies**
- ◆ **Provides Component EC Plan Framework**
- ◆ **Sets Forth PSA Functional Plans**
- ◆ **Meet OMB EC Planning Requirements**

<http://www.c3i.osd.mil/org/cio/doc/EBECStratPlan.doc>

“EC For Buyers and Sellers

A Strategic Plan for Electronic Federal Purchasing and Payments”

<http://www.policyworks.gov/epic/>

◆ **Electronic Business in Federal Procurement Act of 1998**

- Positions the government to better leverage technology advances
- Not a “one-size-fits-all” solution.

◆ **Vision**

- All agencies will support programs by making available customer-friendly electronic purchasing tools integrated with end-to-end commercial electronic processing of payment, accounting, and performance information by 2001.

◆ **Strategy:**

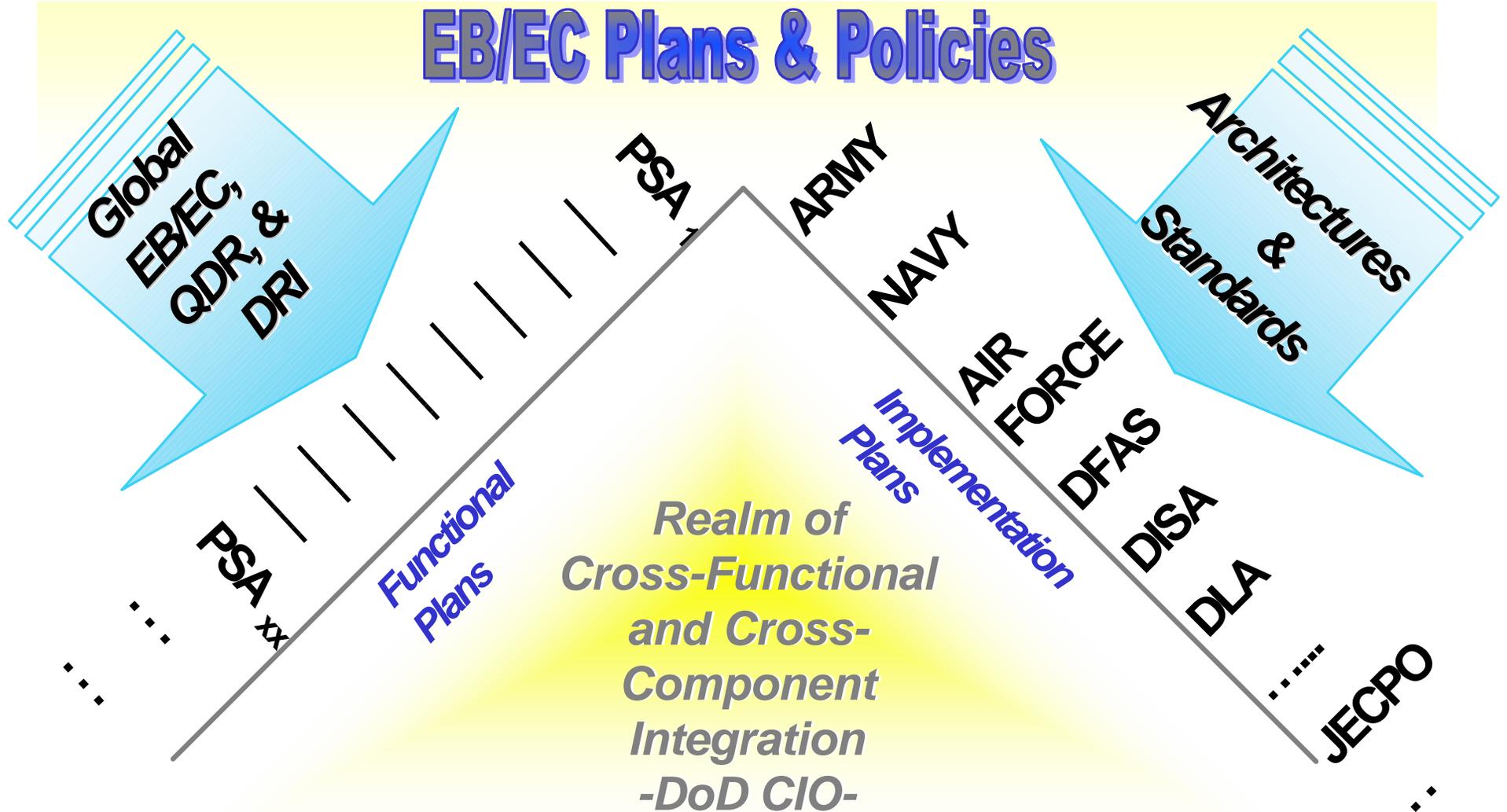
- Foster EC Partnerships
- Integrate High-Volume Services End-to-End
 - Enhance Use of Purchase Card
 - Streamline Catalog Ordering
- Re-Engineer Buying and Paying Functions
 - Key Buying and Paying Functions are Targeted

DoD Directive 8190.2: The DoD EB/EC Program

- ◆ **Codifies DoD CIO EB/EC Guidance**
- ◆ **Establishes:**
 - **DoD Joint EB/EC Program**
 - **Policy and assigns responsibilities**
 - **JECPO reporting relationship to DoD CIO**
 - **DoD CIO as OSD Principal Staff Assistant for the EB/EC Program**

<http://web7.whs.osd.mil/pdf/d81902p.pdf>

EB/EC Planning



OSD Principal Staff Assistants' Functional Area and Activity Responsibilities

<ul style="list-style-type: none">◆ <u>USD(A&T)</u><ul style="list-style-type: none">◆ Economic Security◆ Environmental Security◆ Logistics◆ Procurement/Contract Admin◆ Science and Technology◆ Systems Acquisition Mgmt	<ul style="list-style-type: none">◆ <u>USD(P&R)</u><ul style="list-style-type: none">◆ Civilian Personnel◆ Health◆ Military Personnel and Readiness◆ Reserve Affairs
<ul style="list-style-type: none">◆ <u>USD(P)</u><ul style="list-style-type: none">◆ NBC Defense Programs◆ Policy	<ul style="list-style-type: none">◆ <u>ASD(C3I)</u><ul style="list-style-type: none">◆ Command and Control◆ Information Management◆ Intelligence
<ul style="list-style-type: none">◆ <u>USD(C)</u><ul style="list-style-type: none">◆ Finance	<ul style="list-style-type: none">◆ <u>“Other Staff”</u><ul style="list-style-type: none">◆ Inspector General◆ General Counsel◆ Other as specified
<ul style="list-style-type: none">◆ <u>DOT&E</u><ul style="list-style-type: none">◆ Test and Evaluation	

Reference: FY 2000-05 POM Preparation Instructions

Electronic Business/ Electronic Commerce

EB/EC

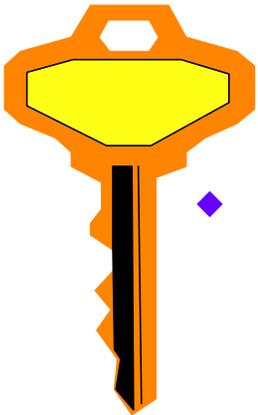
Trust Assurances



Electronic Business Assurance

a.k.a. Information Security

- ◆ **Security is key to EB/EC's success**
 - Protection in Cyberspace
 - Gain Acceptance by Electronic Trading Partners
- ◆ **Digital Signature (Hardware Based)**
 - Integrity
 - Authentication
 - Non-Repudiation (Both Ends)
- ◆ **Encryption**
 - Privacy - Confidentiality
- ◆ **Application of Assurances to Processes**
- ◆ **Guaranteed Service/Availability/Delivery**
- ◆ **Controlled Liability**



Access With Trust

- ◆ **Principles that guide agency pilot efforts using public key technology:**
 - **Use of commercial off-the-shelf software to the maximum extent practical;**
 - **Use of open vice proprietary standards;**
 - **Strong bias towards product neutrality - that is, allowing agencies to select whatever products they determine will best suit their needs; and**
 - **Strong desire to deploy solutions which are interoperable, scalable (the ability to serve large numbers of users), and extensible (the ability to serve multiple applications from one infrastructure).**

<http://www.gits-sec.treas.gov/access/AccessWithTrust.pdf>

The Security Dilemma



Open System, Network Enterprise

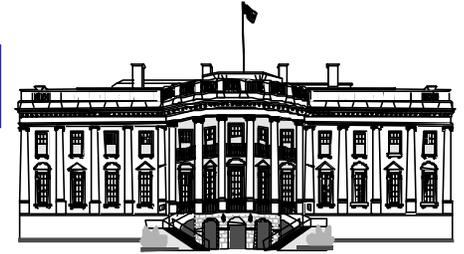
- **Cost Effective**
- **Easily Maintained**
- **Responsive to Change**
- **User Friendly**



Vulnerabilities: A Way of Life

- **Global Exposure to Malevolent Actors**
- **Hacker Tools/Techniques Freely Exchanged**
- **Solutions Become a Race Against Time**

Federal Smart Card Activity



- ◆ **President's Budget for Fiscal Year 1998: *"The Administration wants to adopt 'smart card' technology so that, ultimately, every employee will be able to use one card for a wide range of purposes, including travel, small purchases, and building access."***
- ◆ **Federal Smart Card Implementation Plan Published**
- ◆ **Included in Federal PKI Planning**
- ◆ **Included in Federal EC Program Planning**
- ◆ **Users Groups**
 - Federal Smart Card User Group (4x/Year)
 - Smart Card Project Managers User Group
- ◆ **Contract Vehicles Available - More Coming**

Token Technologies

(Listed from weakest to strongest in security)

- ◆ **None - (Unauthenticated “Guest” Access)**
- ◆ **Password / PIN**
- ◆ **Floppy Disk or hard disk holding encrypted private keys**
- ◆ **Memory-only Smart Card (EPROM or EEPROM) holding encrypted private keys (can stipulate that retrieving anything from Smart Card requires Password/PIN/biometric)**
- ◆ **Smart Card which produces key pairs, but does no crypto processing on the card (same retrieval control)**
- ◆ **Smart Card which produces key pairs, and does crypto processing on the card (no retrieval of private signing keys)**
- ◆ **FORTEZZA**

DoD Assurance Levels Summary as Approved

End User Perspective:

Class	User Identification	User Token	Algorithms
2 (Basic)	Not in person	Software	Type II
3 (Medium)	In person	Software	Type II
4 (High)	In person	Hardware (SmartCards/FORTEZZA)	Type II
5 (Classified)	In person	Hardware (STE FORTEZZA Plus card)	Type I

PKI: Personnel, physical, procedures, and technical security controls also play into assurance level (e.g. Revocation period, Re-key/renewal periods, auditing requirements, etc.)

Desirable Token Characteristics

- ◆ Key pairs (signing and encryption) generated on token
- ◆ Private signing key(s) never leave token
- ◆ Token meets applicable FIPS and complies with JTA
- ◆ Cryptographic functions (signing, decryption) performed on token
- ◆ Private keys unlocked for use by user biometrics authentication
- ◆ Easily fits into DoD PK / KM Infrastructure
- ◆ Portable, easy to use, fast in operation
- ◆ Supports multiple applications
- ◆ Inexpensive to procure, rugged in use, easy to maintain

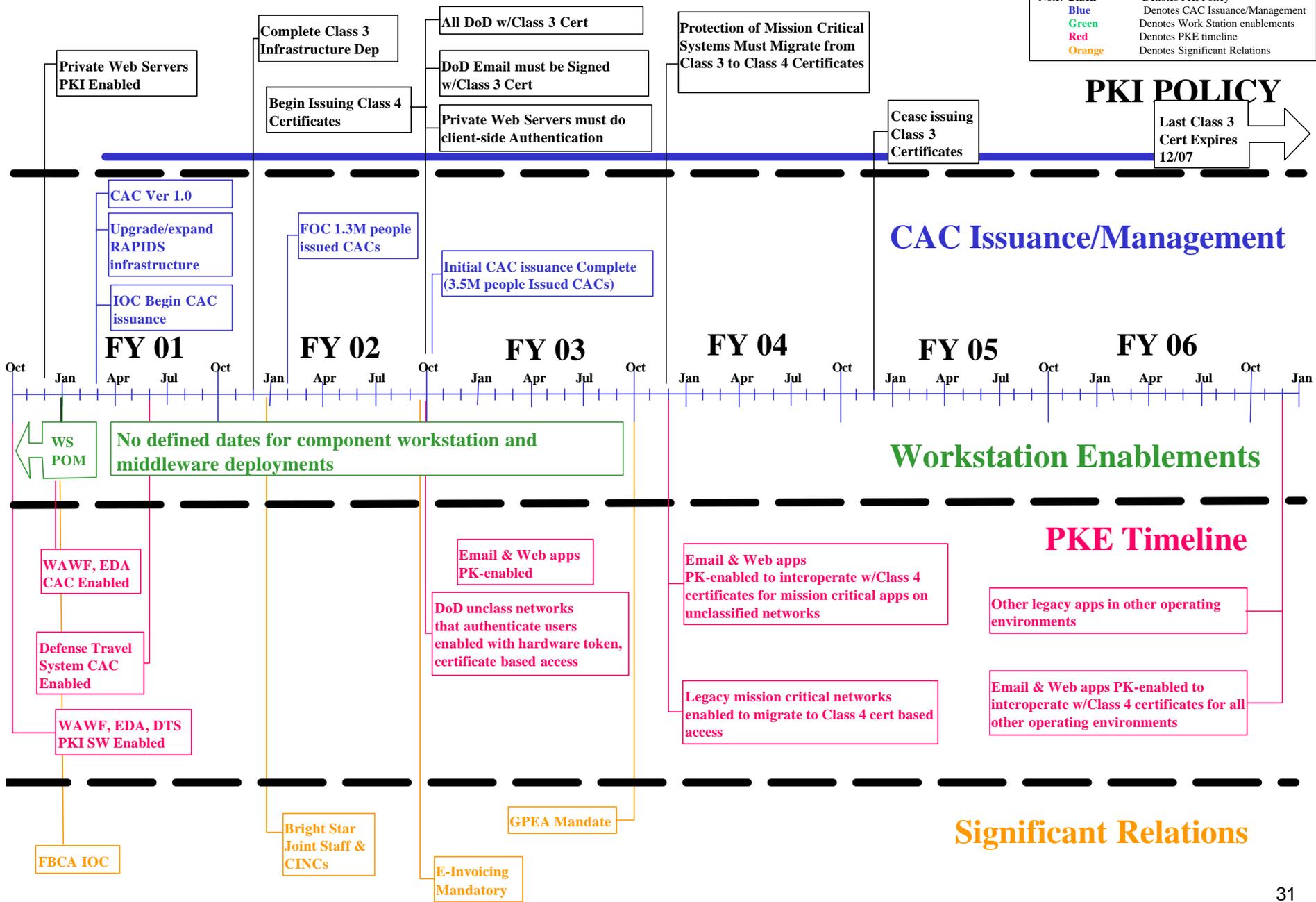
Note: These characteristics could grow into minimum requirements for PKI Hardware tokens.

DoD Smart Card Roadmap

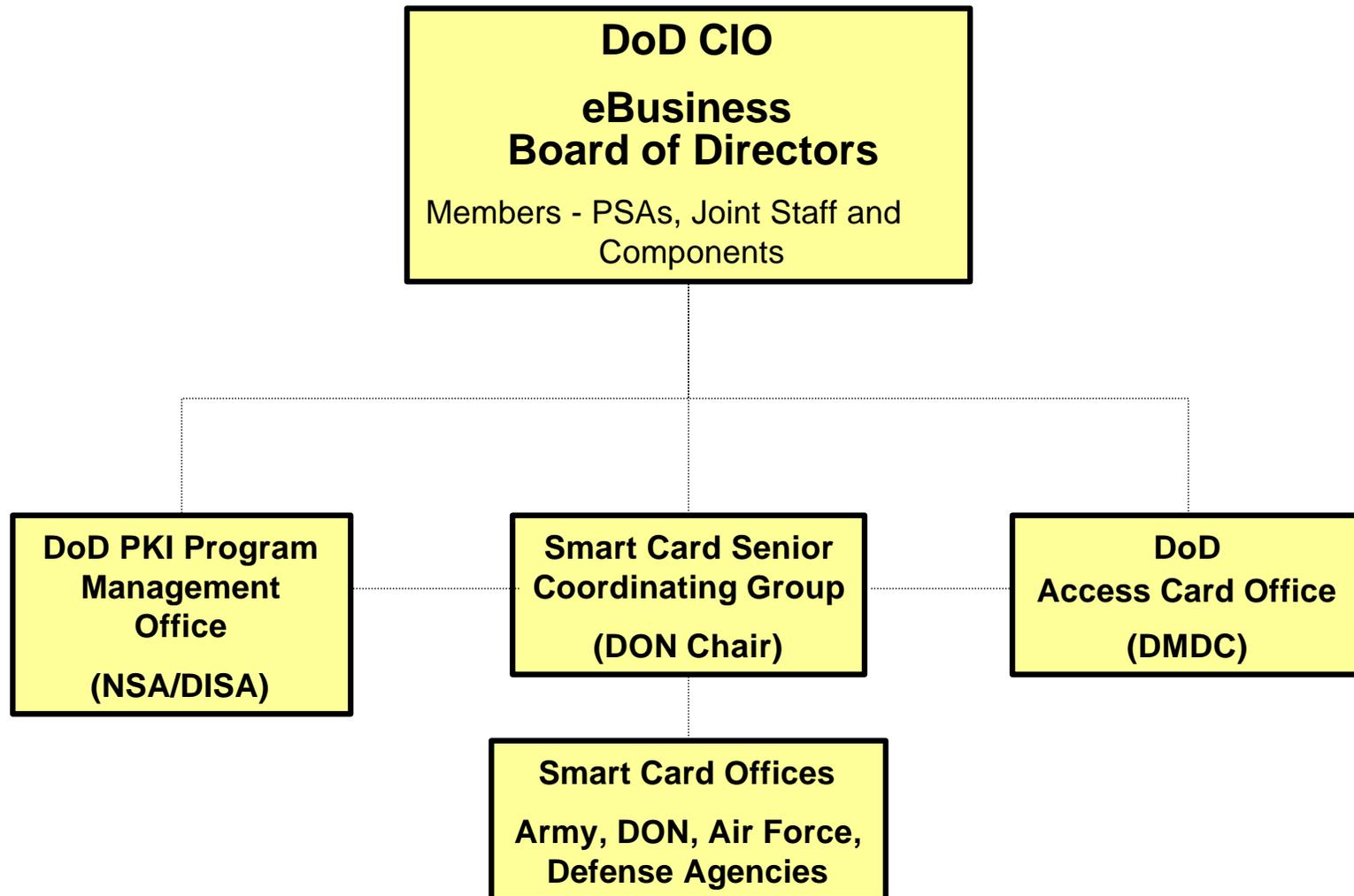
- ◆ **The card platform will include all relevant media**
- ◆ **This will be the predominant platform for the PKI hardware token**
- ◆ **This “DoD Common Access Card (CAC)” will be the Military and Civilian Identification Card**
- ◆ **We will use DEERS/RAPIDS platform for card maintenance**
- ◆ **DoD (OSD/C3I/CIO) will head up a configuration control board (with Service Reps) to specify technical allocation of chip**
- ◆ **Space will be allocated on the chip for Services/Agencies specific application**
- ◆ **OSD functional leaders (P&R, Comptroller, C3I, etc.) will convene community panels to develop consensus for data element standardization on chip space**

PKI and CAC Milestones

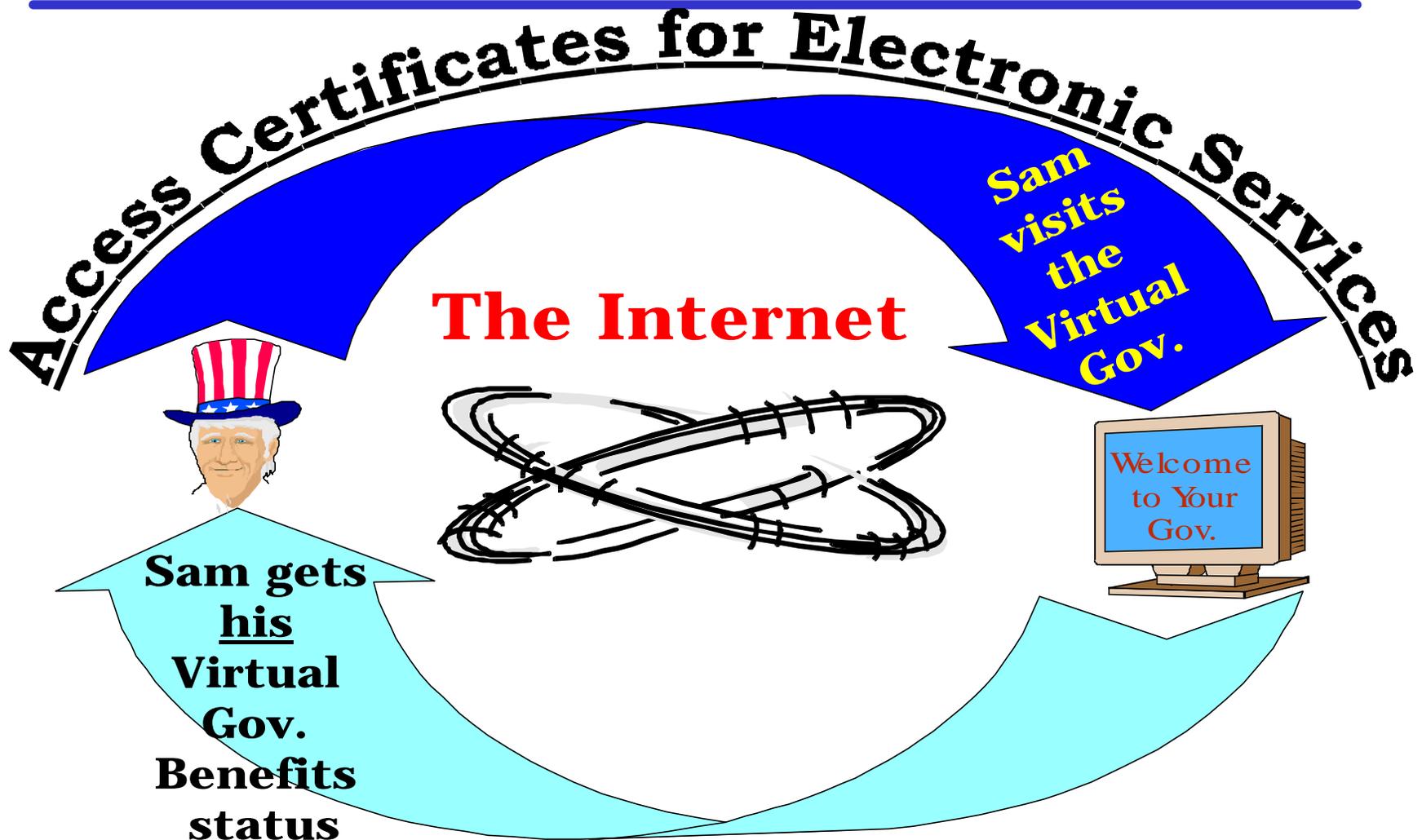
Note: **Black** Denotes PKI Policy
Blue Denotes CAC Issuance/Management
Green Denotes Work Station enablements
Red Denotes PKE timeline
Orange Denotes Significant Relations



Common Access / ID / Smart Cards Configuration Management



The ACES Solution



Electronic Business/ Electronic Commerce

EB/EC

E-Malls and E-Cats



E-Mail 1999 Congressional Language

- ◆ **National Defense Authorization Act 1999 (Section 332)**
- ◆ **JECPO Shall Develop a Single, Defense-wide E-Mail**
 - **DLA Shall Maintain the E-mail System**
 - **CIO Shall :**
 - **Oversee Elimination of Overlapping E-Catalogs**
 - **Ensure DoD E-Catalogs Use Technologies and Formats Compatible with JECPO's E-mail system**
 - **CIO Shall Provide Congressional Defense Committees:**
 - **Inventory of Existing & Planned DoD E-Malls**
 - **Schedule for Ensuring Compliance**



DoD EMALL Update

FY98
Sales: \$ 19.0 M
Items: 3.0 M

FY99
Sales: \$ 51.5M
Registered Orderers: 1078
Items: 2.3 M
Total Catalogs: 11

FY00 (as of Apr 00)
Sales: \$ 63.4M
Registered Orderers: 1271
Items: close to 5 M
Total Catalogs: 17

- Version 3.5 - Released Aug 99
- Version 4.0 - Released Nov 99
- Version 4.0.1 - Released Mar 00
 - Regional Pricing and catalogs
 - New screens
- Version 4.1 – Scheduled for June 00
 - Collaborative Order Placement
 - NSN “Not Orderable” Message
 - Public and Private Shopping Carts
- Version 4.2 – Scheduled for Oct 00
 - Streamlined Payment Process
 - Navy Legacy System Interface
 - Customer Provided Receipt Acknowledgement
- Implement Cross Catalog Shopping in IT Corridor



Jan 00

IT Commodity Buying

- ◆ **Develop Concept of IT Commodity E-Catalog (ECAT)**
- ◆ **Access a Single Internet Point**
- ◆ **Best Value from All Sources**
- ◆ **JTA Compliant**
- ◆ **Order and Ship Visibility**
- ◆ **Capture Historical Information**
 - **Who, What, How Much for IT Buys**

Electronic Business/ Electronic Commerce

Business Opportunities (Public Solicitations)



Federal Business Opportunities (FedBizOpps) Goal

- ◆ **Provide a method for notice of agency requirements or agency solicitation for contract opportunities in a form that allows convenient and universal user access through a single, Government-wide point of entry (ref section 850).**

FedBizOpps web site:
<http://www.fedbizopps.gov/>

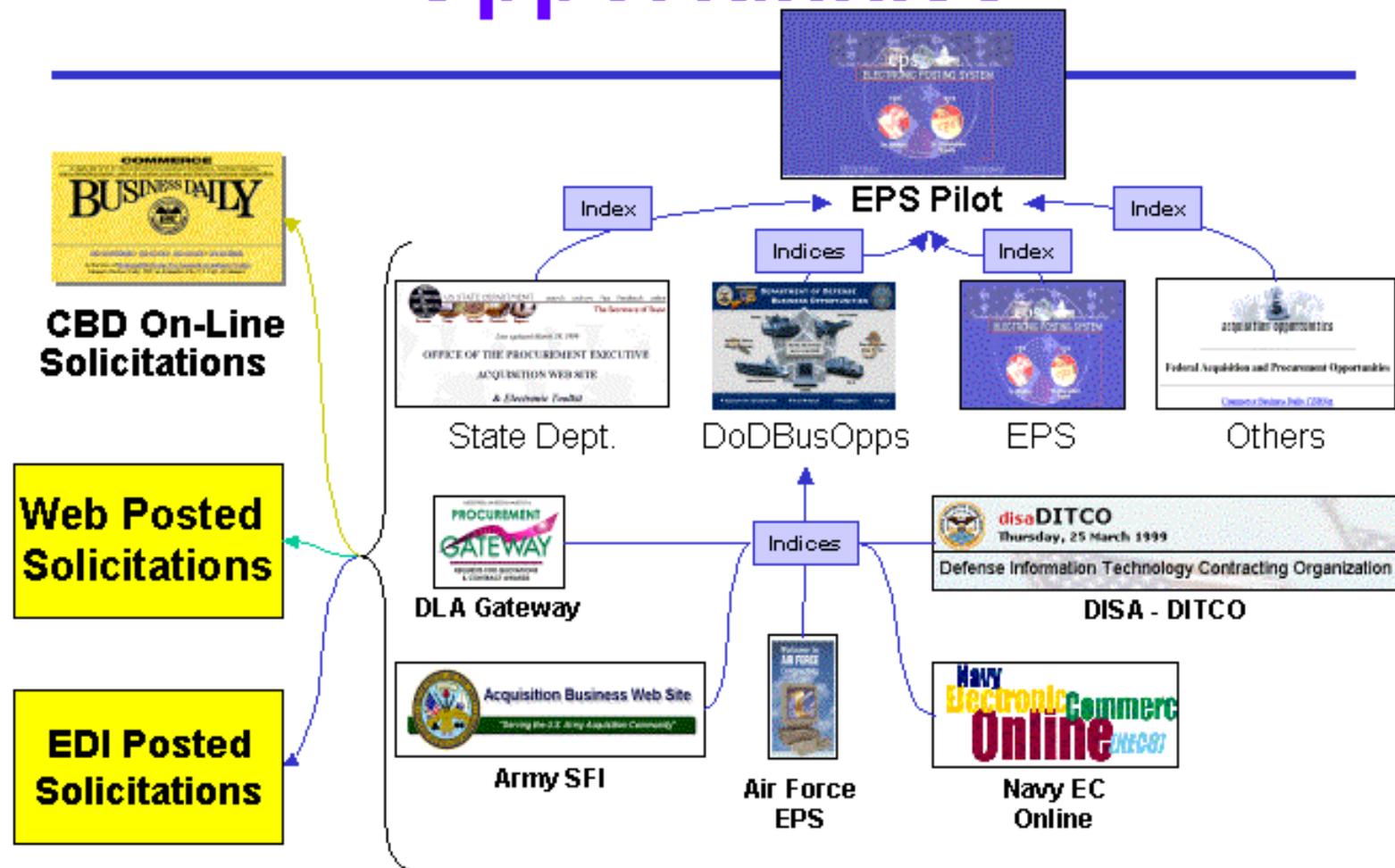
For more information on FedBizOpps:
<http://www.ec.fed.gov/fedbizopps.htm>

FedBizOpps Pilot Agencies

- ◆ **General Services Administration**
- ◆ **National Aeronautics & Space Admin.**
- ◆ **U.S. Air Force**
- ◆ **Department of Transportation**
- ◆ **Department of Commerce**
- ◆ **Department of Treasury**

<http://www.ec.fed.gov/fedbizopps.htm>

Federal Single Access for Opportunities



Federal Electronic Commerce Program

Electronic Business/ Electronic Commerce

Common Solutions and Standards



Goals of Standards



Standards are a means for achieving goals; not goals in themselves.

- ◆ **Fulfill Mission Needs**
- ◆ **Enabling Interoperability**
- ◆ **Portability of Software and Hardware**
- ◆ **Lowering Costs**

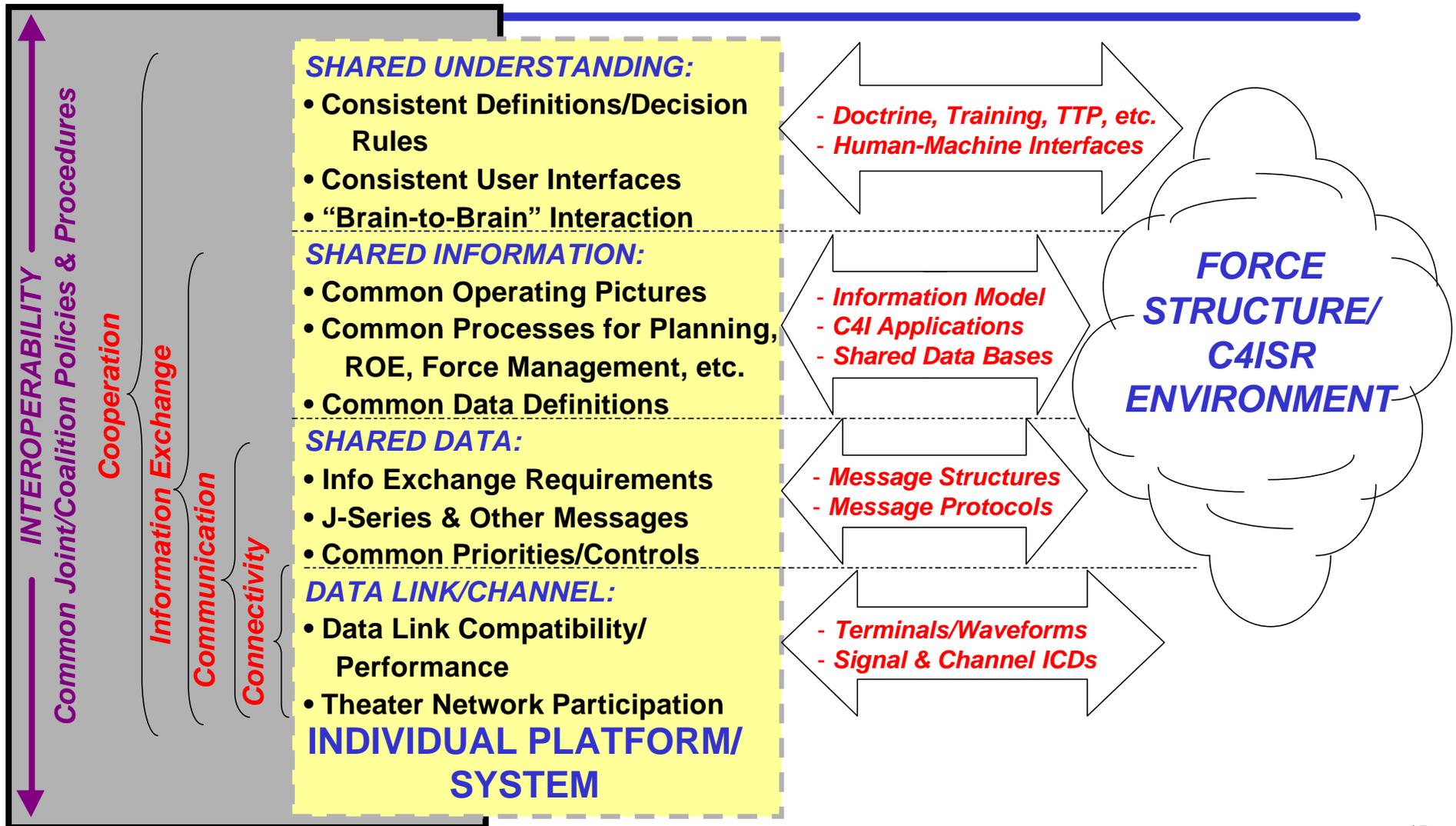
Standards Selection Criteria



Influencing Factors:

- ◆ **Technical**
 - Mission, Interoperability, Long-Term Vision, Existing Infrastructure, Costs for Legacy
- ◆ **Marketplace**
 - Actually working, Widespread Use, Multiple Platforms, Openly Specified, Competition
- ◆ **Status (Maturity) of the Standard(s)**
 - Open International
 - National Standards
 - Consortia Standards
 - Defacto Proprietary

Interoperability Means *Far More* Than Using The Same Radio



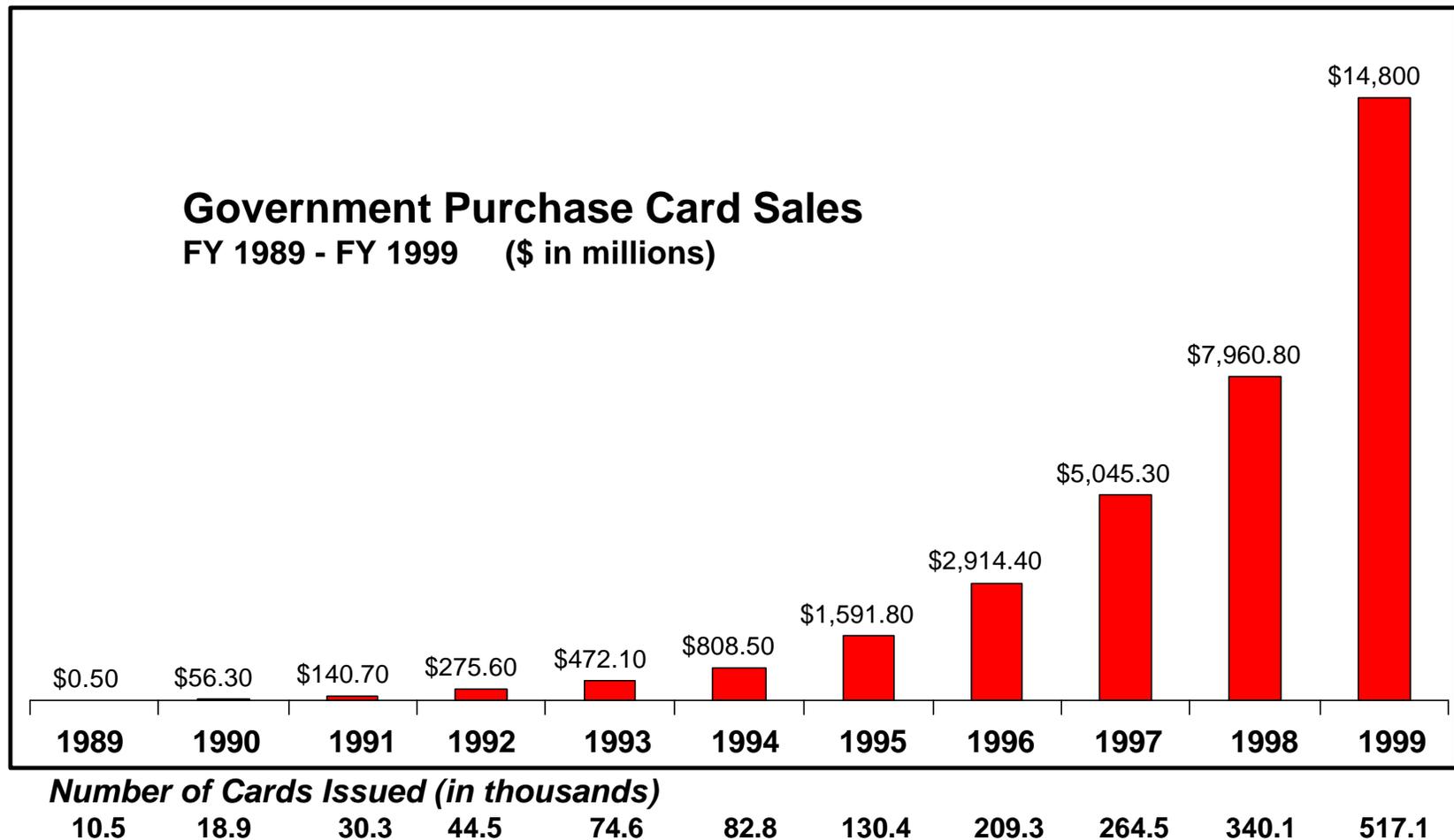
Electronic Business/ Electronic Commerce

Potpourri of Initiatives



GSA Reports:

Purchase Card Sales Keep Growing

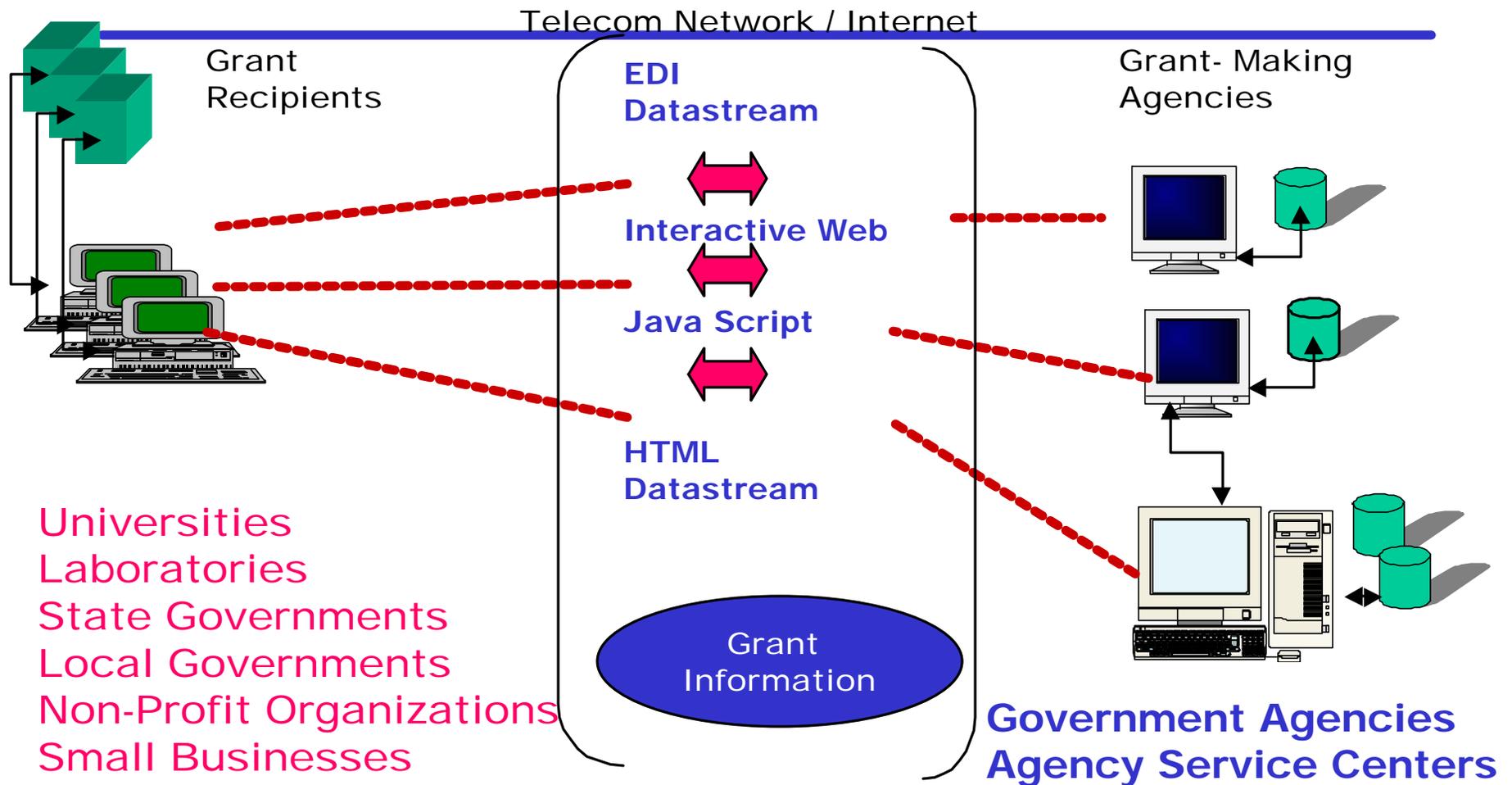


E-Grants

Tasks for E-Grants included as EC Action Item in Access America Report

- ◆ **Build a consolidated electronic federal grants application system.**
 - Establish an interagency working group
 - Develop government-wide grants business model
 - Provide a common interface for customers
 - Tie the system to the payment reengineering efforts underway at the Department of Treasury

GOVERNMENTWIDE Electronic Grants Web, Internet, and EDI/Batch



Electronic Benefits Transfer (EBT)

- ◆ **ALL STATES TO USE EBT BY 2002**

(NPR GOAL OF 1999 SUPERCEDED BY PL 104-193)

- ◆ **21.4 MILLION PARTICIPANTS RECEIVING
FOOD STAMPS MONTHLY**

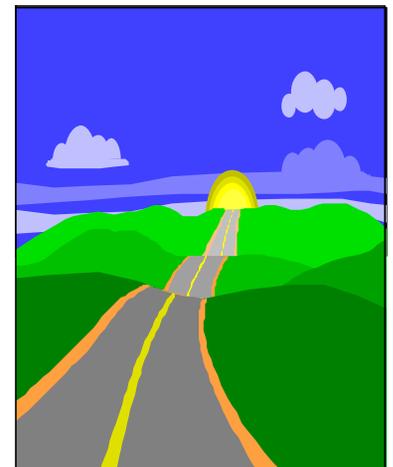
- ◆ **\$21 BILLION IN BENEFITS ANNUALLY**

- ◆ **36 STATES ARE NOW OPERATIONAL**
(ISSUING \$9.4 B IN BENEFITS BY EBT THIS FISCAL YEAR)



Federal Electronic Commerce - Future

- ◆ **EB will expand in most functional areas**
- ◆ **Expanded Vision and Concept**
 - EDI / EBT / EFT / E-Cats / Cards /
- ◆ **Continued business process redevelopment**
- ◆ **Continued Emphasis on Standards and application of best practices**
- ◆ **More E-Catalogs - Shared & Secure**
- ◆ **Smart Cards -- More & Improved**
- ◆ **Web-Based EC Grows - with Security**
- ◆ **Internet Use Grows -- with Security**





Paperless Contracting Score Card

INDUSTRY

REQUIREMENTS		CONTRACT WRITING		ADMINISTRATION		FINANCE & ACCOUNTING		AUDIT	
CONTRACT REQUIREMENTS		SOLICITATIONS	AWARDS/MODS	RECEIPTS/ACCEPTANCE	INVOICE	PAYMENT			
ARMY	Base	CEFMS TAMMIS, IRGT, SPS, Acquiline 12/30/00	SAACONS, SFI, SPS ★	SAACONS, EDA, SPS ★	WAWF-RA 1/1/03	CAPS/STANFINS 12/29/00	SRD-1 12/29/00		
	Spares	JCALs PILOT, SPS, Acquiline ★	PADDS, SFI, SPS ★	PADDS, EDA, SPS ★	WAWF-RA 1/1/03	MOCAS/SOMARD; SAPAS, CCSS ★	MOCAS ★		
	Systems	CCSS, Acquiline JCALs PILOT, SPS ★	PADDS, SFI, SPS ★	PADDS, EDA, SPS ★	WAWF-RA 1/1/03	MOCAS/SOMARD; SAPAS, CCSS ★	MOCAS ★		
	Const	CEFMS, SPS ★	SAACONS, SFI, SPS ★	SAACONS, EDA, SPS ★	WAWF-RA 1/1/03	CEFMS 11/30/00	CEFMS 12/29/00		
Medical	TAMMIS, SPS Implemented	SAACONS, SFI, SPS ★	SAACONS, EDA, SPS ★	WAWF-RA 1/1/03	CAPS/STARFIARS MODE 12/29/00	SRD-1 12/29/00			
NAVY	Base	Manual, SPS, ILSMIS 6/1/01	ILSMIS, SPS, NECO ★	ILSMIS, NAFI EDA SPS Implemented	WAWF-RA 1/1/03	STARS, CAPS, MOCAS 12/29/00	STARS, SRD-1 12/29/00		
	Spares	ITIMP, Manual	ITIMP, SPS, NECO 6/1/01	ITIMPEDA, NAFI EDA, SPS ★	WAWF-RA 1/1/03	STARS, MOCAS ★	STARS, MOCAS 12/29/00		
	Systems	EPG, SPS Univ IF, 6/1/01	SPS, NECO ★	NAFI EDA Implemented	WAWF-RA 1/1/03	STARS/NIFMS/CAPS, MOCAS 12/29/00	MOCAS ★		
AIR FORCE	Base	Medlog CEMAS, SBSS, ABSS ★	BCAS/MADES II, SPS, EPS ★	BCAS EDA, NAFI EDA ★	WAWF-RA 1/1/03	IAPS, GAFS 12/29/00	IPC 12/29/00		
	Spares	J023, J090, D203 1/1/02	ACPS/MADES I, SPS, EPS 12/1/00	NAFI EDA 12/1/00	WAWF-RA 1/1/03	MOCAS, CPAS, GAFS ★	MOCAS ★		
	Systems	SPS, ABSS ★	ConWrite, SPS, EPS ★	ConWrite EDA, NAFI EDA ★	WAWF-RA 1/1/03	MOCAS, CPAS, GAFS ★	MOCAS ★		
DLA	Base	BOSS, SPS ★	BOSS, SAACONS, SPS ★	BOSS, EDA ★	BOSS ★	CAPS/DBMS 12/29/00	SRD-1 12/29/00		
	Subsis	DISMS, SPVI, MILSTRIP, SPS ★	DISMS, SPVI, SPS ★	DISMS, SPVI, SPS ★	DISMS, MOCAS ★	DISMS 12/29/00	DISMS ★		
	Spares	SPS, DESEX, AIMS, SAMMS, ASCOT, ★	DPACS, SPEDE, POPS, SPS, EPPI, MALT, PROCGATE ★	DPACS, SPEDE, POPS, SPS, EPPI, MALT, ★	SAMMS, MOCAS ★	SAMMS, MOCAS 12/29/00	SAMMS, MOCAS ★		
DCMA	Energy	MEDPV, MILSTRIP 12/31/00	Solicitations to Web ★	PROCGATE ★	FAS, PORTS 12/31/00	DFAMS, AVEDS 12/29/00	DFAMS, AVEDS ★		
	Systems	SPS 3/30/01	SPS 3/30/01	SPS, AMODS, SDW, EDW ★	DD250 Re-eng, SDW 11/1/00	EDI Progress Pay Implemented	Contract Close Re-eng 12/31/00		
	Delegate	DCD 6/26/01		EDM ★	WAWF-RA 1/1/03	DCD, EDM, WAWF-RA, DPPS, EDI, WInS 12/29/00	MOCAS ★		
DFAS	Non-Dlg.	DCD 6/26/01		EDA 12/29/00	WAWF-RA 1/1/03	DCD, EDM, WAWF-RA, DPPS, EDI, WInS 12/29/00			
							Electronic Audit Reports ★		



Paper Handoff



Electronic Handoff



New Star



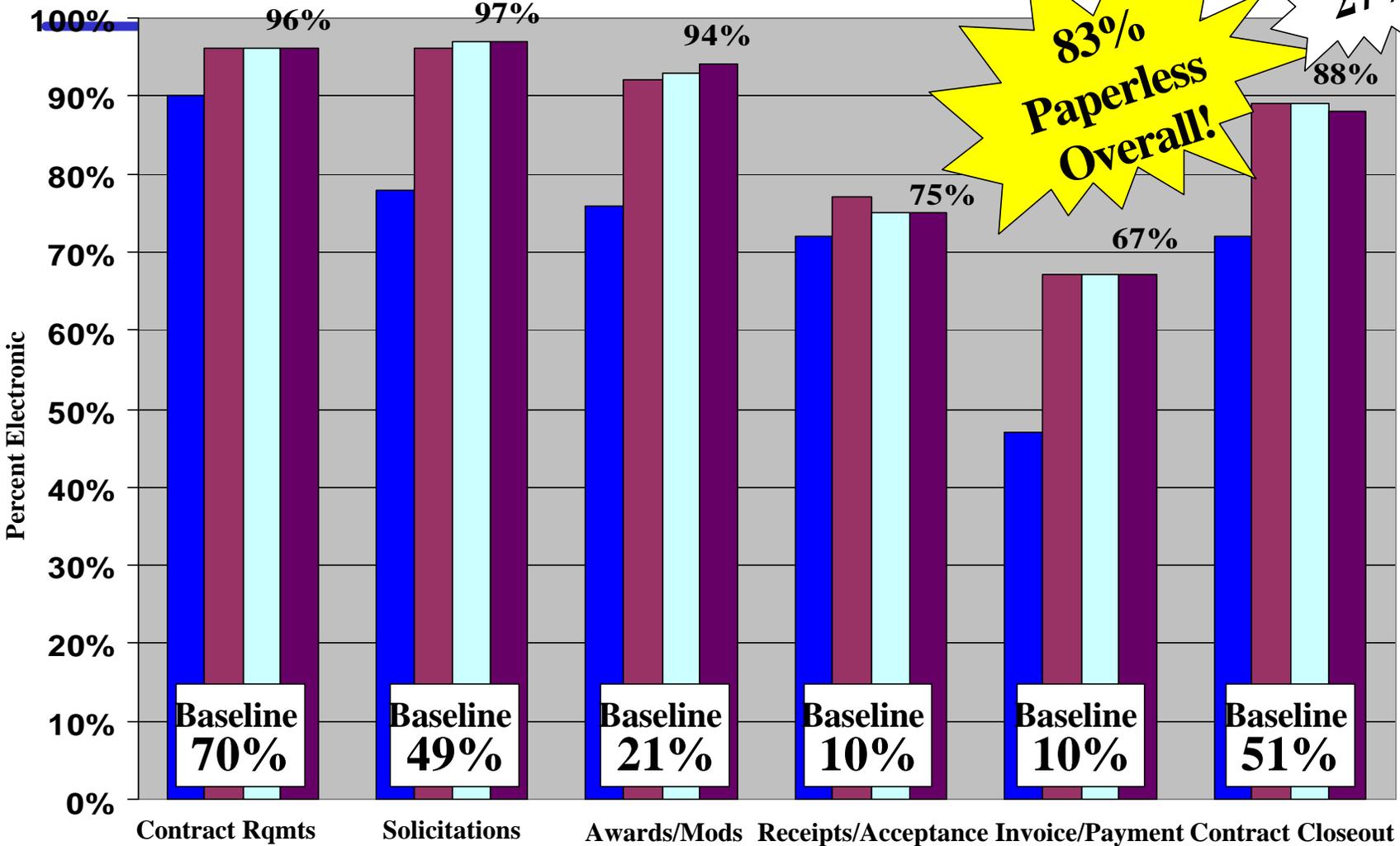
Dropped below 90%⁵²



DoD Metrics Summary

Baseline
27%

83%
Paperless
Overall!



■ FY99 Annual ■ June 00 ■ July 00 ■ August 00



Information



Federal EC Program Office

<http://EC.Fed.Gov/>

202-501-7092

DoD eBusiness Office

<http://ww.c3i.osd.mil/org/cio/ebpage.html>

703-604-1475

Back Up

Slides Follow

Range

Purchasing - Acquisition

- ◆ Low Dollar Transactions
 - Micro Purchases
- ◆ High Volume
 - x% of Total Transactions
- ◆ Relatively Low Information
- ◆ High Dollar Transactions
 - Major Systems / Contracts
- ◆ Low Volume
 - % of Total Transactions
- ◆ Relatively High Information



Environs

- ◆ Commodities
- ◆ E-Catalogs / E-Malls
- ◆ Credit Cards

Environs

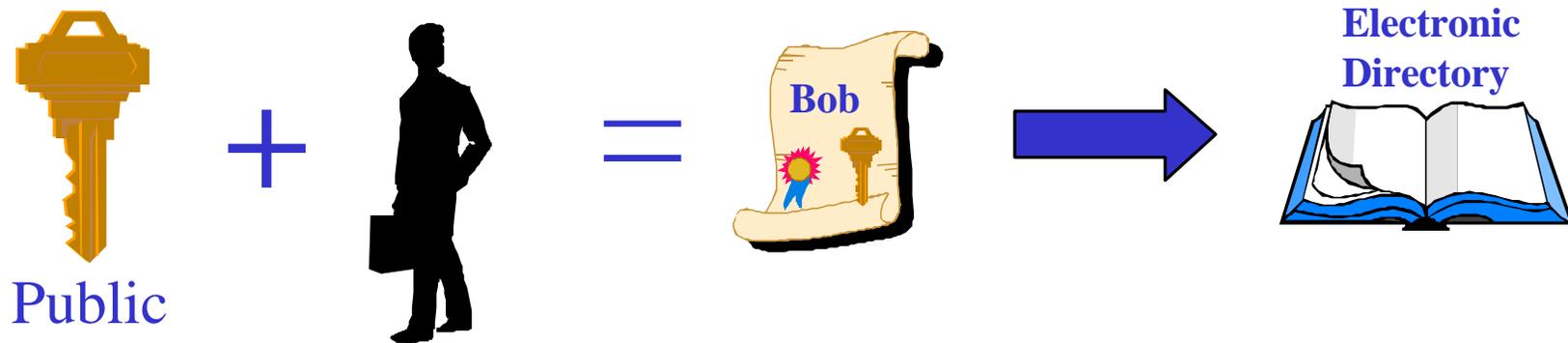
- ◆ Major Weapon Systems
- ◆ Integrated Data Environment
- ◆ CALS / JCALS/ JEDMICS

Key Concepts

Generate public/private key pair:



Public key + Name + 3rd Party signature = CERTIFICATE

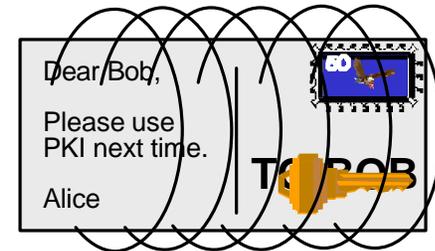


A PKI Generates, Publishes, & Maintains Certificates

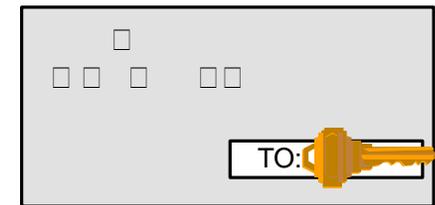
Basic Public Key Cryptographic Services

◆ Digital Signature

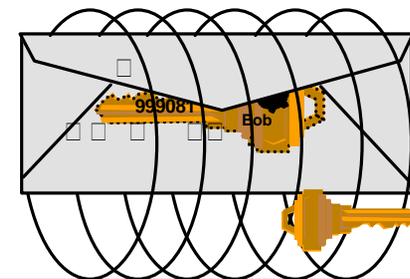
- Authentication
- Integrity



◆ Encryption



◆ Encryption + Digital Signature



- These basic functions can be used for many other operationally useful things:

- Verify someone's electronic identity
- Simplify key management for virtual private networks, etc.

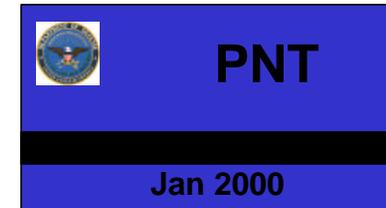
FIPS 186-1

Digital Signature Standard

- ◆ **RFC**
 - Fed Register Dec 15, 98
 - Comments Due Mar 15, 99
 - Final Decision to Follow
- ◆ **Effective Dec 15, 98 as Interim**
- ◆ **DSA and X 9.31 (RSA Signature)**
- ◆ **Separate DigSig from Encryption**
- ◆ **The FIPS is at:**
 - <http://csrc.nist.gov/cryptval/dss/fr981215.htm>

Direction: Common Access Card

- ◆ **Draft DRID in preparation**
- ◆ **Coordination with NSA/GSA/+**
- ◆ **Features:**
 - **Selected Physical Access**
 - **Selected Information Systems Access**
 - **Unique, High-Tech User Identifiers**



EFT Payments

Treasury Disbursed Payments - 1998

Type of Payment	Total No. of Payments (millions)	Percent EFT
Federal Salaries	51.1	95
Federal Pensions	28.8	82
Social Scty Benefits	535.1	71
Veterans Benefits	39.4	67
Vendor Payments Supplemental	14.8	42
Security Income	80.7	40
Tax Refunds	90.7	21

Federal Business Opportunities (FedBizOpps) Goal

- ◆ **Provide a method for notice of agency requirements or agency solicitation for contract opportunities in a form that allows convenient and universal user access through a single, Government-wide point of entry (ref section 850).**

FedBizOpps web site:
<http://www.fedbizopps.gov/>

For more information on FedBizOpps:
<http://www.ec.fed.gov/fedbizopps.htm>

FedBizOpps Pilot Agencies

- ◆ **General Services Administration**
- ◆ **National Aeronautics & Space Admin.**
- ◆ **U.S. Air Force**
- ◆ **Department of Transportation**
- ◆ **Department of Commerce**
- ◆ **Department of Treasury**

<http://www.ec.fed.gov/fedbizopps.htm>

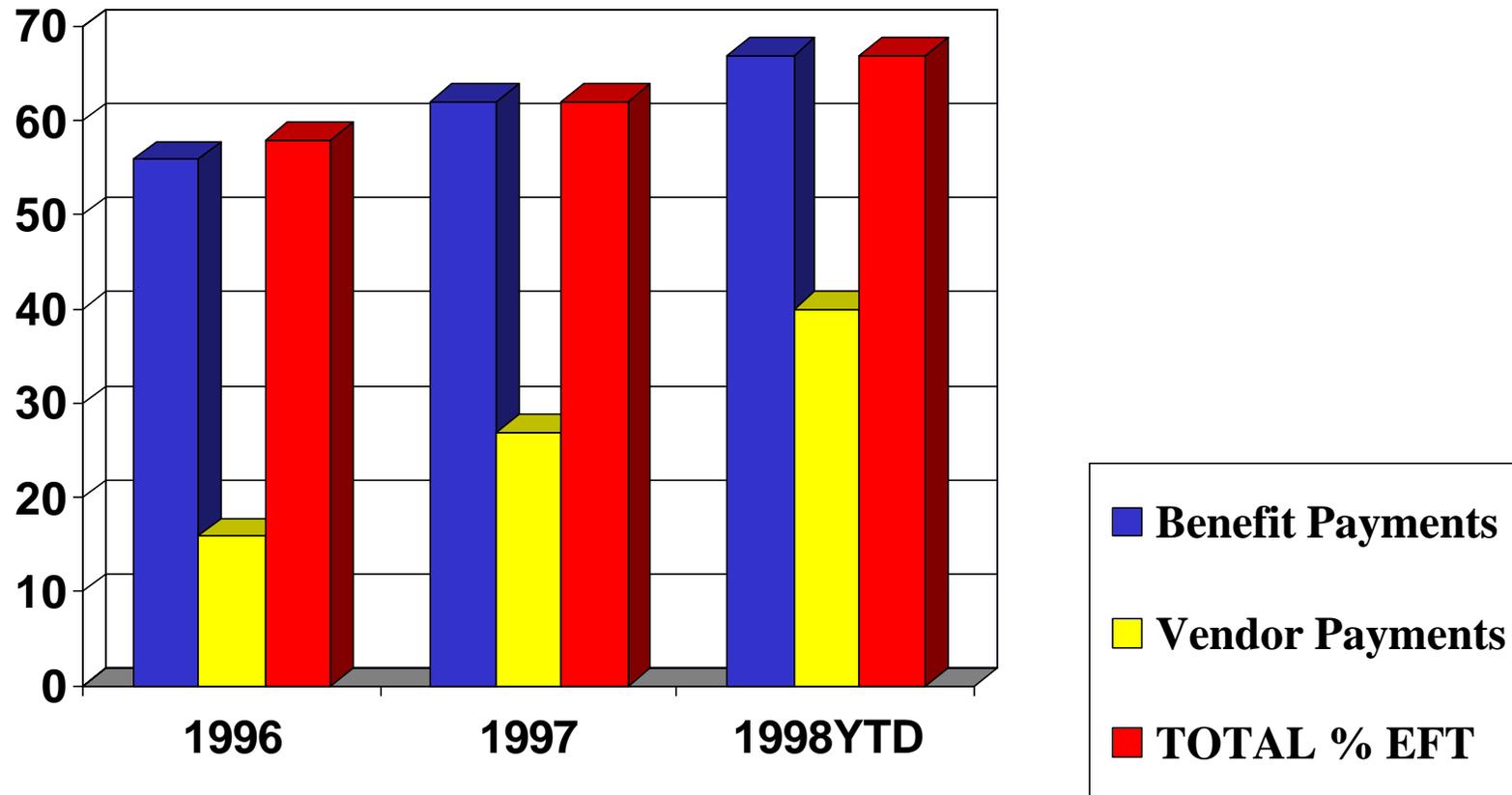
Support & Continue Maturation of the EC Toolbox

- ◆ EDI
- ◆ Smart Cards
- ◆ Purchase Cards
- ◆ Common Access Cards
- ◆ Commercial Security -- EB/EC Assurance
- ◆ EFT
- ◆ Web Access
- ◆ IDE
- ◆ Message Based EB/EC



Electronic Fund Transfers

Percent of EFT Payments



EB/EC as an Agent of Change



◆ Past

- Locally Optimized
- Stovepiped
- Technically Driven

- Non-Standard
- Duplicative
- Costly & Wasteful

◆ Future with EB/EC

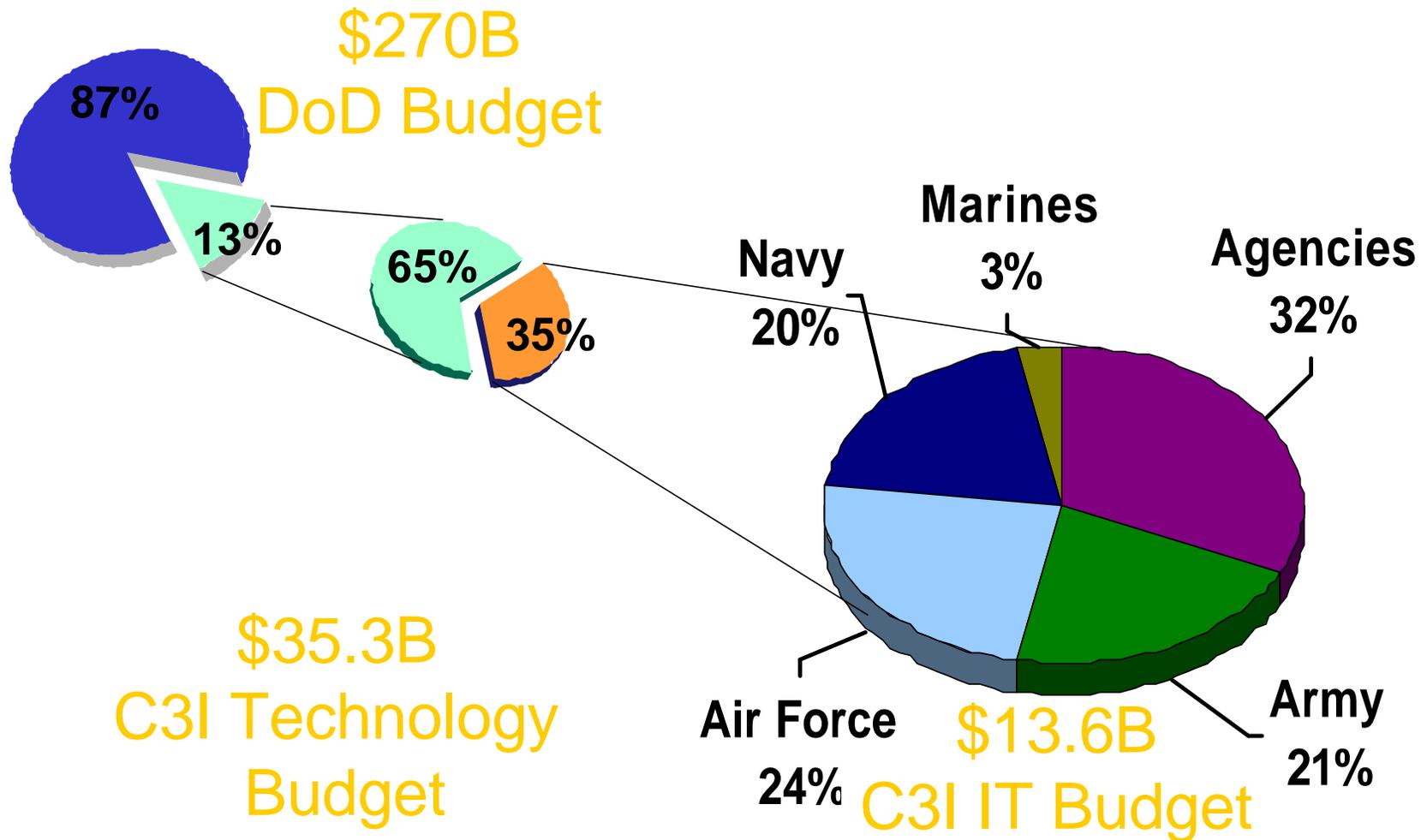
- Globally Optimized
- Integrated
- Functional & Technical Collaboration
- Standard
- Consolidated
- Best Practices Emulated

Information Technology

- ◆ DoD Has
 - 2-3M Computers
 - 2,017 Mission Critical Systems
 - 4,768 Non Mission Critical Systems
 - Thousands LANs & Hundreds of WANs/Long Haul Circuits
 - Thousands of IT Applications

Large Complex Global Enterprise

DoD IT Budget



Definitions

- ◆ **Public Key Technology** is a method of encryption where the encryption and decryption process are related, but the relationship is not readily discernable. Thus, one part of the process may be made public, without disclosing the other (private) part.
- ◆ A **Public Key Infrastructure** provides for the generation, distribution, and revocation of Public/Private key pairs to Valid users within a Community of Interest.

PKI Applications

Desktop

- ◆ E-mail
- ◆ E-Business
- ◆ File Transfer Protocol and TELNET
- ◆ Secure Sockets Layer
- ◆ File Encryption
- ◆ Unitary Log-in
- ◆ Client-Server Authentication
- ◆ Remote Access

Network

- ◆ Virtual Private Networks
- ◆ ipSEC
- ◆ Network Encryption
- ◆ Firewall Authentication
- ◆ ATM Network Encryption
- ◆ SONET Encryption
- ◆ Secure Network Mgmt Protocol Authentication

How Far We've Come...

e-Business

- ◆ e-Business
- ◆ Strategic Plan & Implementation Plan
- ◆ Directives and operational architecture
- ◆ e-Mall expansion
- ◆ Performance metrics

DoD Values/Benefits from an EB/EC Architecture

- ◆ **Promote interoperability**
- ◆ **Promote resource sharing**
- ◆ **Achieve reduced costs (freeing up resources for other high priority needs)**
- ◆ **Enhance communication and understanding**
- ◆ **Improve our ability to share information**
- ◆ **Assist us in bringing the Revolution in Business Affairs into the Department, which will in turn support/facilitate the Revolution in Military Affairs**