

```

#pragma once
#ifdef _MSC_VER > 1000
    #include <afxwin.h>
    #error include 'afxwin.h' before 'afxres.h'
#endif
#include "resource.h" // icons and bitmaps
// CDMotionApp
// See DMotion.cpp for the implementation of the class
//
class CDMotionApp : public CWinApp
{
public:
    CDMotionApp();
    // Overrides
    // ClassWizard generated virtual function overrides
    //{{AFX_VIRTUAL(CDMotionApp)
    public:
        virtual BOOL InitInstance();
    //}}AFX_VIRTUAL

    // Implementation
    //{{AFX_MSG(CDMotionApp)
    afx_msg void OnAppAbout();
    // NOTE - the ClassWizard will add and remove
    //      messages here.
    // MSG HANDLING HERE
    //{{

```

# Special Publication 800-171

## ***Protecting Controlled Unclassified Information in Nonfederal Information Systems and Organizations***

Dr. Ron Ross  
Computer Security Division  
Information Technology Laboratory

First, some definitions.



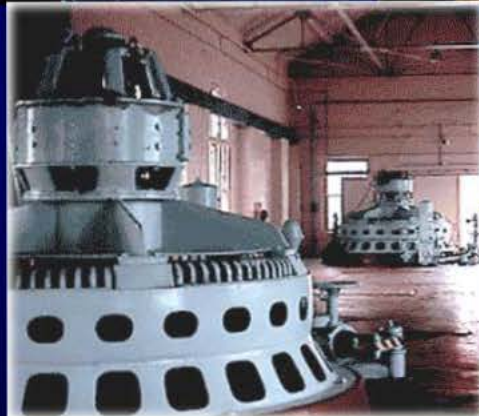
## *Controlled Unclassified Information*

Information that law, regulation, or governmentwide policy requires to have safeguarding or disseminating controls, excluding information that is classified under Executive Order 13526, Classified National Security Information, December 29, 2009, or any predecessor or successor order, or the Atomic Energy Act of 1954, as amended.

-- Executive Order 13556

# Controlled Unclassified Information

*Supports federal missions  
and business functions...*



*...that affect the economic and  
national security interests of the  
United States.*





# *Federal Information System*

An information system used or operated by an executive agency, by a contractor of an executive agency, or by another organization on behalf of an executive agency.

-- Federal Information Security Management Act (40 U.S.C., Sec. 11331)



## *Nonfederal Information System*

An information system that does not meet the criteria for a federal information system.

-- NIST Special Publication 800-171



## *Nonfederal Organization*

An entity that owns, operates, or maintains a nonfederal information system.

-- NIST Special Publication 800-171

# Nonfederal Organizations

## *Some Examples*

- Federal contractors.
- State, local, and tribal governments.
- Colleges and universities.







## *An urgent need... A national imperative.*

The protection of Controlled Unclassified Information while residing in nonfederal information systems and organizations is of paramount importance to federal agencies and can *directly* impact the ability of the federal government to successfully carry out its designated missions and business operations.

-- NIST Special Publication 800-171



# Executive Order 13556

## *Controlled Unclassified Information*

November 4, 2010

### **The Order —**

- Established a governmentwide Controlled Unclassified Information (CUI) Program to standardize the way the Executive branch handles unclassified information that requires protection.
- Designated the National Archives and Records Administration (NARA) as the Executive Agent to implement the CUI program.

***Only information that requires safeguarding or dissemination controls pursuant to federal law, regulation, or governmentwide policy may be designated as CUI.***

```

#pragma once
#ifdef _MSC_VER > 1000
#include <afxwin.h>
#endif
#include "Resource.h"
// CDMotionApp
// See DMotion.cpp for the implementation of the class
class CDMotionApp : public CWinApp
{
public:
    CDMotionApp();
    // Overrides
    // ClassWizard generated virtual function overrides
    //{{AFX_VIRTUAL(CDMotionApp)
    public:
        virtual BOOL InitInstance();
    //}}AFX_VIRTUAL

    // Implementation
    //{{AFX_MSG(CDMotionApp)
    afx_msg void OnAppInit();
    // NOTE - the ClassWizard will add and remove
    // messages here.
    //{{AFX_MSG_END
};

```

# The CUI Registry

[www.archives.gov/cui/registry/category-list.html](http://www.archives.gov/cui/registry/category-list.html)

- Online repository for information, guidance, policy, and requirements on handling CUI, including issuances by the CUI Executive Agent.
- Identifies approved CUI categories and subcategories (with descriptions of each) and the basis for controls.
- Sets out procedures for the use of CUI, including but not limited to marking, safeguarding, transporting, disseminating, re-using, and disposing of the information.





# The Big Picture

*A three-part plan for the protection of CUI*

- Federal CUI rule (32 CFR Part 2002) to establish the required controls and markings for CUI governmentwide.
- NIST Special Publication 800-171 to define security requirements for protecting CUI in nonfederal information systems and organizations.
- Federal Acquisition Regulation (FAR) clause to apply the requirements of the federal CUI rule and NIST Special Publication 800-171 to contractors.





## NIST Special Publication 800-171

# Protecting Controlled Unclassified Information in Nonfederal Information Systems and Organizations

***Final Public Draft***

***April 2015***

# Purpose

- To provide federal agencies with recommended requirements for protecting the confidentiality of CUI —
  - *When the CUI is resident in nonfederal information systems and organizations.*
  - *Where the CUI does not have specific safeguarding requirements prescribed by the authorizing law, regulation, or governmentwide policy for the CUI category or subcategory listed in the CUI Registry.*
  - *When the information systems where the CUI resides are not operated by organizations on behalf of the federal government.*

# Applicability

- CUI requirements apply only to components of nonfederal information systems that process, store, or transmit CUI, or provide security protection for such components.
- *The requirements are intended for use by federal agencies in contractual vehicles or other agreements established between those agencies and nonfederal organizations.*







# Target Audience

*Public and Private Sectors*

Individuals with —

- System development life cycle responsibilities.
  - Program managers, information owners, mission/business owners.
- Acquisition or procurement responsibilities.
  - Contracting officers, COTRs.
- Information security or risk management responsibilities.
  - Authorizing officials, CIOs, CISOs, system owners/security managers.
- Security assessment and monitoring responsibilities.
  - Auditors, system evaluators, assessors, independent verifiers and validators.



# Assumption #1

- Statutory and regulatory requirements for the protection of CUI are *consistent*, whether such information resides in federal information systems or nonfederal information systems.



## Assumption #2

- Safeguards implemented to protect CUI are *consistent* in both federal and nonfederal information systems and organizations.



## Assumption #3

- The confidentiality impact value for CUI is no lower than *moderate* in accordance with FIPS Publication 199.







# Additional Assumptions

## Nonfederal Organizations —

- Have information technology infrastructures in place.
  - Are not developing or acquiring systems specifically for the purpose of processing, storing, or transmitting CUI.
- Have safeguarding measures in place to protect their information.
  - May also be sufficient to satisfy the CUI requirements.
- May not have the necessary organizational structure or resources to satisfy every CUI security requirement.
  - Can implement alternative, but equally effective, security measures.
- Can implement a variety of potential security solutions.
  - Directly or through the use of managed services.





# CUI Security Requirements

Basic and derived security requirements are obtained from FIPS 200 and NIST SP 800-53 initially — and then *tailored* appropriately to *eliminate* requirements that are:

- Uniquely federal (i.e., primarily the responsibility of the federal government).
- Not directly related to protecting the confidentiality of CUI.
- Expected to be routinely satisfied by nonfederal organizations without specification.



- Access Control.
  - Audit and Accountability.
  - Awareness and Training.
  - Configuration Management.
  - Identification and Authentication.
  - Incident Response.
  - Maintenance.
  - Media Protection.
  - Physical Protection.
  - Personnel Security.
  - Risk Assessment.
  - Security Assessment.
  - System and Communications Protection
  - System and Information Integrity.

# Security Requirements

***14 Families***

*Obtained from FIPS 200 and  
NIST Special Publication 800-53.*

# Structure of Security Requirements

- Security requirements have a well-defined structure that consists of the following components:
  - *Basic security requirements section.*
  - *Derived security requirements section.*







# Security Requirement

## *Configuration Management Example*

### Basic Security Requirements:

- 3.4.1** Establish and maintain baseline configurations and inventories of organizational information systems (including hardware, software, firmware, and documentation) throughout the respective system development life cycles.
- 3.4.2** Establish and enforce security configuration settings for information technology products employed in organizational information systems.

### Derived Security Requirements:

- 3.4.3** Track, review, approve/disapprove, and audit changes to information systems.
- 3.4.4** Analyze the security impact of changes prior to implementation.
- 3.4.5** Define, document, approve, and enforce physical and logical access restrictions associated with changes to the information system.





*Mapping CUI Requirements to  
ISO 27001 and SP 800-53 Security Controls*

*Mapping Tables.*

Two new appendices.

*Tailoring actions applied to moderate security  
control baseline.*



*Tailoring Criteria.*

The road ahead.



## In the Interim...

***Using NIST Special Publication  
800-171 on a voluntary basis***

- Until the formal process of establishing a single FAR clause takes place, the CUI security requirements in NIST Special Publication 800-171 may be referenced in federal contracts consistent with federal law and regulatory requirements.





# NIST Special Publication 800-171

## **Final Public Comment Period**

April 2 – May 12, 2015

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