

**STAFF SUMMARY SHEET**

TO	ACTION	SIGNATURE (Surname), GRADE AND DATE	TO	ACTION	SIGNATURE (Surname), GRADE AND DATE
1 ESC/CX	Coord	<i>Burt</i> , COL 16 Jul 01	6 ESC/CC	Sign	<i>K</i> 16 Jul 01
2 ESC/CCT	In Process	<i>ASgt MLEZ</i>	7 ESC/CCT	Out Process	<i>MSgt MLEZ</i> 17 Jul 01
3 ESC/CCZ	Coord		8		
4 ESC/CO	Coord		9		
5 ESC/CD	Coord		10		

SURNAME OF ACTION OFFICER AND GRADE	SYMBOL	PHONE	TYPYST'S INITIALS	SUSPENSE DATE
Powis, Mr., GS-15	ESC/DIJ	3-8488	db	

SUBJECT	DATE
DAC Enterprise Directive 002 - Web-Enabling Systems for the C2 Enterprise	20010716

**SUMMARY**

1. This Directive (Tab 1) implements SECAF and CSAF Memorandum establishing Web-enabling Technologies and Standards for AF Applications (Tab 2).

2. **RECOMMENDATION:** ESC/CC sign proposed directive.

*Matt L. Mleziva*

MATT L. MLEZIVA, SES  
 Program Director  
 Defense Information Infrastructure - AF

2 Tabs  
 1. Proposed DAC Directive 002  
 2. SECAF/CSAF Memorandum, Information Technology (IT) Web-enabling Technologies and Standards for AF Applications, 9 July 2001



SECRETARY OF THE AIR FORCE  
WASHINGTON

JUL 9 2001

MEMORANDUM FOR ALMAJCOM-FOA-DRU/CC

SUBJECT: Information Technology (IT) Web-enabling Technologies and Standards for AF Applications

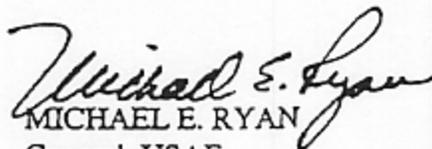
Information Technology (IT) Systems and National Security Systems (NSS) must be interoperable within the Air Force, among the joint services and other communities of interest. Currently, the wide variety of standards limit information support to our warfighters, decision support, and Command and Control processes across the Air Force. To move ahead, we must integrate web-enabling technologies and standards to govern information interchange and promote greater interoperability.

The following four IT commercial web-enabling technologies and standards are Air Force requirements for Joint systems that apply to all Air Force systems. Air Force Community of Interest domains will migrate to these standards.

- a. Internet Protocol (IP)
- b. Extensible Markup Language (XML)
- c. Web/Universal Resource Locator (URL)
- d. Web Browser (HTTP/HTTPS/HTML supported)

All systems in development will apply these four technologies and standards, and plans must be developed and executed to migrate legacy systems. Attachment 1 provides details on the fundamental technologies.

Lead MAJCOM, Functional Area, FOA and DRU commanders are responsible for new IT/NSS development and legacy system maintenance and modernization. The Air Force-CIO will review IT/NSS program standards migration plans as part of AF POM preparations to develop a consistent and cost effective IT investment strategy compliant with the Clinger-Cohen Act.

  
MICHAEL E. RYAN  
General, USAF  
Chief of Staff

  
JAMES G. ROCHE  
Secretary of the Air Force

## Attachment 1

### Amplification of Information Technology (IT) Web-enabling Technologies and Standards for AF Applications

1. The following is an expansion of the IT Standards outlined in paragraph 2 with applicable notes
  - a. Internet Protocol (IP) applied at the network layer for communications systems\* to provide a foundation for seamless end-to-end communications for AF/Joint Command, Control, Communications, Computer, Intelligence, Surveillance and Reconnaissance (C4ISR) systems,
    - \*Certain networks, e.g., space, airborne data links, 'special use' airborne/terrestrial circuits, etc. will continue to use special protocols to satisfy unique warfighter/user performance requirements. These special networks will connect to the IP backbone through translating gateways.
  - b. Extensible Markup Language, Intelligence, Surveillance and Reconnaissance (C4ISR) systems, data exchanges and to the maximum extent possible, intra-Domain COI data exchanges: to facilitate publish and subscribe mission relevant information brokering vital to effective Information Management,
  - c. Web/Universal Resource Locator (URL) enabled AF applications and systems: web-enabled applications access should provide the maximum functionality possible to facilitate the establishment of Warfighter Portal services and data access for all missions the AF supports, and
  - d. Web Browser (HTTP/HTTPS/HTML\* supported) entry to all AF IT/NSS systems in development and for legacy systems where practical to facilitate ready application data access and (self-service) system operation.
    - \* "Secure Sockets layer (SSL) protocol or better" mandated by Department of Defense Public Key Infrastructure (PKI) and PKI Enabled Applications memo, OASD/C3I, November 2000

2. **Exemption Waivers to Applying Web-enabling Technologies and Standards:** Certain IT/NSS systems will continue to use special protocols, message formats, and presentation methods to satisfy unique military requirements or to support legacy technologies. These special IT/NSS systems should use translation mechanisms (e.g., gateways) to enable information exchange across the standards-based IT infrastructure described herein. Furthermore, it is recognized that the feasibility of legacy system migration is often dependent on diverse political, programmatic and economic considerations. Consequently, valid business case substantiated analyses in support of exemption waivers against any web-enabling standards dictates in this Policy Memo will be considered.

*Questions regarding application of IT architectures and standards should be directed to Mr. Gilligan or Mr. Phil Huber in the AF-CIO at [james.huber@pentagon.af.mil](mailto:james.huber@pentagon.af.mil), DSN 329-3574 or (703) 601-3574.*



## DEPARTMENT OF THE AIR FORCE

HANSCOM AFB, MA 01731-2109

OFFICE OF THE DESIGNATED ACQUISITION COMMANDER, C2 ENTERPRISE INTEGRATION

16 JUL 01

MEMORANDUM FOR SEE DISTRIBUTION

FROM: DAC, C2 Enterprise Integration  
ESC/CC  
9 Eglin Street  
Hanscom AFB, MA 01731-2109

**SUBJECT: DAC Enterprise Directive 002 – Web-Enabling Systems for the C2 Enterprise**

REFERENCE: CSAF & SECAF Policy Memorandum – Information Technology (IT)  
Web-enabling Technologies and Standards for AF Applications, 9 July 2001

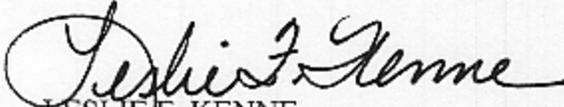
The referenced Air Force Policy Memorandum establishes formal policy direction affecting our C2 Enterprise. The changes this policy intends to put in place are critical to achieving C2 integration. Therefore, I am directing the following essential components be implemented as quickly as possible for AF Information Technology and National Security Systems within the C2 enterprise shown at Attachment 1.

- a. Interfaces will be standardized through the Internet Protocol (IP). By using the IP protocol AF C2 systems will have standard addresses through which they can be accessed – just like the telephone system. This provides a common mechanism to move data from one machine to another permitting operations on standard networks anywhere in the world.
- b. Data transfers will use the Extensible Markup Language (XML) to facilitate publish and subscribe information brokering via a standard language – just like English is the standard language for pilots. With XML, an IT system can “publish” data and make it available to many systems and users.
- c. Browser-based applications with standard internet addressing (Universal Resource Locator) will be used. Browser enabling an information system permits access to the application/data from anywhere on the network through wide variety of devices (e.g. handhelds) not just PCs – keeping up to date with consumer electronics.

The use of Universal Resource Locators and browser-based applications, when combined with XML and IP provide users with the tools they need to efficiently and quickly access and use applications. IP enabling our information systems will permit them to be connected to the Joint/AF shared network (e.g. NIPRNET or SIPRNET). Like the telephone system, once connected, you only need the address (telephone number) of the party to be called. You can call from anyplace on the globe and the connection path and media are transparent. Adopting a URL provides a network address for any information system so it can be accessed from anywhere on the net via a directory. By making applications browser-based users are presented with a simple and consistent way of interacting with them – just like the computers you use at home. Lastly, XML enabling an application permits you to send both data and a description of that data in a way that an XML enabled recipient can understand without agreeing in advance on a fixed format.

Request each DAC/PEO in the C2 Enterprise provide a schedule by 31 August 2001 depicting when their programs could comply with each of the above components within their current funding profile. The purpose is not to produce implementation plans at this stage, but to compile an integrated look at when our C2 systems (in the main) might be compliant. This should be a first order look at the overall picture. In the future, each DAC/PEO will need to continue to work with their customers for appropriate requirements and funding changes as required. The opportunity the enterprise approach presents is to begin to work together to make these changes to benefit interoperability across our C2 system. We have scheduled a PEO/DAC forum for 5 September 2001 and these schedules will be a topic of discussion.

If you have questions regarding this directive please contact Lt Col Bill Nelson, ESC/CXP at DSN 478-6420 (bill.nelson@hanscom.af.mil).

  
LESLIE F. KENNE  
Lieutenant General, USAF  
DAC, C2 Enterprise Integration

Attachments

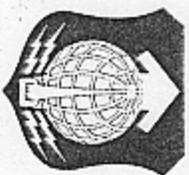
1. C2 Enterprise Portfolio
2. Schedule Format

Distribution:

AFPEO/AT  
AFPEO/C2&CS  
ASC/CC, RA  
ESC/AC, AW, CX, DI, FD, FM, GA, JS, MC, ND, SR  
ESC/BP, EN, FA, FM, IN, PK, TE, XP  
ESC/CV, CD, CO, CCC, CCT, CCX, CCZ  
ESC/MSG, SSG, 38EIW, CPSG  
OC-ALC/CC  
OO-ALC/CC

cc:

AAC/CC  
AC2ISRC/CC  
AF-CIO  
AFMC/CC, DR, EN, LG  
AFOTEC/CC  
AFPEO/SP  
AFPEO/FB  
AFRL/CC  
ESC/BC, HO, IG, PA, SE  
SAF/AQ, AQI  
SMC/CC  
WR-ALC/CC



# C2ISR Enterprise Portfolio

AFPEO/C2 & Combat Support  
Brig Gen Riemer

GCSS-AF

FIRST JAMSS  
ILS-S GTN  
GCSS-AF Remaining  
IMDS PEO/IL Prog  
Log Info Sys

Platform & Sensors

AWACS  
R/ADS(R/SAOC)  
CRC (GTACS)  
CBMS  
JSTARS  
MP-RTIP  
Strategic/Nuclear C2  
SWPS  
ISC2-N/UWSS  
CMC/CMU  
MCCC  
SEWS/JDEC  
SBMCS  
Global Hawk (after DAB)

ESC/DAC  
Lt Gen Kenne

**Integration between Domains**  
*Enterprise system arch definition*  
*Enterprise sys config mgt & control*  
*Enterprise performance certification*  
*Aeronautical Enterprise Infrastructure Acq*

*Major cross program execution*

CDL	Programs	<u>GCSS-AF</u>
Link-16	UEWR	App Int
IBS	ISR-BM	AOC
TDC	JTRS	DCCGS
CITS	Contr Info Sys	TBMCS
GATO/MC2		Info Ops Sys
JTT		Func Supt Info
DII	Integration Efforts	Force Protection
SIAP/FIOP		JDEP
Domain Architectures for GCSS-AF & GCSS-AF		
Crypto Systems	Fin Info Sys	
Med Info Systems	Bus Info Sys	

ASC/DAC  
Lt Gen Reynolds

UAV Enhancements  
U-2  
Rivet Joint  
Compass Call  
Commando Solo  
Big Safari  
JSAAF

OO-ALC/DAC  
MGen Bergen  
Photo/Recon/Imaging  
Telecommunications  
Ground Based Sensors

OC-ALC/DAC  
MGen Johnson  
HFCCS

AFPEO/AT  
BGen Chedister  
NAS JPALS GATM

# Program Name

	Start Date	Completion Date	Comments
IP			
XML			
URL			
Browser-based Applications			

POC: Name/Office/Phone/email