



NATIONAL DEFENSE RESEARCH INSTITUTE

CHILDREN AND FAMILIES
EDUCATION AND THE ARTS
ENERGY AND ENVIRONMENT
HEALTH AND HEALTH CARE
INFRASTRUCTURE AND
TRANSPORTATION
INTERNATIONAL AFFAIRS
LAW AND BUSINESS
NATIONAL SECURITY
POPULATION AND AGING
PUBLIC SAFETY
SCIENCE AND TECHNOLOGY
TERRORISM AND
HOMELAND SECURITY

The RAND Corporation is a nonprofit institution that helps improve policy and decisionmaking through research and analysis.

This electronic document was made available from www.rand.org as a public service of the RAND Corporation.

Skip all front matter: [Jump to Page 1](#) ▼

Support RAND

[Purchase this document](#)

[Browse Reports & Bookstore](#)

[Make a charitable contribution](#)

For More Information

Visit RAND at www.rand.org

Explore the [RAND National Defense Research Institute](#)

View [document details](#)

Limited Electronic Distribution Rights

This document and trademark(s) contained herein are protected by law as indicated in a notice appearing later in this work. This electronic representation of RAND intellectual property is provided for non-commercial use only. Unauthorized posting of RAND electronic documents to a non-RAND website is prohibited. RAND electronic documents are protected under copyright law. Permission is required from RAND to reproduce, or reuse in another form, any of our research documents for commercial use. For information on reprint and linking permissions, please see [RAND Permissions](#).

This report is part of the RAND Corporation research report series. RAND reports present research findings and objective analysis that address the challenges facing the public and private sectors. All RAND reports undergo rigorous peer review to ensure high standards for research quality and objectivity.



Authority to Issue Interoperability Policy

Carolyn Wong, Daniel Gonzales



NATIONAL DEFENSE RESEARCH INSTITUTE

Authority to Issue Interoperability Policy

Carolyn Wong, Daniel Gonzales

This research was conducted within the Acquisition and Technology Policy Center (ATPC) of the RAND National Defense Research Institute, a federally funded research and development center sponsored by the Office of the Secretary of Defense, the Joint Staff, the Unified Combatant Commands, the Navy, the Marine Corps, the defense agencies, and the defense Intelligence Community under contract W74V8H-06-C-0002.

Library of Congress Cataloging-in-Publication Data

Wong, Carolyn, 1952-
Authority to issue interoperability policy / Carolyn Wong, Daniel Gonzales.
pages cm
Includes bibliographical references.
ISBN 978-0-8330-8177-3 (pbk. : alk. paper)
1. United States. Navy—Management. 2. United States. Navy—Personnel management. 3. Sea-power—United States—Management. 4. Organizational effectiveness. I. Gonzales, Daniel, 1956- II. Rand Corporation. III. Title.

VA58.4.W64 2013

359.30973—dc23

2013036815

The RAND Corporation is a nonprofit institution that helps improve policy and decisionmaking through research and analysis. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors.

Support RAND—make a tax-deductible charitable contribution at www.rand.org/giving/contribute.html

RAND® is a registered trademark.

© Copyright 2014 RAND Corporation

This document and trademark(s) contained herein are protected by law. This representation of RAND intellectual property is provided for noncommercial use only. Unauthorized posting of RAND documents to a non-RAND website is prohibited. RAND documents are protected under copyright law. Permission is given to duplicate this document for personal use only, as long as it is unaltered and complete. Permission is required from RAND to reproduce, or reuse in another form, any of our research documents for commercial use. For information on reprint and linking permissions, please see the RAND permissions page (www.rand.org/pubs/permissions.html).

RAND OFFICES

SANTA MONICA, CA • WASHINGTON, DC

PITTSBURGH, PA • NEW ORLEANS, LA • JACKSON, MS • BOSTON, MA

DOHA, QA • CAMBRIDGE, UK • BRUSSELS, BE

www.rand.org

Preface

This document presents an approach for determining which parties have authority to issue Navy interoperability policy, the origins and implementation paths of the authority, and the extent of the authority. The methodology identifies the officials who are assigned roles, responsibilities, and authorities in defense guidance and enables comparison of the scopes of responsibility to determine gaps, overlaps, ambiguities, and inconsistencies in defense policy. We applied the approach to Navy interoperability policy to show that multiple parties can claim legal authority to issue Navy mission area systems engineering policy.

This study builds on previous RAND research for the Assistant Secretary of the Navy, Research Development, and Acquisition (ASN[RD&A]), Chief Systems Engineer (CHSENG), that demonstrated the value of using automation to facilitate analysis of many Department of Defense (DoD) policy documents. That work was documented in a report titled *Using EPIC to Find Conflicts, Inconsistencies, and Gaps in Department of Defense Policies* (Wong et al., 2013).

This research should be of interest to DoD officials responsible for formulating, reviewing, establishing, or implementing DoD policy that pertains to information technology (IT) or national security systems (NSS) or to the acquisition of weapon systems and platforms that contain IT systems and NSSs. This report should also be of interest to members of Congress and congressional staff members who play a role in the development of legislation dealing with DoD weapon system, aircraft, ship, IT, and NSS interoperability and acquisition programs.

This research was sponsored by the ASN(RD&A) CHSENG and conducted within the Acquisition and Technology Policy Center of the RAND National Defense Research Institute, a federally funded research and development center sponsored by the Office of the Secretary of Defense, the Joint Staff, the Unified Combatant Commands, the Navy, the Marine Corps, the defense agencies, and the defense Intelligence Community.

For more information on the RAND Acquisition and Technology Policy Center, see <http://www.rand.org/nsrd/ndri/centers/atp.html> or contact the director (contact information is provided on the web page). Comments or questions on this report should be addressed to the project leaders, Carolyn Wong and Daniel Gonzales.

Contents

Preface	iii
Figures	vii
Tables	ix
Summary	xi
Acknowledgments	xvii
Abbreviations	xix
CHAPTER ONE	
Introduction	1
Background	1
Purpose	2
Approach	2
Organization	3
CHAPTER TWO	
Framework and Methodology	5
Framework	5
Methodology	6
The Electronic Policy Improvement Capability	7
CHAPTER THREE	
Analysis of Authority to Issue Navy Interoperability Policy	9
Network of Linked Guidance Relevant to Navy Interoperability Policy	9
Federal Law	9
Department of Defense Issuances	10
Department of the Navy Issuances	12
R&R Network of Authority to Issue Interoperability Guidance	16
Responsibilities of Officials	17
Potential Gaps and Ambiguity in Navy Interoperability Policy	18
CHAPTER FOUR	
ASN(RD&A) CHSENG Case Study	21
Direct Paths for the ASN(RD&A) CHSENG	22
Path 1: Direct Path for ASN(RD&A) CHSENG on Navy MASE Policy	22
Path 2: Direct Path for the ASN(RD&A) CHSENG on Navy MASE Policy	25
Indirect Paths Available to the ASN(RD&A) CHSENG to Issue Navy MASE Policy	30

Path 3: Indirect Path for the ASN(RD&A) CHSENG to Issue Navy MASE Policy 30
Path 4: Indirect Path for the ASN(RD&A) CHSENG to Issue Navy MASE Policy 34
Path 5: Indirect Path for the ASN(RD&A) CHSENG to Issue Navy MASE Policy 39
Path 6: Indirect Path for the ASN(RD&A) CHSENG to Issue Navy MASE Policy 46
ASN(RD&A) CHSENG Authority to Issue MASE Policy 46
Implications of Multiple Paths of Authority 50

CHAPTER FIVE

Recommendations and Closing Remarks 51
Synopsis of the Study 51
Recommendations 52
Next Steps 53
Closing Remarks 53

APPENDIXES

A. Electronic Policy Improvement Capability (EPIC) 55
B. Statements of Authority 57
C. Authority of Other Officials 65

References 69

Figures

S.1.	Authority Framework	xi
S.2.	Schematic of Methodology	xiii
S.3.	R&R Network of Authority for Interoperability Policy Related to MASE.....	xiv
2.1.	Authority Framework	5
2.2.	Generic Form of Citation of Authority Component of Framework	5
2.3.	Example of Citation of Authority Component of Framework	5
2.4.	Example of Authority Framework	6
2.5.	Schematic of Methodology	8
3.1.	The USD(AT&L) Works with the Secretary of Defense and Service Acquisition Executives on Systems Engineering.....	12
3.2.	Federal Law Is Linked to Navy Policy Directly and Via DoD Policy.....	13
3.3.	SECNAV Policy for DON CIO Responsibilities Is Linked to Federal Law.....	14
3.4.	ASN(RD&A) CHSENG Is the Navy's Senior Technical Authority for Interoperability.....	15
3.5.	Navy Policy Specifies DON CIO Duties Related to Interoperability.....	15
3.6.	SNI 5000.36A Cites SNI 5000.2D in Assigning Responsibilities to the ASN(RD&A) and DON CIO	16
3.7.	R&R Network of Authority for Navy Interoperability Policy Related to MASE Policy	20
4.1.	Root of Paths of Authority for the ASN(RD&A) CHSENG	23
4.2.	Path 1: ASN(RD&A) CHSENG Authority to Issue Navy MASE Policy.....	24
4.3.	Path 2: ASN(RD&A) CHSENG Authority to Issue Navy MASE Policy.....	29
4.4.	Path 3: ASN(RD&A) CHSENG Authority to Issue Navy MASE Policy (Indirect).....	35
4.5.	Path 4: ASN(RD&A) CHSENG Authority to Issue Navy MASE Policy (Indirect).....	40
4.6.	Path 5: ASN(RD&A) CHSENG Authority to Issue Navy MASE Policy (Indirect).....	43
4.7.	Path 6: ASN(RD&A) CHSENG Authority to Issue Navy MASE Policy (Indirect).....	47
C.1.	Aggregate Lines of Authority Available to the Secretary of the Navy to Issue MASE Policy	66
C.2.	Aggregate Lines of Authority Available to the DON CIO to Issue MASE Policy.....	67

Tables

3.1.	Sections of Federal Law Pertinent to Authority to Issue MASE Policy	11
4.1.	Trace of Citations of Authority for Path 1	25
4.2.	Trace of Citations of Authority for Path 2	31
4.3.	Trace of Citations of Authority for Path 3	36
4.4.	Trace of Citations of Authority for Path 4	41
4.5.	Trace of Citations of Authority for Path 5	44
4.6.	Trace of Citations of Authority for Path 6	48
A.1.	Syntactic Combinations of Words of Interest	55

Summary

Introduction

Achieving interoperability among Navy systems is instrumental to enabling critical functions, such as timely information exchange during operations and efficiencies in acquisition. For this reason, it is important to understand what parties have authority to issue policy that governs the facets of interoperability. In the Navy’s Service Acquisition Executive Organization, the office of the Assistant Secretary of the Navy, Research, Development, and Acquisition (ASN[RD&A]), systems engineering policy oversight is assigned to the Chief Systems Engineer (CHSENG). The program for management of systems engineering aligned to mission area is called mission area systems engineering (MASE). This report documents policy findings with respect to identifying the parties that have roles and responsibilities for establishing and issuing Navy interoperability policy related to MASE.¹

Methodology and Framework

We present a methodology and framework that can be used to create a network of guidance relevant to a particular issue. The framework, shown in Figure S.1, has three components: citation of authority, caveats, and party with authority. The citation of authority contains the source information, such as document identifier and section number where the statement of authority is found, and a summary of the statement of authority. The caveats are a summary of the conditions that must hold in order for the citation to be referenced as authority. The party with authority is the organization, office, executive, or entity that has authority to take the action specified in the citation if the caveats hold.

The first step of our methodology is to identify and examine guidance that governs the roles, responsibilities, and authorities pertinent to the issue being investigated. Next, the analyst must locate the specific passages in each guidance document that pertain to the issue being

Figure S.1
Authority Framework



RAND RR357-S.1

¹ This report is based on information current as of July 7, 2011.

examined and assess each passage for relevance.² The set of relevant passages can then be analyzed to logically establish the links among the passages and thus weave the passages into a network of guidance relevant to the issue being investigated.

By applying the framework to the elements in the network of guidance relevant to a particular issue, the analyst can create a roles and responsibilities (R&R) network of authority that identifies all parties with roles, responsibilities, or authorities with respect to the issue being investigated. Moreover, the R&R network shows the scope of the authority each official is assigned by guidance documents via the caveats that the law and relevant policy place on the authority of each official. Hence, an analyst can compare the scopes of authority and either (1) identify the single official responsible for handling the issue being investigated, (2) show that the issue being investigated does not meet any of the caveats and hence a potential gap in the guidance exists because no official can claim responsibility to address the issue being investigated, or (3) identify multiple officials whose scopes of responsibility include the issue being investigated. If multiple officials have R&R regarding the issue being investigated, the analyst can determine whether there are other policies and procedures that prescribe the coordination of the R&R of the multiple officials. If such policies or procedures exist, then the guidance specifying the authorities is potentially overlapping and redundant. If there are no policies or processes in place to coordinate the R&R of multiple officials regarding a particular issue, then the guidance is potentially ambiguous or inconsistent. Figure S.2 shows a schematic of the methodology.

ASN(RD&A) CHSENG MASE Policy Case Study

We applied the methodology to determine who has authority to issue Navy interoperability policy related to MASE. The resulting R&R network of authority relevant to issuing Navy MASE policy shows that there are 13 different paths of authority that could be cited by four different parties to claim authority to influence interoperability policy related to MASE. Two paths stem from Section 2223(b)(3) of Title 10 of the United States Code (10 USC § 2223(b)(3)). Three paths stem from 10 USC § 2223(b)(3), 10 USC § 5013(c)(3), and 10 USC § 5013(f). The other eight paths stem from 10 USC § 133(b), 10 USC § 139b(b), 10 USC § 5013(c)(3), 10 USC § 5013(f), and 10 USC § 5016(b)(4)(A).

Four paths show that the Secretary of the Navy (SECNAV) retains authority to issue Navy interoperability policy related to MASE. Four different paths show that the Department of the Navy (DON) Chief Information Officer (CIO) has authority to issue Navy interoperability policy related to MASE. Three other paths, distinct from the eight already mentioned, give the ASN(RD&A) authority to establish Navy interoperability policy related to MASE. Finally, a separate set of two paths give the ASN(RD&A) CHSENG a pivotal role to influence interoperability policy related to MASE.

The two direct paths available to the ASN(RD&A) CHSENG to influence interoperability policy related to MASE both require the MASE policy to be providing senior technical authority on interoperability. However, if the MASE policy is not providing senior technical authority on interoperability, there are four other paths the ASN(RD&A) CHSENG

² The Electronic Policy Improvement Capability (EPIC) can facilitate location of candidate passages for further examination. EPIC is described in Appendix A. See also Wong et al., 2013.

Figure S.2
Schematic of Methodology

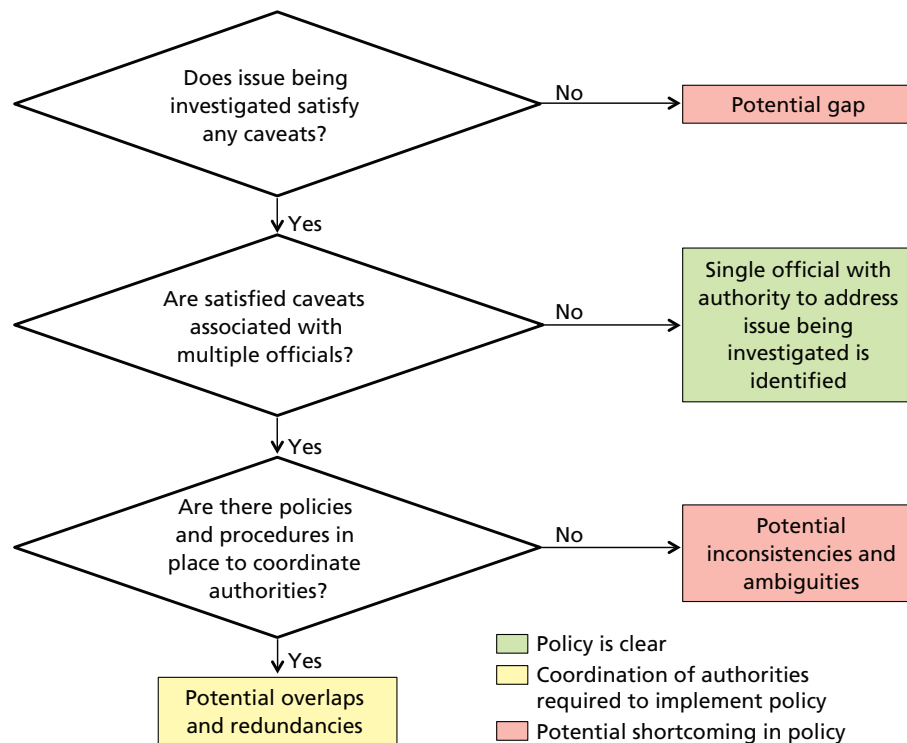
Build network of linked relevant guidance

- Identify guidance
- Locate relevant passages (Use EPIC to facilitate)
- Establish logical links among passages
- Weave passages into a network of linked relevant passages of guidance

Apply framework construct and fabricate R&R network

- Append source information to each passage to create citation of authority
- Determine caveats relevant to the issue being examined and attach caveats to citations
- Identify party with authority for each citation in the network

Analyze R&R network

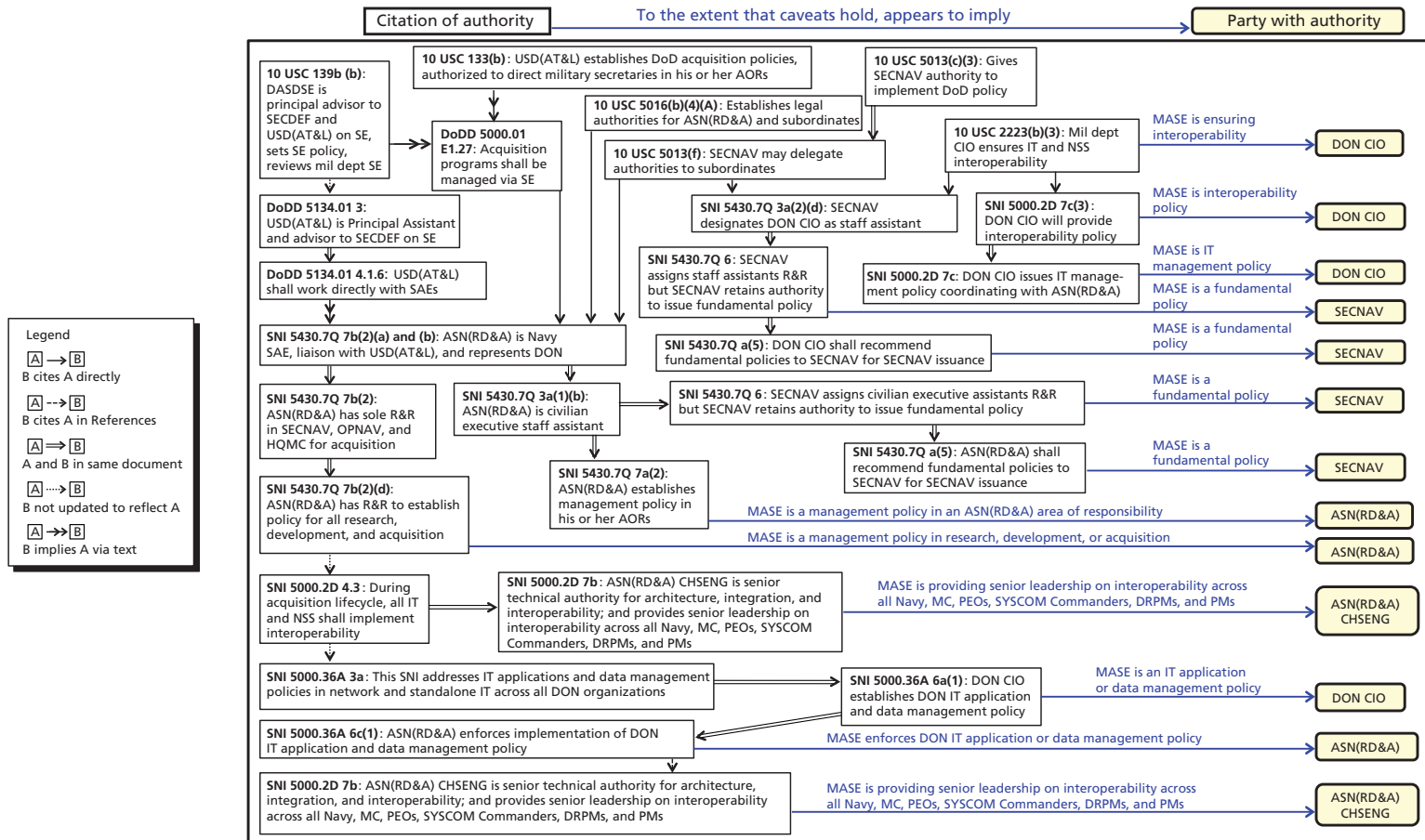


RAND RR357-S.2

can use to influence MASE policy. All four of these indirect paths require the ASN(RD&A) CHSENG to recommend MASE policy to the ASN(RD&A). If the recommended policy (1) is enforcing implementation of DON information technology (IT) application or data management policy; (2) is policy for research, development, or acquisition; or (3) is management policy in an area where the ASN(RD&A) has responsibility, then the ASN(RD&A) can issue the MASE policy recommended by the CHSENG. If the recommended MASE policy falls outside of the ASN(RD&A)'s scope of responsibility, the ASN(RD&A) can recommend the MASE policy to the SECNAV for the SECNAV to issue as fundamental policy.

Figure S.3 shows the R&R network of authority relevant to issuing Navy interoperability policy related to MASE.

Figure S.3
R&R Network of Authority for Interoperability Policy Related to MASE



NOTES: Figure is based on laws and policies current as of July 7, 2011. DASDSE = Deputy Assistant Secretary of Defense for Systems Engineering; Mil Dept = military department; USD(AT&L) = Under Secretary of Defense for Acquisition, Technology, and Logistics; AORs = areas of responsibility; CIO = Chief Information Officer; NSS = national security system; DoDD = Department of Defense Directive; SNI = Secretary of the Navy Instruction; SAE = Service Acquisition Executive; OPNAV = Office of the Chief of Naval Operations; HQMC = Headquarters Marine Corps; MC = U.S. Marine Corps; PEO = program executive office; SYSCOM = Systems Command; DRPM = direct reporting program manager; PM = program manager.

Recommendations

Our analysis shows that the body of guidance relevant to interoperability yields many paths of authority traceable to U.S. law and as many as four officials having responsibility for various aspects of interoperability. In such a situation, determining which official has responsibility for a particular facet of interoperability may not be straightforward, as illustrated in our case study of the ASN(RD&A) CHSENG's role in issuing Navy MASE policy. We recommend that all stakeholders, and particularly the ASN(RD&A) and DON CIO, take proactive steps to increase the routine communications necessary to maintain and grow collaborative working environments. Such actions will enable teamed approaches to quickly come to a shared understanding on issues of mutual interest.

Next Steps

In addition to the recommended actions, further research can enhance the government's capability to address potential inconsistencies, ambiguities, and gaps in policy:

- Research can help mitigate the probability of potential conflicts:
 - Additional proactive research can identify potential policy gaps, inconsistencies, ambiguities, and overlaps in complex areas that intersect many arenas. Such research can enable policy fixes before potential conflicts arise. Candidate areas for proactive research include more aspects of interoperability, information assurance, and cyberspace.
 - Inconsistencies in policy can arise from unsynchronized policies. Research and development of techniques that can help identify unsynchronized policies when existing policies are updated and when new policies are issued would serve to anticipate areas of potential conflict and thus provide forewarning to effect solutions before potential conflicts can occur. Such techniques can also help ensure consistency within and among bodies of policy.
- Collaborative approaches can go a long way in mitigating and avoiding potential conflicts when policy is not clear. Research in collaborative approaches and organizational management concepts that promote routine exchange of information and viewpoints and proactively foster collaborative working environments will increase management's arsenal of tools to address situations when policy is not clear.

Closing Remarks

This report presents an approach and framework for determining which parties have authority to issue Navy interoperability policy, the origins and implementation path of the authority, and the extent of the authority. The approach includes rigorous analysis by researchers to identify pertinent authorities in federal law supplemented by a means to facilitate discovery of roles and responsibilities in Department of Defense and Service-level policies. Comparisons of the scopes of roles, responsibilities, and authorities of executives assigned duties in official defense guidance allow researchers to create a network of authority for interoperability policy. This approach and the complementary analytic techniques we suggest be researched and developed can provide the government with the ability to create and maintain consistent and comprehensive bodies of policy that will ensure the effective and efficient operation of defense agencies.

Acknowledgments

We thank Ricardo Cabrera, Deputy Chief Engineer and former Acting Chief Systems Engineer, Assistant Secretary of the Navy for Research, Development, and Acquisition, for his support and interest in our work. In addition, we greatly appreciate the guidance provided by Lynn Petersen, current Director, Systems Engineering and Policy (SE&P), Deputy Assistant Secretary of the Navy for Research, Development, Test, and Evaluation (DASN RDT&E); Ken Ives, Deputy Director, Standards, Policy, and Guidance (SPG), DASN RDT&E SE&P; and Kevin Lowther, current Technical Director, Policy and Standards, SPG, DASN RDT&E SE&P. We also thank our RAND colleagues Mark Arena, former acting director of the RAND Acquisition and Technology Policy Center (ATPC), and Cynthia Cook, current director of ATPC, as well as Michel McMahon and Douglas Shontz for their insightful reviews that improved this report.

Abbreviations

AOR	area of responsibility
ASN(RD&A)	Assistant Secretary of the Navy for Research, Development, and Acquisition
CHSENG	Chief Systems Engineer
CIO	Chief Information Officer
DASDSE	Deputy Assistance Secretary of Defense for Systems Engineering
DoD	Department of Defense
DoDD	Department of Defense Directive
DON	Department of the Navy
DRPM	direct reporting program manager
EPIC	Electronic Policy Improvement Capability
HQMC	Headquarters Marine Corps
IT	information technology
MASE	mission area systems engineering
MC	U.S. Marine Corps
mil dept	military department
NSS	national security system
OPNAV	Office of the Chief of Naval Operations
PEO	program executive office
PM	program manager
R&R	roles and responsibilities
SAE	Service Acquisition Executive
SE	systems engineering
SECDEF	Secretary of Defense
SECNAV	Secretary of the Navy

SNI	Secretary of the Navy Instruction
SYSCOM	systems command
USC	United States Code
USD(AT&L)	Under Secretary of Defense for Acquisition, Technology, and Logistics

Introduction

Background

Achieving interoperability among Navy systems is instrumental to enabling critical functions, such as timely information exchange during operations and efficiencies in acquisition. Navy interoperability policy provides the means for realizing the benefits of the many facets of interoperability. These many facets imply that interoperability touches on a variety of arenas, and hence policy governing its establishment also intersects many arenas. For this reason, it is important to understand what parties have authority to issue policy that governs any facet of interoperability.

The laws and policies that address interoperability reflect that interoperability has many facets and touches a variety of arenas. In particular, federal law, upon which defense and military Service policies are based, provides for two communities to issue policy related to interoperability. These are (1) the defense information technology (IT) community, which has federally mandated responsibility to ensure that IT and national security systems (NSSs) are interoperable, and (2) the defense acquisition community, which has federally mandated responsibilities to acquire the systems that are to be interoperable. Moreover, federal law stipulates that the acquisition community is responsible for the systems engineering function that is integral to achieving interoperability. Both the IT and acquisition communities must, of course, interact with the operational community that will employ the fielded systems to carry out military missions.

As might be expected, federal law provides general guidance on responsibilities regarding interoperability policy. Department of Defense (DoD) and Service-level guidance implement federal law. However, since many facets of interoperability intersect many arenas, it is not always clear which party has responsibility to issue interoperability policy in any particular area. Such an environment can create ambiguous situations, such as more than one party assuming responsibility for issuing interoperability policy in a particular area or gaps where policy is missing and no party can assume responsibility for establishing interoperability policy in the area. Neither of these situations is conducive to either achieving interoperable systems or effective and efficient execution of agency functions. A thorough understanding of how federal law has been implemented with Service-level policies is required to prevent potential conflicts and gaps and to correctly identify the party responsible for issuing policy pertaining to any facet of interoperability.

Purpose

This report has two purposes. First, it presents an approach for determining which parties have authority to issue Navy interoperability policy, the origins and implementation path of the authority, and the extent of the authority. The approach includes a methodology and framework for comparing the scopes of authority to determine potential gaps, overlaps, ambiguities, and inconsistencies in defense policy. Second, this document presents the results of applying our approach and methodology to the Navy mission area systems engineering (MASE) facet of interoperability. In particular, we illustrate the complexity of the Navy's network of policy regarding interoperability policy and examine in detail the role of the Assistant Secretary of the Navy for Research, Development, and Acquisition (ASN[RD&A]) Chief Systems Engineer (CHSENG) with regard to issuing MASE policy.¹

Approach

Our approach for this study is to trace authority to issue interoperability policy, and specifically Navy MASE policy, from federal law to DoD policy, and finally to Navy issuances. To do so, we tailored a rigorous and well-established methodology. Analysts identified pertinent authorities specified in federal laws, then pinpointed relevant roles and responsibilities in pertinent DoD and Navy policies. Analysts were aided in identifying roles and responsibilities in policy issuances by a new capability developed by RAND that facilitates efficient analysis of many policy documents. This new capability is called the Electronic Policy Improvement Capability (EPIC). EPIC was used to scan DoD and Navy issuances for sentences that pertain to roles and responsibilities related to interoperability policy. Analysts examined the EPIC output for relevance, pinpointing the roles and responsibilities that were pertinent to interoperability policy and adding any that EPIC missed.

The continuity established by the citations and references in policy documents allows the researcher to trace authority from federal law to DoD policy to Navy issuances to determine which parties have authority to issue MASE policy for the Navy and the purview of that authority. We constructed a framework to capture the tracings and purview of authoritative parties who have roles in determining interoperability and systems engineering policy for the Navy. The framework is used to display our findings and is the medium we use to build a roles and responsibilities (R&R) network of guidance relevant to interoperability and thus show how complex the authority network for issuing MASE policy is.

Although we apply our approach and resulting method to the MASE scenario in this study, our approach and method are applicable to all facets of interoperability policy, as well as to any other area relating to roles, responsibilities, and authorities to execute the duties assigned to defense officials. Our approach can also be tailored to apply across government agencies to illuminate areas where multiple agencies have to collaborate to ensure complete and consistent policy. For example, the approach can be applied to information-sharing policy between the Department of Homeland Security and DoD.

¹ This report is based on information current as of July 7, 2011.

Organization

Chapter Two presents the framework and methodology we developed to trace citations from origins in federal law through Service-level policy identifying executives responsible for issuing policy. Chapter Three presents an analysis of authority to issue Navy interoperability policy related to MASE. Chapter Four presents a case study that details the authority the ASN(RD&A) CHSENG has to influence Navy MASE policy. Chapter Five presents recommendations and closing remarks.

Framework and Methodology

Framework

We developed a framework to distill and display the components in sections of federal law, defense policy, and Navy issuances pertinent to roles, responsibilities, and authorities of government executives. The framework has three components: citation of authority, caveats, and party with authority, as shown in Figure 2.1.

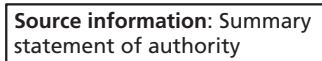
The citation of authority contains the source information, such as document identifier and section number where the statement of authority is found, and a summary of the statement of authority. For example, Section 139(b) of Title 10 of the United States Code would be shown as 10 USC § 139(b). A summary statement of authority for this citation would be “Deputy Assistant Secretary of Defense for Systems Engineering (DASDSE) is principal advisor to the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD[AT&L]) on systems engineering (SE), sets SE policy, reviews military department (Mil Dept) SE.” Figure 2.2 shows the generic form of the citation-of-authority component of the framework. Figure 2.3 shows a depiction of the 10 USC § 139b(b) example.

Figure 2.1
Authority Framework



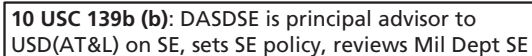
RAND RR357-2.1

Figure 2.2
Generic Form of Citation of Authority Component of Framework



RAND RR357-2.2

Figure 2.3
Example of Citation of Authority Component of Framework



NOTE: Figure is based on laws and policies current as of July 7, 2011.

RAND RR357-2.3

The caveats are a summary of the conditions that must hold in order for the citation to be referenced as authority. The caveats dictate the bounds of the authority and allow for the integration of purview of authority with the citations. Caveats are determined from the citation statement, and only those pertinent to the issue being investigated need to be identified. For instance, in the above 10 USC § 139(b) example, the DASDSE can cite 10 USC § 139(b) as authority to set systems engineering policy. A candidate caveat is that the policy the DASDSE is attempting to set must be related to systems engineering. The DASDSE would not be able to cite 10 USC § 139(b) to try to set policy in another area, such as cost-estimation policy. Hence, if the issue being investigated is related to DoD-wide systems engineering policy, then the above caveat would be of interest and included in the framework. If, instead, the issue being investigated is the extent of the DASDSE authority to review agency systems engineering plans and procedures, then the above caveat is irrelevant to the issue being investigated—but a caveat of interest might be that the DASDSE can cite only 10 USC § 139b(b) as authority to review agency systems engineering plans and policies if the agency is a military department. So, the DASDSE can cite 10 USC § 139b(b) as authority to review Army or Navy systems engineering policy but cannot use this citation of authority to try to review systems engineering policy in a nonmilitary agency, such as the National Aeronautics and Space Administration (NASA). In the next chapter, we will identify the caveats related to authority to issue Navy MASE policy.

The party with authority is the organization, office, executive, or entity that has authority to take the action specified in the citation if the caveats hold. In the above example, 10 USC § 139(b) identifies the DASDSE as the party with authority to the extent that the applicable caveats hold. Figure 2.4 shows an example of the authority framework where the citation of authority is Secretary of the Navy Instruction (SNI) 5430.7Q 7b(2)(d); the caveat is that MASE policy is research, development, or acquisition policy; and the party with authority is the ASN(RD&A).

Figure 2.4
Example of Authority Framework



NOTE: Figure is based on laws and policies current as of July 7, 2011.

RAND RR357-2.4

Methodology

In this chapter, we present a methodology that can be applied to any issue being investigated regarding who has authority to issue policy. In the case study presented in Chapter Four, we apply the methodology to a specific issue, namely, authority to issue Navy MASE policy.

The first step of our methodology is to identify and examine guidance that governs the roles, responsibilities, and authorities pertinent to the issue being investigated. This guidance may include federal law, DoD policies, and official Service-level documents, such as Navy

issuances. Next, the analyst must locate the specific passages in each document that pertain to the issue being examined and assess each passage for relevance. Analysts locate all pertinent passages in federal laws. For DoD and Service-level policies, automated tools, such as EPIC,¹ can help locate and extract the pertinent text passages and place that text into a searchable medium, such as a Microsoft Excel spreadsheet. Multiple EPIC scans may be needed to generate all of the text relevant to the issue being investigated. The analyst verifies the relevance of each passage, eliminating those that are not pertinent to the issue being investigated. Since EPIC does not always identify all relevant policies, analysts also supplement EPIC output by identifying relevant passages that EPIC missed.

Once identified, the set of relevant passages from federal laws and policies can then be analyzed by researchers to logically establish the links among the passages and thus weave the passages into a network of guidance relevant to the issue being investigated. The links should generally flow from federal law to DoD guidance to Service-level issuances, but there can be links among the DoD policies and among the Service-level issuances.

The framework can now be applied to the network of passages. Each passage can be appended with source information to transform the passage to a citation of authority.

Next, the caveat component of the framework can be determined for each citation of authority in the network. The party with authority can also be identified. By placing the citations, caveats, and parties with authority in the framework depicted in Figure 2.1, a comprehensive R&R network of authorities pertaining to the issue being investigated can be generated. The R&R network enables tracing authority from federal law to DoD and Service-level guidance and, finally, to the executives charged with addressing the issue being investigated.

Analysis of the network can continue by evaluating and comparing the scopes of authority for all executives identified as parties with authority. If multiple officials have R&R regarding the issue being investigated, the analyst can determine whether there are other policies and procedures that prescribe the coordination of the R&R of the multiple officials. If such policies or procedures exist, then the guidance specifying the authorities is potentially overlapping and redundant. If there are no policies or processes in place to coordinate the R&R of multiple officials regarding a particular issue, then the guidance is potentially ambiguous or inconsistent. In such cases, collaboration among all executives who have authority can be a way to resolve the situation. Appealing to higher-level executives for clarification is another way to mitigate such potential conflicts. Conversely, if the scopes of authority do not intersect, the body of guidance can have gaps. Specifically, a gap would exist if the issue being investigated did not satisfy any of the caveats because, in such a case, no executive could claim authority over the issue. When gaps are found to exist in the body of guidance relevant to a particular issue, additional policies may be required to fill the gaps and thus ensure orderly and efficient functioning of affected organizations.

Figure 2.5 shows a schematic of the methodology.

The Electronic Policy Improvement Capability

EPIC is a new capability developed by RAND that facilitates efficient analysis of many policy documents. EPIC exists in prototype form. The EPIC prototype extracts text that express an “*actor* (executes) *action* (resulting in) *product*” syntax from user-specified actor-action, action-

¹ EPIC is described in more detail in the following section and in Appendix A. See also Wong et al., 2013.

Figure 2.5
Schematic of Methodology

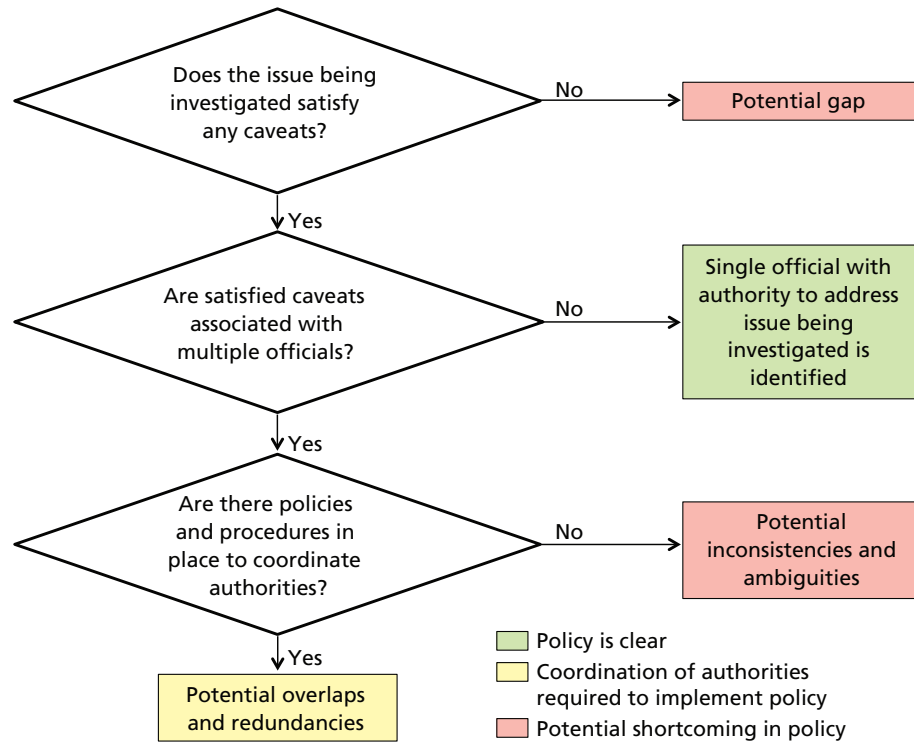
Build network of linked relevant guidance

- Identify guidance
- Locate relevant passages (use EPIC to facilitate)
- Establish logical links among passages
- Weave passages into a network of linked relevant passages of guidance

Apply framework construct and fabricate R&R network

- Append source information to each passage to create citation of authority
- Determine caveats relevant to the issue being examined and attach caveats to citations
- Identify party with authority for each citation in the network

Analyze R&R network



RAND RR357-2.5

product, or actor-product combinations of interests. The specific actor, action, and product keywords selected for EPIC runs would depend on the issue being investigated. For example, we used EPIC to scan DoD and Navy issuances whose titles showed promise that the document addressed interoperability or systems engineering. We specified interoperability, systems engineering, and MASE policy as products in the EPIC scans. EPIC returned all sentences in the policies that contained mention of interoperability, systems engineering, or MASE along with the actor or party identified as the associated party. Analysts filtered the output to those relevant to authority to issue policy. EPIC is described in more detail in Appendix A.

Analysis of Authority to Issue Navy Interoperability Policy

This chapter demonstrates the methodology described in Chapter Two using authority to issue Navy interoperability policy related to MASE as the issue being investigated.

Network of Linked Guidance Relevant to Navy Interoperability Policy

Federal Law

We began our task by identifying and examining sections of U.S. law pertinent to interoperability, systems engineering, and responsibilities of Navy executives. Our previous studies on the roles and responsibilities of defense executives afforded us with starting points to examine federal law.¹ For example, Title 10 of the United States Code² and the Weapon Systems Acquisition Reform Act of 2009³ both contain sections that address interoperability and systems engineering. Our analysis resulted in the identification of six key paragraphs in the United States Code that relate to interoperability policy. All six paragraphs are in Title 10 of the United States Code: 10 USC § 133(b), titled “Under Secretary of Defense for Acquisition, Technology, and Logistics”; 10 USC § 139b, titled “Deputy Assistant Secretary of Defense for Systems Engineering”; 10 USC § 2223(b), titled “Additional Responsibilities of Chief Information Officers of Military Departments”; Subsections (c)(3) and (f) of 10 USC § 5013, titled “Secretary of the Navy”; and 10 USC § 5016(b)(4)(A), titled “Assistant Secretaries of the Navy.”

10 USC § 133(b) states that there is an Under Secretary of Defense for Acquisition, Technology, and Logistics (USD[AT&L]) who is appointed by the President. Subject to authority of the Secretary of Defense, the USD(AT&L) shall establish policies for acquisition for all components of DoD and has authority to direct the secretaries of the military departments with regard to matters for which the USD(AT&L) has responsibility. Hence, by this law, the USD(AT&L) can direct the military departments on acquisition through policy issuances, such as Department of Defense Directive (DoDD) 5000.01, titled *The Defense Acquisition System*.

¹ See Gonzales et al., 2010; and Wong et al., 2013.

² For this research, we used United State Code Title 10—Armed Forces, 2006 Edition with Supplement IV, posted on the U.S. House of Representatives website on May 18, 2011. This version includes laws enacted through the first session of the 111th Congress and was the latest version available on the U.S. House of Representatives website in July 2011.

³ The Weapon Systems Acquisition Reform Act of 2009, Public Law 111-23, became law on May 22, 2009. This act was incorporated into the 2006 Version of the United States Code with Supplement IV, posted on the U.S. House of Representatives website on May 18, 2011.

10 USC § 139b states that there is a Deputy Assistant Secretary of Defense for Systems Engineering (DASDSE), who is appointed by the Secretary of Defense. The DASDSE is the principal advisor to the Secretary of Defense and the USD(AT&L) on systems engineering and developmental planning within DoD. Moreover, the law states that the DASDSE reports to the USD(AT&L).⁴ Hence, the DASDSE serves as the senior expert on systems engineering–related matters to the DoD acquisition community.

10 USC § 2223(b) states that the Chief Information Officer (CIO) of a military department ensures that IT systems and NSSs of that military department are interoperable with other relevant IT and NSSs of the government and DoD. Hence, the Navy CIO is responsible for ensuring that Navy IT and Navy NSSs are interoperable with relevant government and DoD IT and NSSs.

10 USC § 5013(c)(3) states that, subject to the control, direction, and authority of the Secretary of Defense, the Secretary of the Navy (SECNAV) is responsible to the Secretary of Defense for timely implementation of DoD policies relating to the Department of the Navy (DON).

10 USC § 5013(f) allows the SECNAV to delegate his or her authority as he or she considers appropriate to the Under Secretary of the Navy and to the Assistant Secretaries of the Navy. When considered in conjunction with USC § 5013(c)(3), the SECNAV may delegate authority to implement DoD policies to the Assistant Secretaries of the Navy.

10 USC § 5016(b)(4)(A) states that one of the Assistant Secretaries of the Navy shall be the ASN(RD&A). This section of the law also states that the principal responsibility of the ASN(RD&A) is the overall supervision of research, development, and acquisition matters in the DON.

Table 3.1 shows the six relevant sections of Title 10. Figure 3.1 depicts the links among these sections of law.

Department of Defense Issuances

Once we identified the six sections of U.S. law that address interoperability, systems engineering, and roles and responsibilities of pertinent Navy executives, we searched for DoD issuances that addressed policymaking roles and responsibilities with respect to the six sections of federal law. DoDD 5134.01, titled *Under Secretary of Defense for Acquisition, Technology, and Logistics*, contains two sections that provide the link between federal law and DON issuances. DoDD 5134.01 states that the USD(AT&L) is the principal staff assistant and advisor to the Secretary of Defense on systems engineering and that the USD(AT&L) is to work directly with Service Acquisition Executives (SAEs). The first policy statement, that USD(AT&L) is the principal staff assistant and advisor to the Secretary of Defense on systems engineering, mirrors 10 USC § 139b. The second policy statement specifies that the USD(AT&L) is to work directly with the Navy acquisition executive (as well as with the acquisition executives of the other Services) on acquisition, technology, and logistics issues, including systems engineering concerns.

Another directive, DoDD 5000.01, titled *The Defense Acquisition System*, contains the policy statement that places systems engineering in the acquisition realm. That statement in Section E1.27 provides that acquisition programs shall be managed through application of a systems engineering approach. 10 USC § 133(b) gives the USD(AT&L) responsibility to

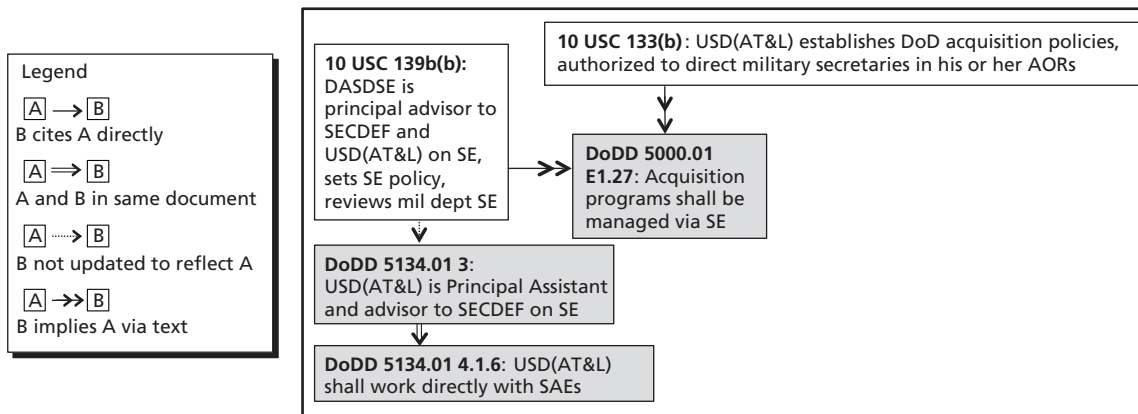
⁴ As of July 27, 2011, the DASDSE reports to the Assistant Secretary of Defense for Research and Engineering (ASD[RE]), and ASD[RE] is a direct report to the USD(AT&L).

Table 3.1
Sections of Federal Law Pertinent to Authority to Issue MASE Policy

Title	Heading	Date	Section	Extract
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Under Secretary of Defense for Acquisition, Technology, and Logistics	Posted on May 18, 2011	10 USC 133(b)	(b) Subject to the authority, direction, and control of the Secretary of Defense, the Under Secretary of Defense for Acquisition, Technology, and Logistics shall perform such duties and exercise such powers relating to acquisition as the Secretary of Defense may prescribe, including— . . . (2) establishing policies for acquisition (including procurement of goods and services, research and development, developmental testing, and contract administration) for all elements of the Department of Defense; . . . (5) the authority to direct the Secretaries of the military departments and the heads of all other elements of the Department of Defense with regard to matters for which the Under Secretary has responsibility.
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Deputy Assistant Secretary of Defense for Systems Engineering	Posted on May 18, 2011	10 USC 139(b)	Section 139d(b) DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR SYSTEMS ENGINEERING.— . . . (3) SUPERVISION.—The Deputy Assistant Secretary shall be subject to the supervision of the Under Secretary of Defense for Acquisition, Technology, and Logistics and shall report to the Under Secretary. . . . (5) DUTIES.—The Deputy Assistant Secretary. . . (A) develop policies and guidance for—(i) the use of systems engineering. . . (D) provide advocacy, oversight, and guidance to elements of the acquisition workforce responsible for systems engineering . . . (F) periodically review the organizations and capabilities of the military departments with respect to systems engineering, development planning, and lifecycle management and sustainability, and identify needed changes or improvements to such organizations and capabilities. . .
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Additional Responsibilities of Chief Information Officer of Military Departments	Posted on May 18, 2011	10 USC 2223(b)(3)	Section 2223 Additional Responsibilities of Chief Information Officer of Military Departments— . . . the Chief Information Officer of a military department, with respect to the military department concerned, shall— . . . (3) ensure that information technology and national security systems are interoperable with other relevant information technology and national security systems of the Government and the Department of Defense;
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Secretary of the Navy	Posted on May 18, 2011	10 USC 5013(c) (3)	Section 5013 Secretary of the Navy . . . (c) Subject to the authority, direction, and control of the Secretary of Defense, the Secretary of the Navy is also responsible to the Secretary of Defense for— . . . (3) the effective and timely implementation of policy, program, and budget decisions and instructions of the President or the Secretary of Defense relating to the functions of the Department of the Navy; . . .
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Secretary of the Navy	Posted on May 18, 2011	10 USC 5013(f)	Section 5013 Secretary of the Navy . . . (f) The Secretary of the Navy may assign such of his functions, powers, and duties as he considers appropriate to the Under Secretary of the Navy and to the Assistant Secretaries of the Navy. Officers of the Navy and the Marine Corps shall, as directed by the Secretary, report on any matter to the Secretary, the Under Secretary, or any Assistant Secretary.
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Assistant Secretaries of the Navy	Posted on May 18, 2011	10 USC 5016(b) (4)(A)	Section 5016 Assistant Secretaries of the Navy. . . (b)(4)(A) One of the Assistant Secretaries shall be the Assistant Secretary of the Navy for Research, Development, and Acquisition. The principal duty of the Assistant Secretary shall be the overall supervision of research, development, and acquisition matters of the Department of the Navy.

NOTE: Contents of table are based on laws and policies current as of July 7, 2011.

Figure 3.1
The USD(AT&L) Works with the Secretary of Defense and Service Acquisition Executives on Systems Engineering



NOTES: Figure is based on laws and policies current as of July 7, 2011. The figure shows that the latest version of DoDD 5134.01, dated April 1, 2008, cites Title 10. This reference is to a previous version of Title 10 that was rewritten and renumbered as a result of the Ike Skelton National Defense Authorization Act for Fiscal Year 2011, Public Law 111-383, signed into law on January 7, 2011. DoDD 5134.01 has not yet been updated to reflect the 2011 law. However, analysis of the text in these two documents makes the link between 10 USC § 139b and DoDD 5134.01 clear. The “ \dashrightarrow ” connector is used in Figure 3.1 to indicate the unsynchronized reference relationship. AORs = areas of responsibility.

RAND RR357-3.1

establish policies for acquisition for all elements of DoD and gives the USD(AT&L) authority to direct the secretaries of the military departments with regard to matters for which the USD(AT&L) has responsibility. Through E1.27 of DoDD 5000.01, the USD(AT&L) is ordering the Navy to manage acquisition programs through application of a systems engineering approach, thus placing systems engineering in the acquisition realm.

Figure 3.1 illustrates the links established by DoDD 5134.01 and DoDD 5000.01 with federal law. The two sections of DoDD 5134.01 and one section in DoDD 5000.01 show a listing of the responsibilities of the USD(AT&L) that are related to the systems engineering facet of interoperability, indicated by the \Rightarrow connector in Figure 3.1.

Department of the Navy Issuances

We searched every issuance on the DON website to find issuances that contained keywords such as “interoperability,” “systems engineering,” or “mission area.”⁵ We used EPIC⁶ to scan the issuances containing one or more keywords to identify sections in the documents that specify roles and responsibilities pertaining to these keywords. Analysis of those sections of text revealed three SNIs that specified policymaking responsibilities related to interoperability. These three issuances are SNI 5430.7Q, titled *Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy*; SNI 5000.2D, titled *Implementation and Operation of the Defense Acquisition System and the Joint Capabilities Integration and Development System*; and

⁵ The website <http://doni.daps.dla.mil/allinstructions.aspx> showed 1,325 active SNIs and Office of the Chief of Naval Operations instructions (OPNAVINSTs). Only those instructions that contained at least one keyword were selected for further inspection. The search was conducted on February 21, 2011.

⁶ See Appendix A for a detailed description of EPIC.

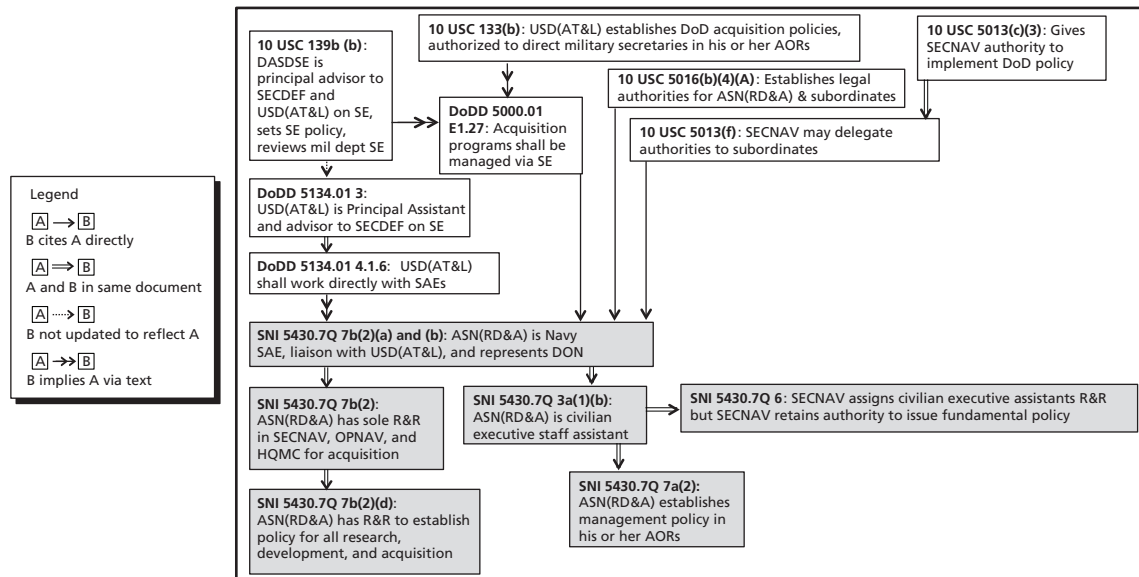
SNI 5000.36A, titled *Department of the Navy Information Technology Applications and Data Management*.

SNI 5430.7Q: Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy

SNI 5430.7Q identifies the ASN(RD&A) as the Navy’s acquisition executive. The same Navy policy specifies the duties of the ASN(RD&A) to include being an executive staff assistant, the Navy’s liaison with the USD(AT&L), and the Navy’s sole senior executive for acquisition. SNI 5430.7Q further charges the ASN(RD&A) with establishing policy for all Navy research, development, and acquisition and management policy in his or her areas of responsibility. The ASN(RD&A) is also responsible for recommending fundamental policy to the SECNAV for SECNAV issuance.

Figure 3.2 shows the links between DoD guidance, DoDD 5134.01, and SNI 5430.7Q. The link between SNI 5430.7Q and DoDD 5134.01 is clear from the text in two documents. DoDD 5134.01 states the USD(AT&L) is to work directly with SAEs, and SNI 5430.7Q names the ASN(RD&A) as the Navy SAE, so the USD(AT&L) is to work directly with the ASN(RD&A). In addition, since systems engineering is included in the USD(AT&L)’s purview, systems engineering is included in the direct working arrangement with the ASN(RD&A). Moreover, Figure 3.2 shows the link between SNI 5430.7Q and DoDD 5000.01. 10 USC § 133(b) gives the USD(AT&L) authority to direct the secretaries of the military departments in acquisition matters, and DoDD 5000.01 is acquisition policy issued by the USD(AT&L) that the military departments must follow. Figure 3.2 also shows the link between SNI 5430.7Q and federal law. SNI 5430.7Q cites 10 USC § 5016(b)(4)(A) for establishing the legal authorities for the ASN(RD&A). In addition, 10 USC § 5013(c)(3) charges the SECNAV with implementing DoD policies, and 10 USC § 5013(f) allows the SECNAV to delegate his or her

Figure 3.2
Federal Law Is Linked to Navy Policy Directly and Via DoD Policy



NOTE: Figure is based on laws and policies current as of July 7, 2011.

responsibilities. SNI 5430.7Q delegates the Navy acquisition responsibilities by designating the ASN(RD&A) as the SAE and liaison, with the USD(AT&L) as the Navy’s representative.

SNI 5430.7Q also lists responsibilities for the DON CIO. The DON CIO is a staff assistant and, as such, has duties to recommend fundamental policy to the SECNAV for SECNAV issuance.

Figure 3.3 shows the link between federal law regarding military department CIOs and Navy policy. 10 USC § 5013(c)(3) charges the SECNAV with timely implementation of DoD policy, and 10 USC § 5013(f) allows the SECNAV to delegate this authority to subordinates. SNI 5430.7Q designates the DON CIO as a staff assistant, and, as such, the DON CIO is given the responsibility of recommending fundamental policy. SNI 5430.7Q also cites 10 USC § 2223(b) in its reference section. 10 USC § 2223(b) charges the military department CIOs, of which the DON CIO is one, with ensuring IT and NSS interoperability.

SNI 5000.2D: Implementation and Operation of the Defense Acquisition System and the Joint Capabilities Integration and Development System

SNI 5000.2D specifies that all IT systems and NSSs shall implement interoperability during the acquisition lifecycle. Furthermore, the ASN(RD&A) CHSENG is designated as the senior technical authority for interoperability and, as such, is charged with providing senior leadership on interoperability. SNI 5000.2D cites SNI 5430.7Q as a reference for the responsibilities assigned in the document. Figure 3.4 shows the links between these two Navy issuances. The links show that Navy policy intends for the ASN(RD&A) CHSENG to be involved with all aspects of interoperability, which would include systems engineering.

SNI 5000.2D also addresses duties of the DON CIO. The DON CIO is charged with providing interoperability policy. As per our discussion of 10 USC § 2223(b)(3) above, this statement is consistent with federal law, and SNI 5000.2D cites 10 USC 2223(b)(3) as its source of authority for the statement. In addition, SNI 5000.2Dc charges the DON CIO with issuing IT management policy in coordination with ASN(RD&A). Figure 3.5 shows the flow-down of responsibilities from federal law to Navy policy. The passages in SNI 5000.2D

Figure 3.3
SECNAV Policy for DON CIO Responsibilities Is Linked to Federal Law

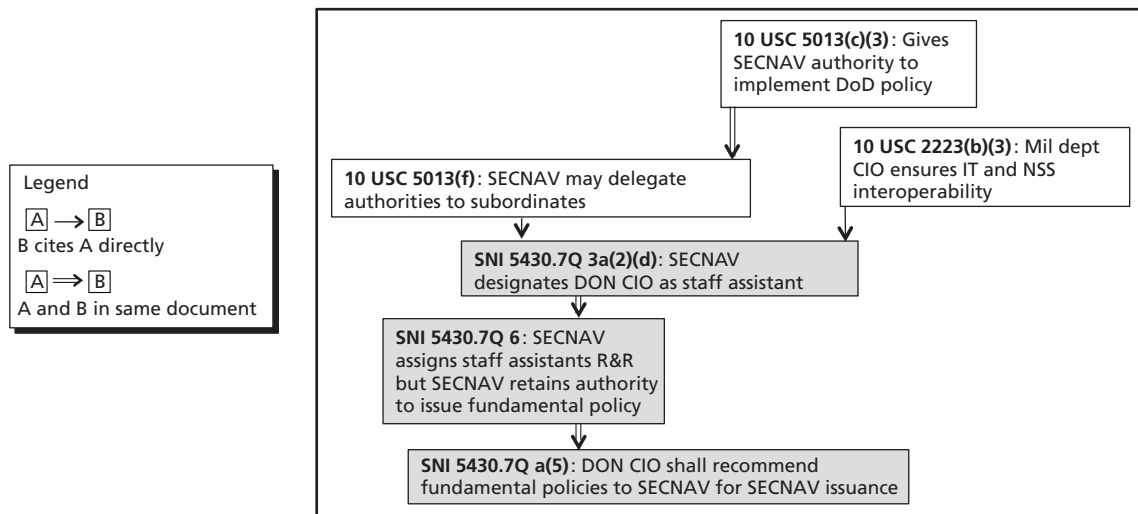
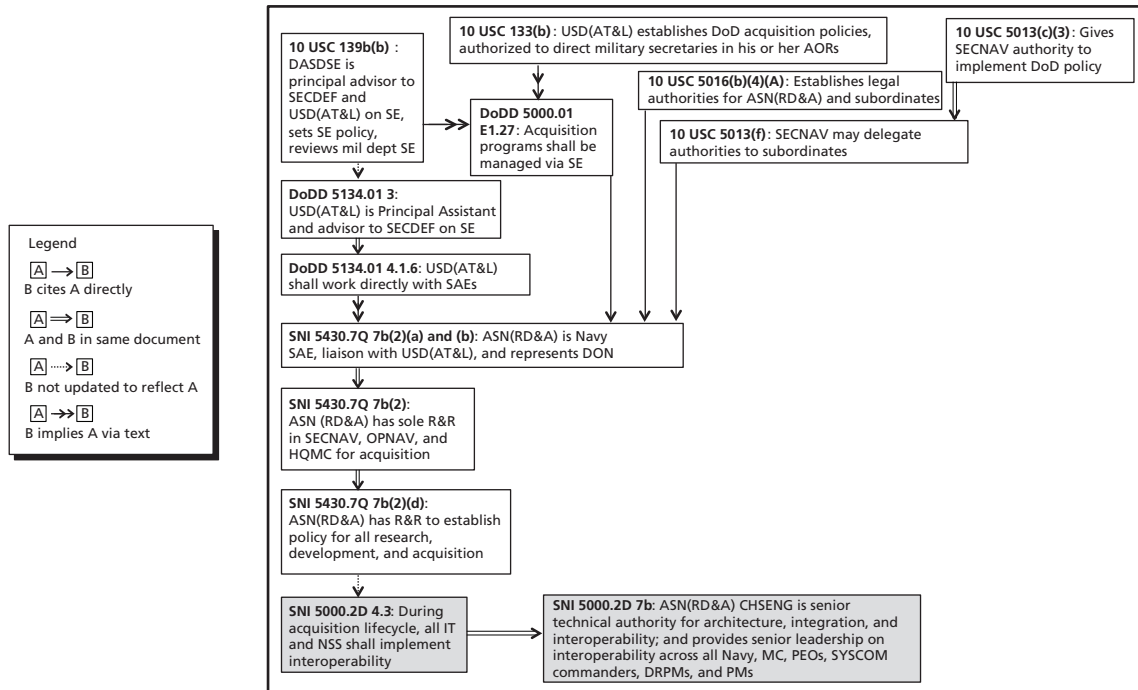


Figure is based on laws and policies current as of July 7, 2011.

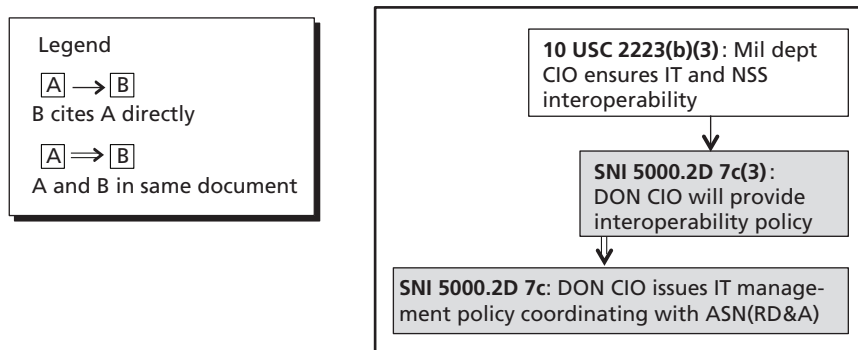
Figure 3.4
ASN(RD&A) CHSENG Is the Navy’s Senior Technical Authority for Interoperability



NOTE: Figure is based on laws and policies current as of July 7, 2011.

RAND RR357-3.4

Figure 3.5
Navy Policy Specifies DON CIO Duties Related to Interoperability



NOTE: Figure is based on laws and policies current as of July 7, 2011.

RAND RR357-3.5

regarding DON CIO responsibilities in issuing interoperability policy and the ASN(RD&A) CHSENG responsibilities to provide technical leadership in interoperability indicate that a collaborative approach toward interoperability policy would be beneficial to both parties and the Navy.

SNI 5000.36A: Department of the Navy Information Technology Applications and Data Management

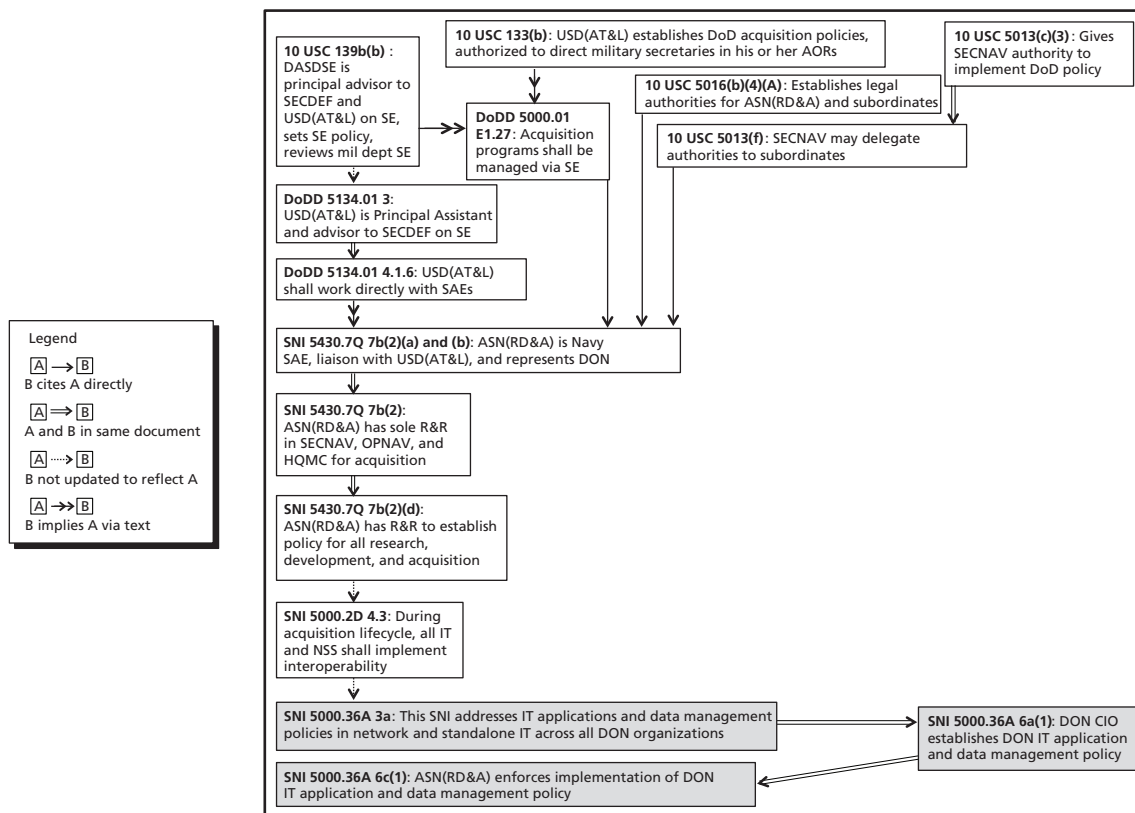
SNI 5000.36 A assigns the DON CIO responsibility to establish IT applications and data management policy. The same document charges the ASN(RD&A) with enforcing implementation of DON IT application and data management policy.

SNI 5000.36A cites SNI 5000.2D in its references, thereby establishing the link shown in Figure 3.6. This link illustrates a collaborative approach toward establishing Navy IT applications and data management policy. For example, the DON CIO may have more insight on interoperability issues connected with IT applications and data management issues, but the ASN(RD&A) might be particularly well versed in the practicality of implementation.

R&R Network of Authority to Issue Interoperability Guidance

The R&R network of linked guidance regarding authority to issue Navy MASE policy can be generated using the methodology and framework. Figure 3.7 shows the complex network that results when all of the authority citations are integrated with the caveats that together govern which parties are charged with responsibilities related to issuing MASE policy. Figure 3.7 shows that determining which party has authority to issue Navy MASE is not a straightforward

Figure 3.6
SNI 5000.36A Cites SNI 5000.2D in Assigning Responsibilities to the ASN(RD&A) and DON CIO



NOTE: Figure is based on laws and policies current as of July 7, 2011.

ward activity. Indeed, four different parties—the ASN(RD&A) CHSENG, the ASN(RD&A), the SECNAV, and the DON CIO—can cite 13 different paths of authority traceable to federal law that gives each of them responsibilities with respect to Navy MASE policy.

More specifically, four paths show that the SECNAV retains authority to issue Navy MASE policy. Another four different paths show that the DON CIO has authority to issue Navy MASE policy. Three other paths, distinct from the eight already mentioned, give the ASN(RD&A) authority to establish Navy MASE policy. Finally, a separate set of two paths give the ASN(RD&A) CHSENG a pivotal role in influencing Navy interoperability policy related to MASE. In the next chapter, we will address the case of the ASN(RD&A) CHSENG's role with respect to MASE policy.

10 USC § 139b(b) states that the DASDSE reports to the USD(AT&L), develops policy and guidance for the use of systems engineering, and reviews the organizations and capabilities of the military departments with respect to systems engineering. This section of the law places systems engineering in the acquisition realm and hence within the purview of USD(AT&L). As the network diagram in Figure 3.7 at the end of this chapter shows and as we will discuss in the next chapter, all paths that charge the ASN(RD&A) CHSENG to play a pivotal role in establishing MASE policy stem from federal law:

- 10 USC § 139b(b)'s placement of systems engineering in the acquisition realm
- 10 USC § 133(b)'s assignment of responsibility to establish acquisition policies to USD(AT&L)
- 10 USC § 5016's establishment of legal authorities for ASN(RD&A) and its subordinates
- 10 USC § 5013's establishment of authority for the SECNAV to implement DoD policy and the SECNAV's ability to delegate authorities to the ASN(RD&A).

The network diagram also shows that 10 USC § 2223(b)(3) states that military department CIOs are responsible for ensuring IT and NSS interoperability. Therefore, the DON CIO has authority to issue MASE policy if MASE policy ensures IT and NSS interoperability.

The key to determining which party has authority to issue MASE policy, then, is dependent on whether MASE policy is guidance for the use of systems engineering or whether MASE policy is part of ensuring IT and NSS interoperability. The exact contents of a particular proposed MASE policy may have to be examined if more than one party claims authority to issue MASE policy.⁷

Responsibilities of Officials

Our analysis shows that federal law, DoD policy, and Navy issuances together provide paths for four officials to claim responsibilities regarding Navy MASE policy, depending on which caveats are consistent with the MASE policy being proposed. The four officials are the SECNAV, the ASN(RD&A), the DON CIO, and the ASN(RD&A) CHSENG. Organizationally, the ASN(RD&A) and DON CIO are direct reports to the SECNAV, and the ASN(RD&A)

⁷ Our review of a proposed MASE policy from the ASN(RD&A) CHSENG in March 2011 indicated that the reviewed MASE policy falls within the realm of acquisition and therefore within the purview of the ASN(RD&A). Since the reviewed proposed MASE policy was a working draft, details of its contents are not described in this document. The purpose of this document is to illustrate a technique for determining purview of authority.

CHSENG is a direct report to the ASN(RD&A). Fundamental military department management provides that the SECNAV has responsibility for issuing MASE policy, as well as responsibility for issuing the Navy instructions that allocate roles and responsibilities to all other Navy officials that provide them authority to issue MASE policies. Hence, the SECNAV can claim sole authority to issue MASE policy or delegate any portion or all of the responsibility to the other three officials.

SNIs define the caveats for each path. The SECNAV is responsible for issuing MASE policy if MASE policy is fundamental policy. The ASN(RD&A) is responsible for issuing MASE policy if the MASE policy (1) is management policy in research, development, or acquisition; (2) enforces DON IT application or data management policy; or (3) is part of any area of ASN(RD&A) responsibility. The DON CIO is responsible for issuing MASE policy if the MASE policy (1) is ensuring interoperability of IT or NSS, (2) is interoperability policy for the Navy, (3) is IT management policy, or (4) is DON IT application or data management policy. Finally, the ASN(RD&A) CHSENG is responsible for playing a pivotal role in establishing MASE policy if the MASE policy is providing senior technical leadership on interoperability.

Potential Gaps and Ambiguity in Navy Interoperability Policy

When a MASE policy is being written, the authors are formulating guidance that is intended to improve the organization's effectiveness or efficiency in accomplishing particular goals. As such, the proposed policy may satisfy more than one of the caveats that define the scope of responsibility of the officials potentially responsible for establishing Navy MASE policy. For example, a proposed MASE policy may be deemed as both (1) management policy on research, development, or acquisition or as enforcement of DON IT application or data management policy and (2) providing interoperability policy. This creates a potentially ambiguous situation, since (1) is the responsibility of the ASN(RD&A) while (2) is the responsibility of the DON CIO; this situation would place responsibility to issue the MASE policy on both the ASN(RD&A) and the DON CIO. Collaboration among the parties with potential authority is a means for resolving this potential ambiguity.

No potentially ambiguous situations are likely among the SECNAV and the other officials because the proposed MASE policy is either fundamental policy or not. If the proposed MASE policy is fundamental policy, then the SECNAV has responsibility to issue it. If the proposed MASE policy is not fundamental policy, then one of the other officials has responsibility to issue it per policy issued by the SECNAV. The organizational structure prevents any further ambiguities because both the ASN(RD&A) and the DON CIO are direct reports to the SECNAV. If an ambiguity existed between the DON CIO and the SECNAV or between the ASN(RD&A) and the SECNAV, it is logical that the SECNAV could resolve the situation. Similarly, there is not likely to be an ambiguous situation between the ASN(RD&A) and the ASN(RD&A) CHSENG because the CHSENG is a direct report to the ASN(RD&A), so the ASN(RD&A) would logically resolve any such ambiguities. Ambiguous situations are likely to exist only when guidance assigns overlapping responsibilities to officials in different chains of command.

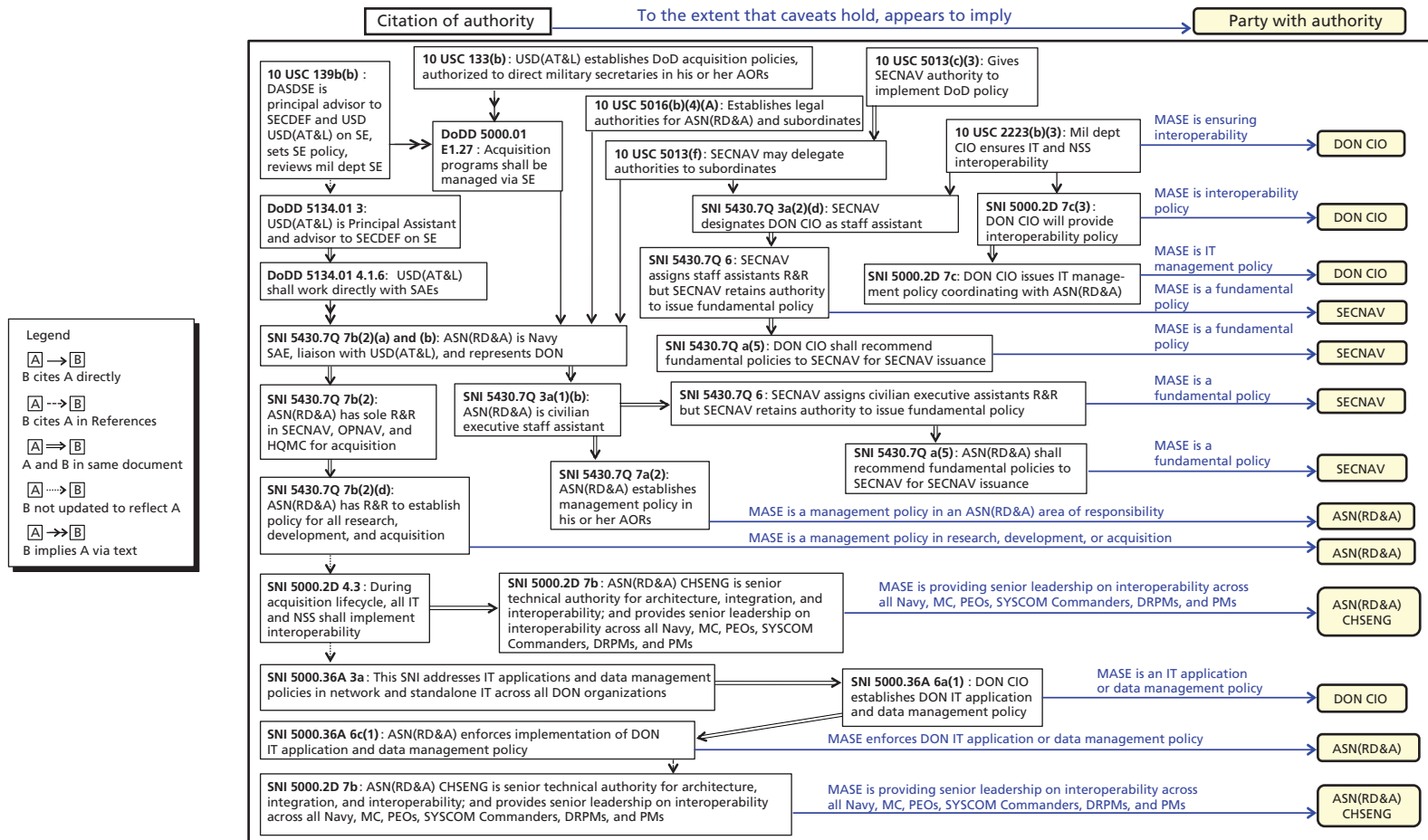
It is possible that a proposed MASE policy would not satisfy any of the caveats. That is, a proposed MASE policy may be deemed to be none of the following:

- fundamental policy
- enforcing IT or NSS interoperability policy
- IT application or data management policy
- IT management policy
- enforcing IT or data management policy
- management policy in research, development, or acquisition.

Though such a situation would be highly unlikely, if none of the caveats listed above are satisfied, then there would be a gap in the guidance network governing the authority to issue MASE policy. If such a gap were ever encountered, it is likely that the SECNAV would instigate resolution.

Figure 3.7 shows the R&R network of authority to issue Navy interoperability policy related to MASE. The following chapter discusses in detail the role of the ASN(RD&A) CHSENG with regard to MASE policy.

Figure 3.7
R&R Network of Authority for Navy Interoperability Policy Related to MASE Policy



NOTE: Figure is based on laws and policies current as of July 7, 2011.

RAND RR357-3.7

ASN(RD&A) CHSENG Case Study

In this case study, we focus on the paths available to the ASN(RD&A) CHSENG to influence Navy interoperability policy related to MASE. In the previous chapter, Figure 3.7 shows that the ASN(RD&A) CHSENG has two direct paths traceable to federal law that can be cited to influence Navy MASE policy. In this chapter, we will describe in detail these two direct paths and also show how the ASN(RD&A) CHSENG can use four other indirect paths of authority to establish Navy MASE policy.

All six paths stem from a common root consisting of five sections of the United States Code, three sections of DoD policy, and two sections of Navy policy. The five sections of United States Code are 10 USC § 133(b), 10 USC § 139b, 10 USC § 5013(c)(3), 10 USC § 5013(f), and 10 USC § 5016(b)(4)(A). These sections are described in Chapter Three and summarized in Table 3.1. The three sections of DoD policy common to all six paths are Section E1.27 of DoDD 5000.01 and Sections 3 and 4.1.5 of DoDD 5134.01. In addition, Sections 7(b)(2)(a) and (b) of SNI 5430.7Q are also common to all six paths. The links among these common sections are described below.

10 USC § 133(b) directs the USD(AT&L) to establish acquisition policies and authorizes the USD(AT&L) to direct the military secretaries on acquisition issues. 10 USC § 139b(b) states that the DASDSE reports to the USD(AT&L), is the principal advisor to the Secretary of Defense and the USD(AT&L) on systems engineering and developmental planning, develops policy and guidance for the use of systems engineering, and reviews the organizations and capabilities of the military departments with respect to systems engineering. Systems engineering is made part of development and acquisition by Section E1.27 of DoDD 5000.01, acquisition policy issued by the USD(AT&L). Hence, systems engineering is part of acquisition policy. Section 3 of DoDD 5134.01 states that the USD(AT&L) is the principal assistant and advisor to the Secretary of Defense on systems engineering and thus also places systems engineering in the acquisition realm. Furthermore, Section 4.1.6 of the same document states that the USD(AT&L) shall work directly with the SAEs. 10 USC § 5013(c)(3) gives the SECNAV authority to implement DoD policy, and 10 USC § 5013(f) states that the SECNAV may delegate authorities to subordinates. 10 USC § 5016(b)(4)(A) establishes the legal authorities for the ASN(RD&A) and his or her subordinates. Paragraphs 7b(2)(a) and (b) of SNI 5430.7Q state that the ASN(RD&A) is the Navy acquisition executive, is the liaison with the USD(AT&L), and represents the DON on all policies and matters related to research, development, and acquisition. Since systems engineering is made part of the acquisition realm by DoDD 5000.01, the ASN(RD&A) as the Navy's SAE has responsibilities for issuing systems engineering policies.

Figure 4.1 depicts the root common to the six paths. The presentations of the six paths below will refer to the common root as the beginning of each path.

Direct Paths for the ASN(RD&A) CHSENG

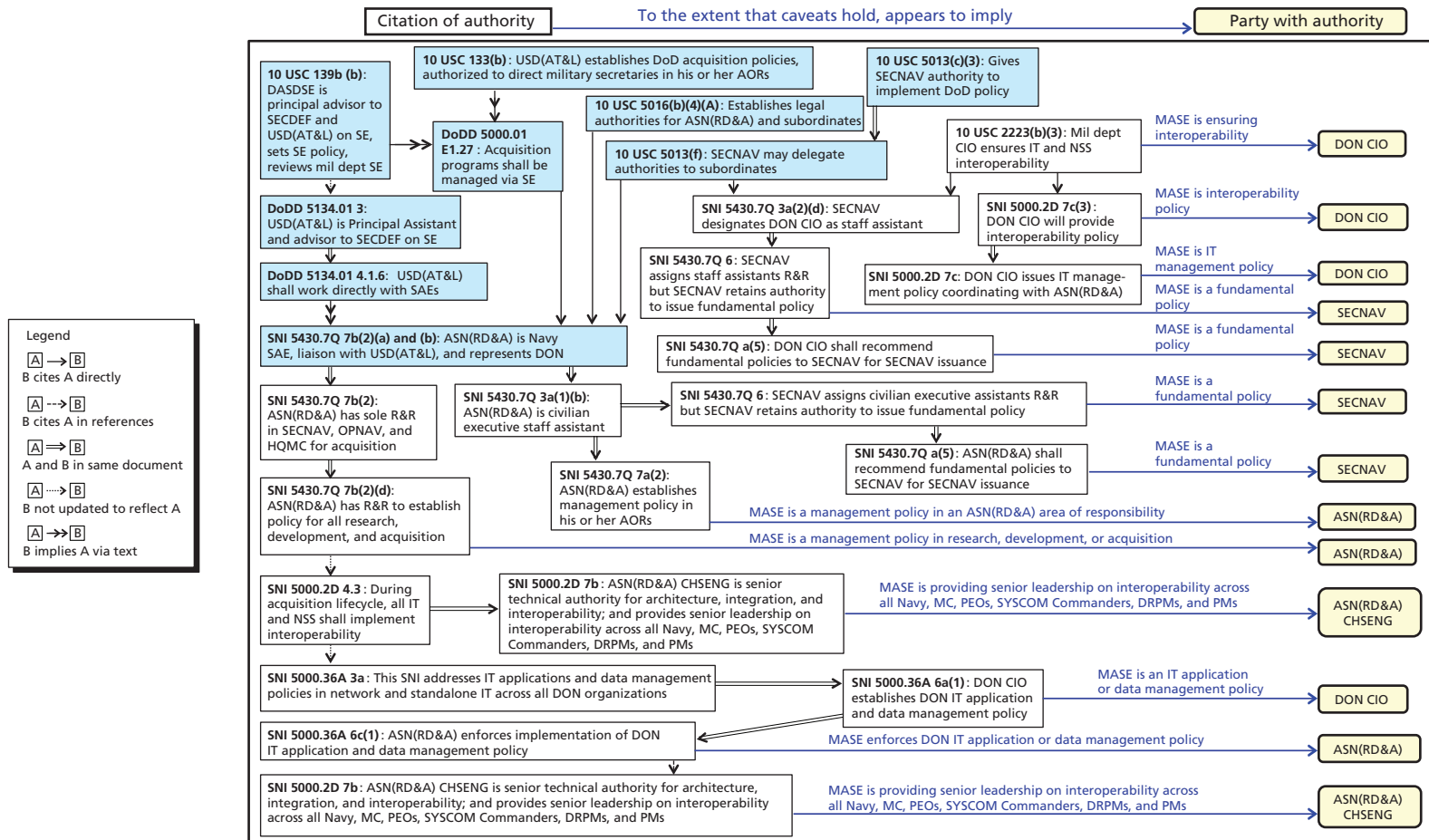
The two direct paths the ASN(RD&A) CHSENG can cite for authority to influence Navy MASE policy both stem from the common root and are ultimately linked to Paragraph 7b of SNI 5000.2D, which proclaims the ASN(RD&A) CHSENG to be the senior technical authority for interoperability and charges the CHSENG with “providing senior leadership” on interoperability. The Navy does not specify what “providing senior leadership” entails. If “providing senior leadership” includes issuing policies in one’s areas of responsibility, then the CHSENG can use that inclusion and issue MASE policy. If “providing senior leadership” does not include issuing policy in one’s areas of responsibility, then the CHSENG is still charged with a pivotal role in establishing MASE policy, but may have to recommend the policy to and rely on the ASN(RD&A) to formally issue the policy. Since the phrase “providing senior leadership” has been left open to interpretation, an ambiguous situation exists. Collaboration among the relevant parties is one way to resolve the ambiguity. These two direct paths are described in detail below.

Path 1: Direct Path for ASN(RD&A) CHSENG on Navy MASE Policy

The first path the ASN(RD&A) CHSENG can use to issue MASE policy stems from the root of Paragraph 7b(2) of SNI 5430.7Q, which states that ASN(RD&A) has sole responsibility within the Office of the Secretary of the Navy, OPNAV, and HQMC for the acquisition function, except for military requirements determination and operational test and evaluation. Hence, DoDD 5000.01 states that systems engineering is part of the research, development, and acquisition functions, and SNI 5430.7Q 7b(2) designates the ASN(RD&A) as the responsible party for systems engineering. SNI 5430.7Q 7b(2)(d) states that the ASN(RD&A) shall establish policy and procedures and be responsible for all research, development, and acquisition. Section 4.3 of SNI 5000.2D states that during the acquisition life cycle of all IT programs, including NSSs, programs shall implement interoperability. This statement directs the ASN(RD&A) to implement the MASE facets of interoperability.

Section 7b of SNI 5000.2D states that the ASN(RD&A) CHSENG is the senior technical advisor within the acquisition structure for interoperability of current and future DON weapon system and IT system acquisition programs. Furthermore, the same section of this document states that the CHSENG provides senior leadership within the acquisition structure on interoperability across all Navy and MC PEOs, SYSCOMs, DRPMs, and PMs. Section 7b of SNI 5000.2D delegates some of the ASN(RD&A) responsibility for facets of interoperability to the CHSENG. As explained previously, although the Navy does not specify what “providing senior leadership” entails, the CHSENG is still charged with a pivotal role in establishing MASE policy, but may have to recommend the policy and rely on the ASN(RD&A) to formally issue the policy. Since the phrase “providing senior leadership” has been left open to interpretation with regard to whether issuing MASE policy is part of providing senior leadership, an ambiguous situation exists. Collaboration among the relevant parties is one way to resolve the ambiguity. Figure 4.2 shows Path 1 in the network of interoperability authority.

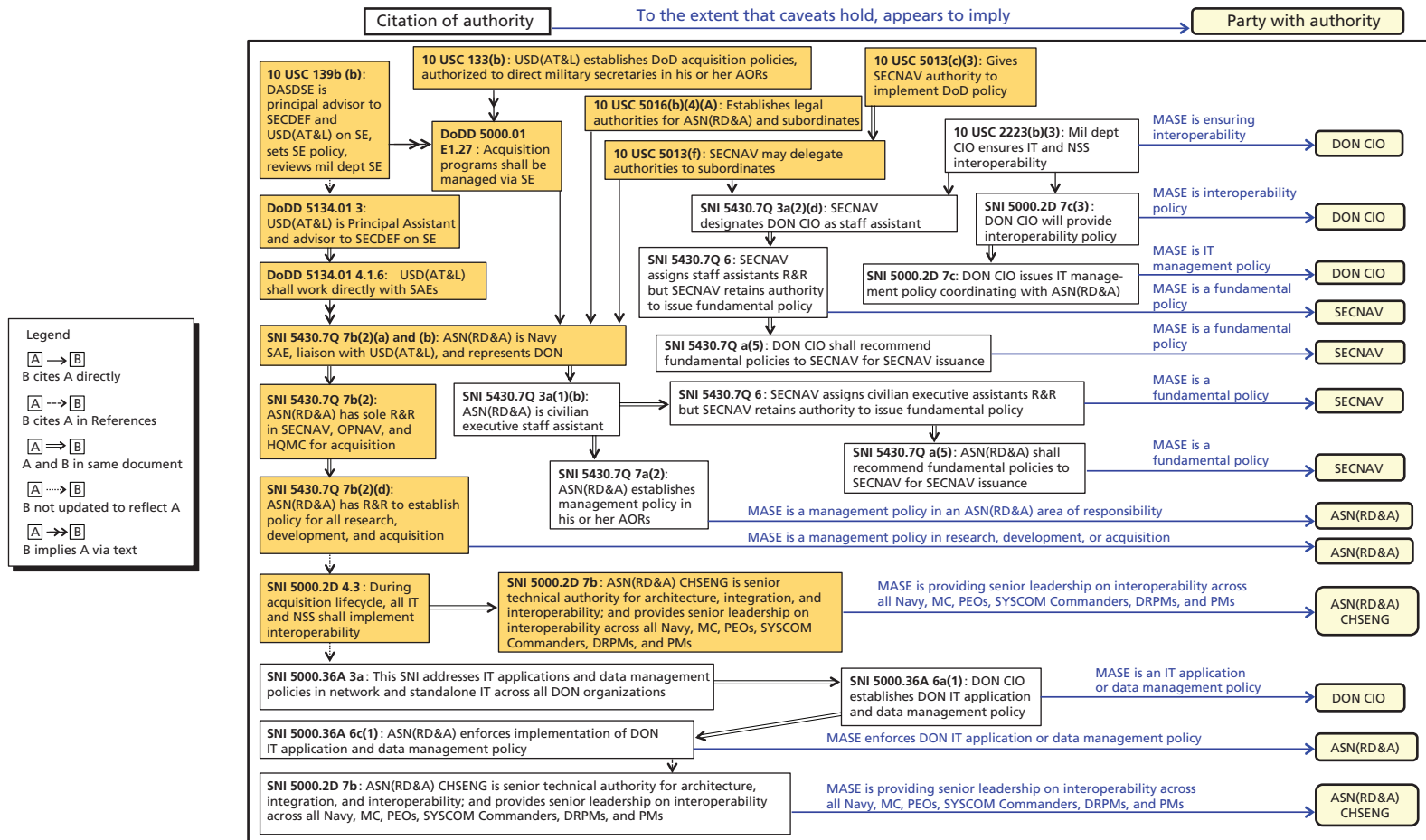
Figure 4.1
Root of Paths of Authority for the ASN(RD&A) CHSENG



NOTE: Figure is based on laws and policies current as of July 7, 2011.

RAND RR357-4.1

Figure 4.2
Path 1: ASN(RD&A) CHSENG Authority to Issue Navy MASE Policy



NOTE: Figure is based on laws and policies current as of July 7, 2011.

RAND RR357-4.2

Table 4.1 shows the statements of authority cited for Path 1. The first column of the table shows the document identifier (e.g., SNI 5000.2D). The second column shows the title of the document. The third column shows the date of the document. The fourth column shows the section or paragraph number where the statement of authority can be found. The fifth column shows the statement of authority. In most cases, the statement of authority is a word-for-word extraction from the document—i.e., a direct quote. In the case of extracting text from Title 10, only the relevant passages are included because the entire paragraph is too lengthy for inclusion. Appendix B contains more complete quotes of the passages that are too lengthy for inclusion in the table.

Path 2: Direct Path for the ASN(RD&A) CHSENG on Navy MASE Policy

The second path that the ASN(RD&A) CHSENG can use to issue MASE policy stems from the root of paragraph 7b(2) of SNI 5430.7Q, which states that the ASN(RD&A) has sole responsibility within the Office of the Secretary of the Navy, OPNAV, and HQMC for the acquisition function, except for military requirements determination and operational test and evaluation. Hence, DoDD 5000.01 states that systems engineering is part of the research, development, and acquisition functions, and SNI 5430.7Q 7b(2) designates the ASN(RD&A) as the responsible party for systems engineering. SNI 5430.7Q 7b(2)(d) states that the ASN(RD&A) shall establish policy and procedures and be responsible for all research, development, and acquisition. Section 4.3 of SNI 5000.2D states that during the acquisition life cycle of all IT programs, including NSSs, programs shall implement interoperability. This statement directs the ASN(RD&A) to implement the MASE facets of interoperability.

Section 3a of SNI 5000.36A states that SNI 5000.36A address DON IT applications and data management policy as it applies to networked and stand-alone IT applications, data, and data exchanges within and across all DON organizations. Furthermore, Section 6a(1) of the same document states that the DON CIO shall establish all IT applications and data management policy, but Section 6c(1) states that the ASN(RD&A) shall implement these policies. Hence, to the extent that a MASE policy is implementation of IT applications and data management policies, the ASN(RD&A) can collaborate with other Navy officials to influence Navy MASE policy.

Section 7b of SNI 5000.2D states that the ASN(RD&A) CHSENG is the senior technical advisor within the acquisition structure for interoperability of current and future DON weapon system and IT system acquisition programs. Furthermore, the same section of that document states that the CHSENG provides senior leadership within the acquisition structure on interoperability across all Navy and MC PEOs, SYSCOMs, DRPMs, and PMs. Section 7b of SNI 5000.2D can be interpreted as delegation of some of the ASN(RD&A) responsibility for MASE policy to ASN(RD&A) CHSENG. Specifically, to the extent that a MASE policy is providing senior leadership on MASE, the CHSENG would have direct authority to issue MASE policy provided that a MASE policy is implementation of IT applications and data management policies. As discussed above, the Navy has not defined what providing senior technical authority is, so the ASN(RD&A) has authority to issue MASE policy only if issuing MASE policy is part of providing senior leadership. If providing senior leadership does not include issuing MASE policy, then the CHSENG is still charged with playing a pivotal role in influencing MASE policy, but must rely on the ASN(RD&A) to issue MASE policy. Figure 4.3 shows Path 2.

Table 4.1
Trace of Citations of Authority for Path 1

The ASN(RD&A) CHSENG has authority to issue MASE policy if MASE is part of providing senior leadership on interoperability across all Navy, MC, PEOs, SYSCOM commanders, DRPMs, and PMs.

Document	Title	Date	Section	Extract
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Under Secretary of Defense for Acquisition, Technology, and Logistics	Posted on May 18, 2011	10 USC 133(b)	(b) Subject to the authority, direction, and control of the Secretary of Defense, the Under Secretary of Defense for Acquisition, Technology, and Logistics shall perform such duties and exercise such powers relating to acquisition as the Secretary of Defense may prescribe, including— . . . (2) establishing policies for acquisition (including procurement of goods and services, research and development, developmental testing, and contract administration) for all elements of the Department of Defense; . . . (5) the authority to direct the Secretaries of the military departments and the heads of all other elements of the Department of Defense with regard to matters for which the Under Secretary has responsibility.
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Deputy Assistant Secretary of Defense for Systems Engineering	Posted on May 18, 2011	10 USC 139(b)	Section 139d(b) DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR SYSTEMS ENGINEERING.— . . . (3) SUPERVISION.—The Deputy Assistant Secretary shall be subject to the supervision of the Under Secretary of Defense for Acquisition, Technology, and Logistics and shall report to the Under Secretary. . . . (5) DUTIES.—The Deputy Assistant Secretary. . . (A) develop policies and guidance for—(i) the use of systems engineering . . . (D) provide advocacy, oversight, and guidance to elements of the acquisition workforce responsible for systems engineering . . . (F) periodically review the organizations and capabilities of the military departments with respect to systems engineering, development planning, and lifecycle management and sustainability, and identify needed changes or improvements to such organizations and capabilities. . .
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Secretary of the Navy	Posted on May 18, 2011	10 USC 5013(c) (3)	Section 5013 Secretary of the Navy . . . (c) Subject to the authority, direction, and control of the Secretary of Defense, the Secretary of the Navy is also responsible to the Secretary of Defense for— . . . (3) the effective and timely implementation of policy, program, and budget decisions and instructions of the President or the Secretary of Defense relating to the functions of the Department of the Navy; . . .
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Secretary of the Navy	Posted on May 18, 2011	10 USC 5013(f)	Section 5013 Secretary of the Navy . . . (f) The Secretary of the Navy may assign such of his functions, powers, and duties as he considers appropriate to the Under Secretary of the Navy and to the Assistant Secretaries of the Navy. Officers of the Navy and the Marine Corps shall, as directed by the Secretary, report on any matter to the Secretary, the Under Secretary, or any Assistant Secretary.

Table 4.1—Continued

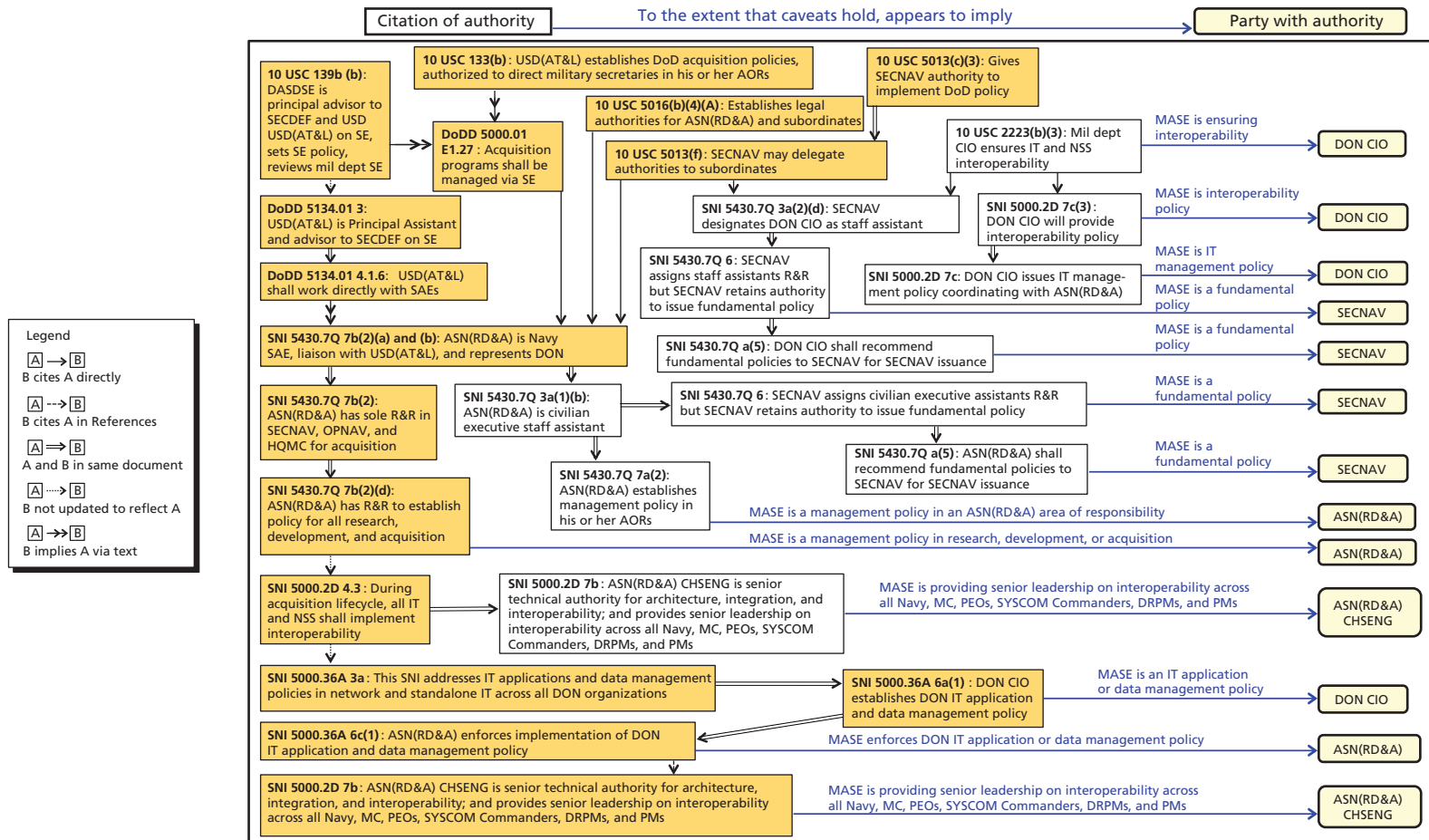
Document	Title	Date	Section	Extract
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Assistant Secretaries of the Navy	Posted on May 18, 2011	10 USC 5016(b) (4)(A)	Section 5016 Assistant Secretaries of the Navy. . . (b)(4)(A) One of the Assistant Secretaries shall be the Assistant Secretary of the Navy for Research, Development, and Acquisition. The principal duty of the Assistant Secretary shall be the overall supervision of research, development, and acquisition matters of the Department of the Navy.
DoDD 5000.01	The Defense Acquisition System	May 12, 2003	E1.27	E1.27. Systems Engineering. Acquisition programs shall be managed through the application of a systems engineering approach that optimizes total system performance and minimizes total ownership costs. A modular, open-systems approach shall be employed, where feasible.
DoDD 5134.01	Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L))	April 1, 2008	3	The Under Secretary of Defense for Acquisition, Technology, and Logistics is the Principal Staff Assistant and advisor to the Secretary of Defense for all matters relating to the DoD Acquisition System; . . . systems engineering; . . .
DoDD 5134.01	Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L))	April 1, 2008	4.1.6.	USD(AT&L) shall: . . . 4.1.6. Work directly with the Service Acquisition Executives.
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	7b(2)(a)	ASN(RD&A) shall: (a) Act as liaison with the Under Secretary of Defense (Acquisition, Technology, and Logistics) and with Assistant Secretaries of Defense, as appropriate and relevant, in matters of mutual concern.
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	7b(2)(b)	ASN(RD&A) shall: . . . (b) Serve as the Navy acquisition executive with responsibility for overseeing the performance of the DON's acquisition system and representing the DON with the Under Secretary of Defense (Acquisition, Technology and Logistics) and Congress on all matters related to acquisition policy and programs.

Table 4.1—Continued

Document	Title	Date	Section	Extract
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	7b(2)	The ASN (RD&A) has sole responsibility within the Office of the SECNAV, OPNAV, and HQMC for the acquisition function, except for military requirements determinations and operational test and evaluation.
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	7b(2)(d)	ASN(RD&A) shall: . . . (d) Establish policy and procedures and be responsible for all research, development, and acquisition.
SNI 5000.2D	Implementation and Operation of the Defense Acquisition System and the Joint Capabilities Integration and Development System	October 16, 2008	4.3	During the acquisition life cycle, all IT, including NSS, programs shall implement interoperability, supportability, and data management processes, procedures, and tools per reference (b) through (g).
SNI 5000.2D	Implementation and Operation of the Defense Acquisition System and the Joint Capabilities Integration and Development System	October 16, 2008	7b	b. The ASN(RD&A) Chief Systems Engineer (CHSENG) is the senior technical authority within the acquisition structure for the overall integrated architecture, integration and interoperability of current and future DON weapon system and IT system acquisition programs. ASN(RD&A) CHSENG provides senior leadership and focus within the acquisition structure on integration and interoperability across all Navy and Marine Corps PEOs, SYSCOM Commanders, DRPMs, and PMs.

NOTE: Contents of table are based on laws and policies current as of July 7, 2011.

Figure 4.3
Path 2: ASN(RD&A) CHSENG Authority to Issue Navy MASE Policy



NOTE: Figure is based on laws and policies current as of July 7, 2011.

RAND RR357-4.3

Table 4.2 shows the statements of authority cited for Path 2. The first column of the table shows the document identifier (e.g., SNI 5000.2D). The second column shows the title of the document. The third column shows the date of the document. The fourth column shows the section or paragraph number where the statement of authority can be found. The fifth column shows the statement of authority. In most cases, the statement of authority is a word-for-word extraction from the document—i.e., a direct quote. In the case of extracting text from Title 10, only the relevant passages are included because the entire paragraph is too lengthy for inclusion. Appendix B contains a quote of entire passages too lengthy for inclusion in the table.

A logical reading of the statements of authority indicates that to the extent that a MASE policy is providing senior leadership on facets of interoperability (the MASE facets), the ASN(RD&A) CHSENG has direct authority to issue MASE policy if issuing MASE policy is included in providing senior leadership. If providing senior leadership does not entail issuing MASE policy, then the CHSENG is charged with playing a pivotal role in influencing MASE policy.

Indirect Paths Available to the ASN(RD&A) CHSENG to Issue Navy MASE Policy

To use a direct path of authorization to issue Navy MASE policy, the ASN(RD&A) CHSENG must be carrying out his or her responsibility as senior technical authority for interoperability and providing senior leadership for interoperability. If issuing Navy MASE policy falls outside of this technical authority, the CHSENG can try to use one of four indirect paths to influence Navy MASE policy if doing so satisfies the caveats embedded in the indirect paths. Using any of the four indirect paths would require the CHSENG to recommend Navy MASE policy to the ASN(RD&A). For three of the indirect paths, the ASN(RD&A) can issue the MASE policy recommended by the CHSENG provided the ASN(RD&A) concurs and the caveats on the ASN(RD&A)'s authority are satisfied.

If the CHSENG recommends a policy to the ASN(RD&A) that falls outside of the ASN(RD&A)'s authority to issue, the ASN(RD&A) can recommend the policy to the SECNAV for issuance as fundamental policy. This indirect path for the CHSENG to influence interoperability policy would be at the discretion of the ASN(RD&A) and the SECNAV.

Indirect paths that provide traceable authority to issue Navy interoperability policy related to MASE are also available to other officials, such as the DON CIO. The details of these paths are not discussed in this document because they fall outside the scope of this study, but Appendix C shows a summary delineation of paths available to other officials.

Path 3: Indirect Path for the ASN(RD&A) CHSENG to Issue Navy MASE Policy

Path 3 shows an indirect path for the ASN(RD&A) CHSENG to issue a MASE policy. This path originates from the root of paragraph 7b(2) of SNI 5430.7Q, which states that the ASN(RD&A) has sole responsibility within the Office of the Secretary of the Navy, OPNAV, and HQMC for the acquisition function, except for military requirements determination and operational test and evaluation. Hence, systems engineering is made part of the research, development, and acquisition functions by DoDD 5000.01, and SNI 5430.7Q 7b(2) designates the ASN(RD&A) as the responsible party for systems engineering. SNI 5430.7Q 7b(2)(d) states that the ASN(RD&A) shall establish policy and procedures and be responsible for all research,

Table 4.2
Trace of Citations of Authority for Path 2

The ASN(RD&A) CHSENG has authority to issue MASE policy if MASE is part of providing senior leadership on interoperability across all Navy, MC, PEOs, SYSCOM commanders, DRPMs, and PMs.

Document	Title	Date	Section	Extract
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Under Secretary of Defense for Acquisition, Technology, and Logistics	Posted on May 18, 2011	10 USC 133(b)	(b) Subject to the authority, direction, and control of the Secretary of Defense, the Under Secretary of Defense for Acquisition, Technology, and Logistics shall perform such duties and exercise such powers relating to acquisition as the Secretary of Defense may prescribe, including— . . . (2) establishing policies for acquisition (including procurement of goods and services, research and development, developmental testing, and contract administration) for all elements of the Department of Defense; . . . (5) the authority to direct the Secretaries of the military departments and the heads of all other elements of the Department of Defense with regard to matters for which the Under Secretary has responsibility.
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Deputy Assistant Secretary of Defense for Systems Engineering	Posted on May 18, 2011	10 USC 139(b)	Section 139d(b) DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR SYSTEMS ENGINEERING.— . . . (3) SUPERVISION.—The Deputy Assistant Secretary shall be subject to the supervision of the Under Secretary of Defense for Acquisition, Technology, and Logistics and shall report to the Under Secretary. . . . (5) DUTIES.—The Deputy Assistant Secretary. . . (A) develop policies and guidance for—(i) the use of systems engineering . . . (D) provide advocacy, oversight, and guidance to elements of the acquisition workforce responsible for systems engineering . . . (F) periodically review the organizations and capabilities of the military departments with respect to systems engineering, development planning, and lifecycle management and sustainability, and identify needed changes or improvements to such organizations and capabilities. . .
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Secretary of the Navy	Posted on May 18, 2011	10 USC 5013(c) (3)	Section 5013 Secretary of the Navy . . . (c) Subject to the authority, direction, and control of the Secretary of Defense, the Secretary of the Navy is also responsible to the Secretary of Defense for— . . . (3) the effective and timely implementation of policy, program, and budget decisions and instructions of the President or the Secretary of Defense relating to the functions of the Department of the Navy;
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Secretary of the Navy	Posted on May 18, 2011	10 USC 5013(f)	Section 5013 Secretary of the Navy . . . (f) The Secretary of the Navy may assign such of his functions, powers, and duties as he considers appropriate to the Under Secretary of the Navy and to the Assistant Secretaries of the Navy. Officers of the Navy and the Marine Corps shall, as directed by the Secretary, report on any matter to the Secretary, the Under Secretary, or any Assistant Secretary.

Table 4.2—Continued

Document	Title	Date	Section	Extract
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Assistant Secretaries of the Navy	Posted on May 18, 2011	10 USC 5016(b) (4)(A)	Section 5016 Assistant Secretaries of the Navy. . . (b)(4)(A) One of the Assistant Secretaries shall be the Assistant Secretary of the Navy for Research, Development, and Acquisition. The principal duty of the Assistant Secretary shall be the overall supervision of research, development, and acquisition matters of the Department of the Navy.
DoDD 5000.01	The Defense Acquisition System	May 12, 2003	E1.27	E1.27. Systems Engineering. Acquisition programs shall be managed through the application of a systems engineering approach that optimizes total system performance and minimizes total ownership costs. A modular, open-systems approach shall be employed, where feasible.
DoDD 5134.01	Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L))	April 1, 2008	3	The Under Secretary of Defense for Acquisition, Technology, and Logistics is the Principal Staff Assistant and advisor to the Secretary of Defense for all matters relating to the DoD Acquisition System; . . . systems engineering; . . .
DoDD 5134.01	Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L))	April 1, 2008	4.1.6.	USD(AT&L) shall: . . . 4.1.6. Work directly with the Service Acquisition Executives.
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	7b(2)(a)	ASN(RD&A) shall: (a) Act as liaison with the Under Secretary of Defense (Acquisition, Technology, and Logistics) and with Assistant Secretaries of Defense, as appropriate and relevant, in matters of mutual concern.
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	7b(2)(b)	ASN(RD&A) shall: . . . (b) Serve as the Navy acquisition executive with responsibility for overseeing the performance of the DON's acquisition system and representing the DON with the Under Secretary of Defense (Acquisition, Technology and Logistics) and Congress on all matters related to acquisition policy and programs.
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	7b(2)	The ASN (RD&A) has sole responsibility within the Office of the SECNAV, OPNAV, and HQMC for the acquisition function, except for military requirements determinations and operational test and evaluation.

Table 4.2—Continued

Document	Title	Date	Section	Extract
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	7b(2)(d)	ASN(RD&A) shall: . . . (d) Establish policy and procedures and be responsible for all research, development, and acquisition.
SNI 5000.2D	Implementation and Operation of the Defense Acquisition System and the Joint Capabilities Integration and Development System	October 16, 2008	4.3	During the acquisition life cycle, all IT, including NSS, programs shall implement interoperability, supportability, and data management processes, procedures, and tools per reference (b) through (g).
SNI 5000.36A	Department of the Navy Information Technology Applications and Data Management	December 19, 2005	3a	a. This instruction addresses DON IT applications and data management policy as it applies to networked and standalone IT applications, data, and data exchanges within and across all DON organizations.
SNI 5000.36A	Department of the Navy Information Technology Applications and Data Management	December 19, 2005	6a(1)	The DON CIO shall: (1) Establish DON IT applications and data management policy, planning, guidance, and metrics, consistent with the DON Enterprise Architecture, for ensuring the interoperability of IT (including NSS) throughout the DON in accordance with references (d) through (g) and (i).
SNI 5000.36A	Department of the Navy Information Technology Applications and Data Management	December 19, 2005	6c(1)	c. The Assistant Secretary of the Navy (Research, Development and Acquisition) (ASN (RD&A)) shall: (1) Enforce implementation of DON IT application and data management policies, standards, and metrics by all acquisition programs.
SNI 5000.2D	Implementation and Operation of the Defense Acquisition System and the Joint Capabilities Integration and Development System	October 16, 2008	7b	b. The ASN(RD&A) Chief Systems Engineer (CHSENG) is the senior technical authority within the acquisition structure for the overall integrated architecture, integration and interoperability of current and future DON weapon system and IT system acquisition programs. ASN(RD&A) CHSENG provides senior leadership and focus within the acquisition structure on integration and interoperability across all Navy and Marine Corps PEOs, SYSCOM Commanders, DRPMs, and PMs.

NOTE: Contents of table are based on laws and policies current as of July 7, 2011.

development, and acquisition. Section 4.3 of SNI 5000.2D states that during the acquisition life cycle of all IT programs, including NSSs, programs shall implement interoperability. This statement directs the ASN(RD&A) to implement the MASE facets of interoperability.

Section 3a of SNI 5000.36A states that SNI 5000.36A address DON IT applications and data management policy as it applies to networked and stand-alone IT applications, data, and data exchanges within and across all DON organizations. Furthermore, Section 6a(1) of the same document states that the DON CIO shall establish all IT applications and data management policy, but Section 6c(1) states that the ASN(RD&A) shall implement these policies. Hence, to the extent that a MASE policy is implementation of IT applications and data management policies, the ASN(RD&A) has jurisdiction over issuing of MASE policy.

For the ASN(RD&A) CHSENG to use this indirect path to issue MASE policy, he or she would have to recommend a MASE policy to the ASN(RD&A), and, if the ASN(RD&A) concurs, the ASN(RD&A) would issue the policy under his or her authority to implement IT and data management policy. This path can be used only if the MASE policy the CHSENG recommends is implementation of IT and data management policy. Of course, the ASN(RD&A) can cite this authority directly to issue interoperability policy related to MASE without a recommendation from the CHSENG as well. Figure 4.4 shows Path 3.

Table 4.3 shows the statements of authority cited for Path 3. As with similar tables for Path 1 and Path 2, the first column of the table shows the document identifier (e.g., SNI 5000.2D). The second column shows the title of the document. The third column shows the date of the document. The fourth column shows the section or paragraph number where the statement of authority can be found. The fifth column shows the statement of authority. In most cases, the statement of authority is a word-for-word extraction from the document—i.e., a direct quote. In the case of extracting text from Title 10, only the relevant passages are included because the entire paragraph is too lengthy for inclusion. Appendix B contains more complete quotes of the passages that are too lengthy for inclusion in the table.

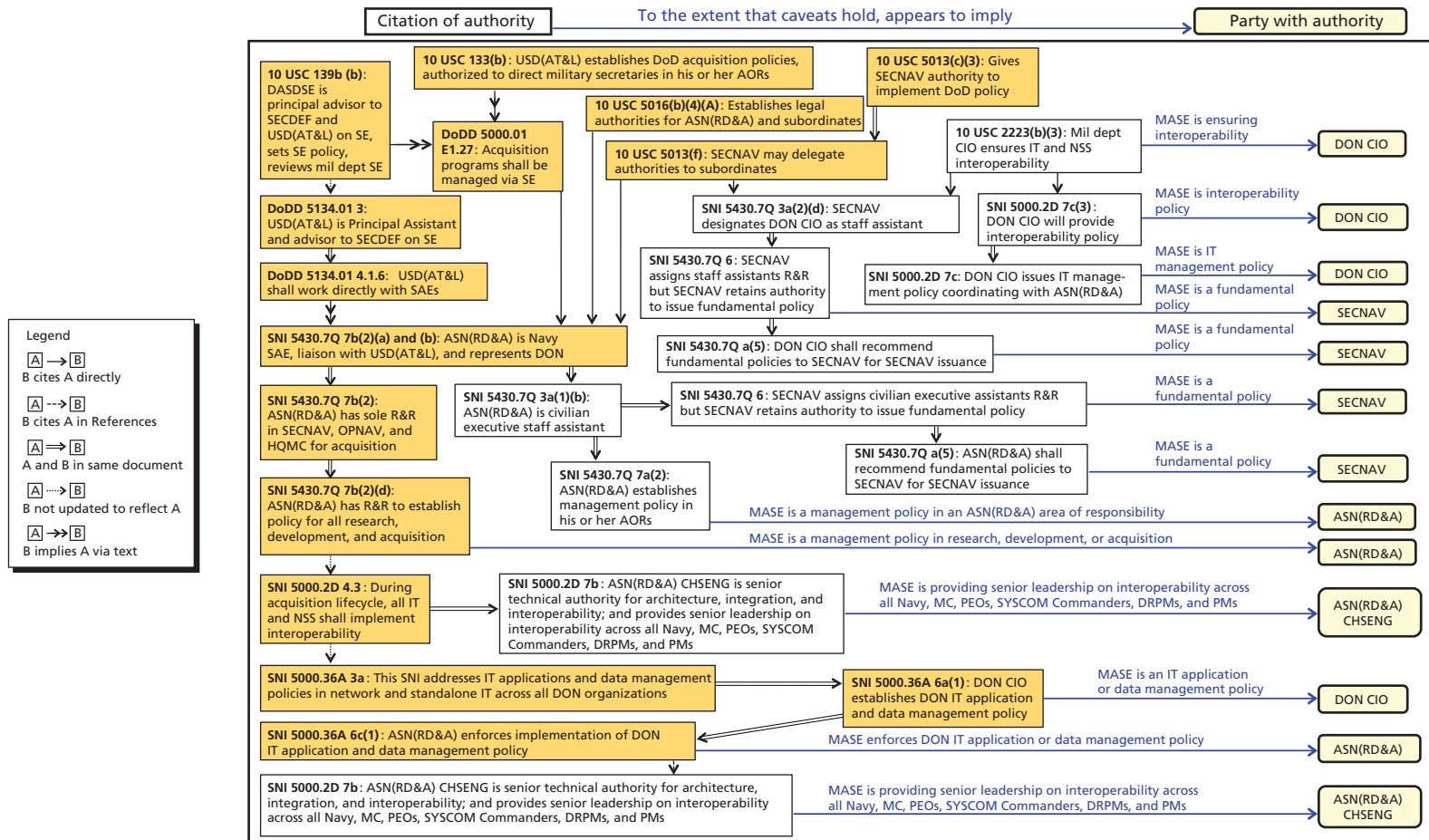
As described previously, a logical reading of the statements of authority indicates that the ASN(RD&A) CHSENG can use this indirect path to issue MASE policy by recommending a MASE policy to the ASN(RD&A), and, if he or she concurs, the ASN(RD&A) would issue the policy under his or her authority to implement IT and data management policy. This path can only be used if the MASE policy the CHSENG recommends is implementation of IT and data management policy.

Path 4: Indirect Path for the ASN(RD&A) CHSENG to Issue Navy MASE Policy

Path 4 shows another indirect path for the ASN(RD&A) CHSENG to issue a MASE policy. This indirect path stems from the root of paragraph 7b(2) of SNI 5430.7Q, which states that the ASN(RD&A) has sole responsibility within the Office of the Secretary of the Navy, OPNAV, and HQMC for the acquisition function, except for military requirements determination and operational test and evaluation. Hence, systems engineering is made part of the research, development, and acquisition functions by Section E1.27 of DoDD 5000.01, and SNI 5430.7Q 7b(2) designates the ASN(RD&A) as the responsible party for systems engineering. SNI 5430.7Q 7b(2)(d) states that the ASN(RD&A) shall establish policy and procedures and be responsible for all research, development, and acquisition.

For the ASN(RD&A) CHSENG to use this indirect path, he or she would have to recommend a MASE policy to the ASN(RD&A), and, if he or she concurs, ASN(RD&A) would issue the policy as part of establishing policy and procedures for research, development, and

Figure 4.4
Path 3: ASN(RD&A) CHSENG Authority to Issue Navy MASE Policy (Indirect)



NOTE: Figure is based on laws and policies current as of July 7, 2011.
 RAND RR357-4.4

Table 4.3
Trace of Citations of Authority for Path 3

The ASN(RD&A) CHSENG can recommend that the ASN(RD&A) issue MASE policy as part of enforcing implementation of DON IT application and data management policies.

Document	Title	Date	Section	Extract
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Under Secretary of Defense for Acquisition, Technology, and Logistics	Posted on May 18, 2011	10 USC 133(b)	(b) Subject to the authority, direction, and control of the Secretary of Defense, the Under Secretary of Defense for Acquisition, Technology, and Logistics shall perform such duties and exercise such powers relating to acquisition as the Secretary of Defense may prescribe, including— . . . (2) establishing policies for acquisition (including procurement of goods and services, research and development, developmental testing, and contract administration) for all elements of the Department of Defense; . . . (5) the authority to direct the Secretaries of the military departments and the heads of all other elements of the Department of Defense with regard to matters for which the Under Secretary has responsibility.
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Deputy Assistant Secretary of Defense for Systems Engineering	Posted on May 18, 2011	10 USC 139(b)	Section 139d(b) DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR SYSTEMS ENGINEERING.— . . . (3) SUPERVISION.—The Deputy Assistant Secretary shall be subject to the supervision of the Under Secretary of Defense for Acquisition, Technology, and Logistics and shall report to the Under Secretary. . . . (5) DUTIES.—The Deputy Assistant Secretary. . . (A) develop policies and guidance for—(i) the use of systems engineering . . . (D) provide advocacy, oversight, and guidance to elements of the acquisition workforce responsible for systems engineering . . . (F) periodically review the organizations and capabilities of the military departments with respect to systems engineering, development planning, and lifecycle management and sustainability, and identify needed changes or improvements to such organizations and capabilities. . .
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Secretary of the Navy	Posted on May 18, 2011	10 USC 5013(c) (3)	Section 5013 Secretary of the Navy . . . (c) Subject to the authority, direction, and control of the Secretary of Defense, the Secretary of the Navy is also responsible to the Secretary of Defense for— . . . (3) the effective and timely implementation of policy, program, and budget decisions and instructions of the President or the Secretary of Defense relating to the functions of the Department of the Navy; . . .
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Secretary of the Navy	Posted on May 18, 2011	10 USC 5013(f)	Section 5013 Secretary of the Navy . . . (f) The Secretary of the Navy may assign such of his functions, powers, and duties as he considers appropriate to the Under Secretary of the Navy and to the Assistant Secretaries of the Navy. Officers of the Navy and the Marine Corps shall, as directed by the Secretary, report on any matter to the Secretary, the Under Secretary, or any Assistant Secretary.

Table 4.3—Continued

Document	Title	Date	Section	Extract
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Assistant Secretaries of the Navy	Posted on May 18, 2011	10 USC 5016(b) (4)(A)	Section 5016 Assistant Secretaries of the Navy. . .(b)(4)(A) One of the Assistant Secretaries shall be the Assistant Secretary of the Navy for Research, Development, and Acquisition. The principal duty of the Assistant Secretary shall be the overall supervision of research, development, and acquisition matters of the Department of the Navy.
DoDD 5000.01	The Defense Acquisition System	May 12, 2003	E1.27	E1.27. Systems Engineering. Acquisition programs shall be managed through the application of a systems engineering approach that optimizes total system performance and minimizes total ownership costs. A modular, open-systems approach shall be employed, where feasible.
DoDD 5134.01	Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L))	April 1, 2008	3	The Under Secretary of Defense for Acquisition, Technology, and Logistics is the Principal Staff Assistant and advisor to the Secretary of Defense for all matters relating to the DoD Acquisition System; . . . systems engineering; . . .
DoDD 5134.01	Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L))	April 1, 2008	4.1.6.	USD(AT&L) shall: . . . 4.1.6. Work directly with the Service Acquisition Executives.
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	7b(2)(a)	ASN(RD&A) shall: (a) Act as liaison with the Under Secretary of Defense (Acquisition, Technology, and Logistics) and with Assistant Secretaries of Defense, as appropriate and relevant, in matters of mutual concern.
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	7b(2)(b)	ASN(RD&A) shall: . . . (b) Serve as the Navy acquisition executive with responsibility for overseeing the performance of the DON's acquisition system and representing the DON with the Under Secretary of Defense (Acquisition, Technology and Logistics) and Congress on all matters related to acquisition policy and programs.

Table 4.3—Continued

Document	Title	Date	Section	Extract
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	7b(2)	The ASN (RD&A) has sole responsibility within the Office of the SECNAV, OPNAV, and HQMC for the acquisition function, except for military requirements determinations and operational test and evaluation.
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	7b(2)(d)	ASN(RD&A) shall: . . . (d) Establish policy and procedures and be responsible for all research, development, and acquisition.
SNI 5000.2D	Implementation and Operation of the Defense Acquisition System and the Joint Capabilities Integration and Development System	October 16, 2008	4.3	During the acquisition life cycle, all IT, including NSS, programs shall implement interoperability, supportability, and data management processes, procedures, and tools per reference (b) through (g).
SNI 5000.36A	Department of the Navy Information Technology Applications and Data Management	December 19, 2005	3a	a. This instruction addresses DON IT applications and data management policy as it applies to networked and standalone IT applications, data, and data exchanges within and across all DON organizations.
SNI 5000.36A	Department of the Navy Information Technology Applications and Data Management	December 19, 2005	6a(1)	The DON CIO shall: (1) Establish DON IT applications and data management policy, planning, guidance, and metrics, consistent with the DON Enterprise Architecture, for ensuring the interoperability of IT (including NSS) throughout the DON in accordance with references (d) through (g) and (0).
SNI 5000.36A	Department of the Navy Information Technology Applications and Data Management	December 19, 2005	6c(1)	c. The Assistant Secretary of the Navy (Research, Development and Acquisition) (ASN (RD&A)) shall: (1) Enforce implementation of DON IT application and data management policies, standards, and metrics by all acquisition programs.

NOTE: Contents of table are based on laws and policies current as of July 7, 2011.

acquisition. The CHSENG could only use this path if the MASE policy he or she recommends to the ASN(RD&A) is policy or procedures for research, development, and acquisition. It should be noted that in this case, the ASN(RD&A) can also cite this authority directly to issue interoperability policy related to MASE without a recommendation from the CHSENG as well. Figure 4.5 shows Path 4.

Table 4.4 shows the statements of authority cited for Path 4. As with similar tables for other paths, the first column of the table shows the document identifier (e.g., SNI 5000.2D). The second column shows the title of the document. The third column shows the date of the document. The fourth column shows the section or paragraph number where the statement of authority can be found. The fifth column shows the statement of authority. In most cases, the statement of authority is a word-for-word extraction from the document—i.e., a direct quote. In the case of extracting text from Title 10, only the relevant passages are included because the entire paragraph is too lengthy for inclusion. Appendix B contains more complete quotes of the passages that are too lengthy for inclusion in the table.

A logical reading of the statements of authority indicates that the ASN(RD&A) CHSENG can use this indirect path to issue MASE policy by recommending a MASE policy to the ASN(RD&A), and, if the ASN(RD&A) concurs, he or she would issue the policy under his or her authority to establish policy and procedures for research, development, and acquisition. The CHSENG could only use this path if the MASE policy he or she recommends to the ASN(RD&A) is policy or procedures for research, development, and acquisition.

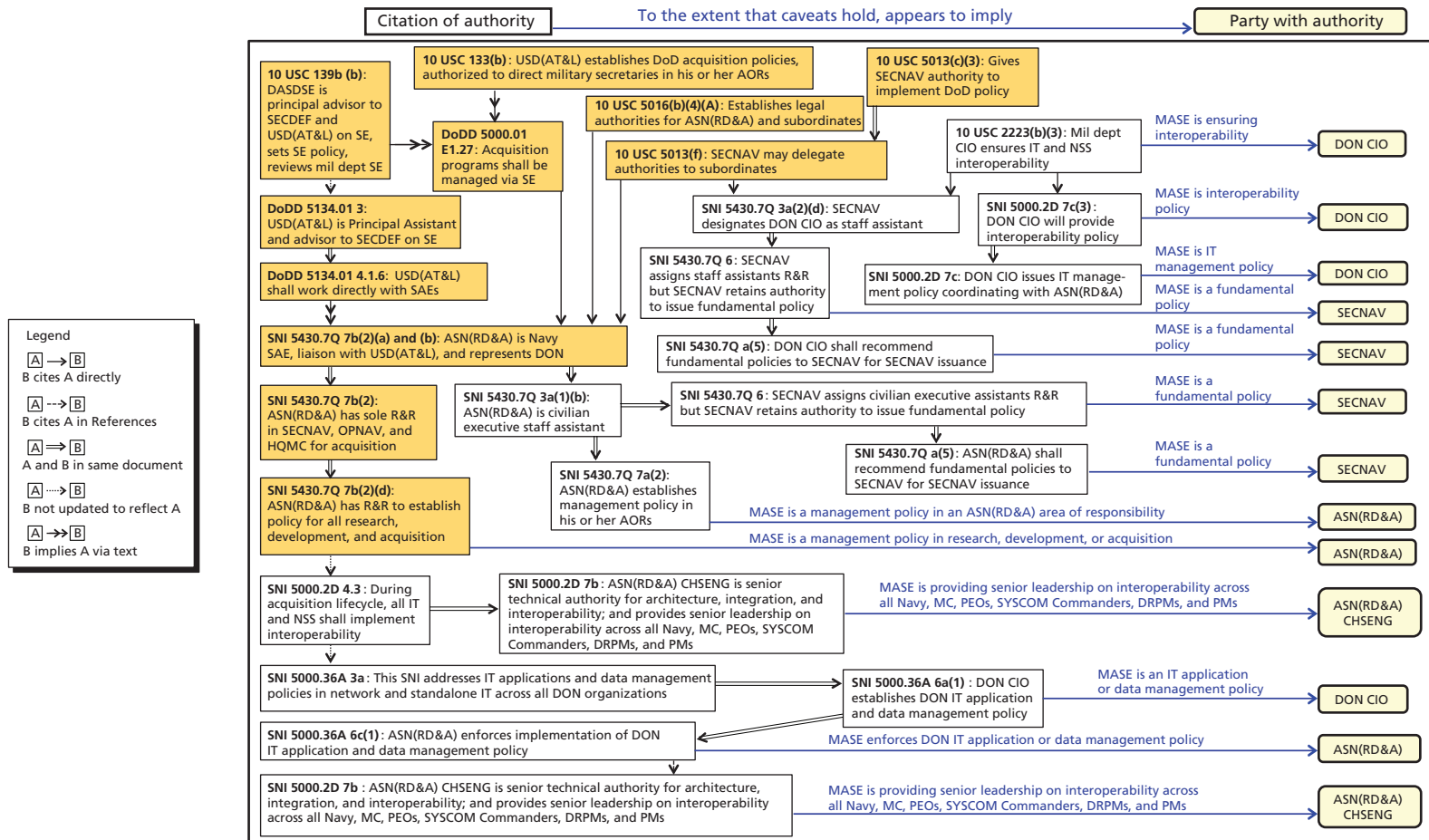
Path 5: Indirect Path for the ASN(RD&A) CHSENG to Issue Navy MASE Policy

Path 5 shows another indirect path for the ASN(RD&A) CHSENG to issue a MASE policy. This indirect path stems from the root of Section 3a(1)(b) of SNI 5430.7Q, which states that the ASN(RD&A) is a civilian executive assistant. Section 7a(2) of the same document states that each civilian executive assistant shall establish management policies that are necessary for effective administration in his or her area of responsibility. Hence, the ASN(RD&A) has responsibility for establishing management policy for systems engineering.

For the ASN(RD&A) CHSENG to use this indirect path to issue a MASE policy, he or she would have to recommend a MASE policy to the ASN(RD&A), and, if he or she concurs, the ASN(RD&A) would issue the policy under his or her responsibility to establish policy for effective administration of systems engineering. For the CHSENG to use this path, the MASE policy that the CHSENG recommends would have to be management policy for systems engineering. Once again, the ASN(RD&A) can cite this authority directly to issue interoperability policy related to MASE without a recommendation from the CHSENG as well. Figure 4.6 shows Path 5.

Table 4.5 shows the statements of authority cited for Path 5. As with similar tables for other paths, the first column of the table shows the document identifier (e.g., SNI 5000.2D). The second column shows the title of the document. The third column shows the date of the document. The fourth column shows the section or paragraph number where the statement of authority can be found. The fifth column shows the statement of authority. In most cases, the statement of authority is a word-for-word extraction from the document—i.e., a direct quote. In the case of extracting text from Title 10, only the relevant passages are included because the entire paragraph is too lengthy for inclusion. Appendix B contains more complete quotes of the passages that are too lengthy for inclusion in the table.

Figure 4.5
Path 4: ASN(RD&A) CHSENG Authority to Issue Navy MASE Policy (Indirect)



NOTE: Figure is based on laws and policies current as of July 7, 2011.

RAND RR357-4.5

Table 4.4
Trace of Citations of Authority for Path 4

The ASN(RD&A) CHSENG can recommend that the ASN(RD&A) issue MASE policy as part of establishing policy for research, development, and acquisition.

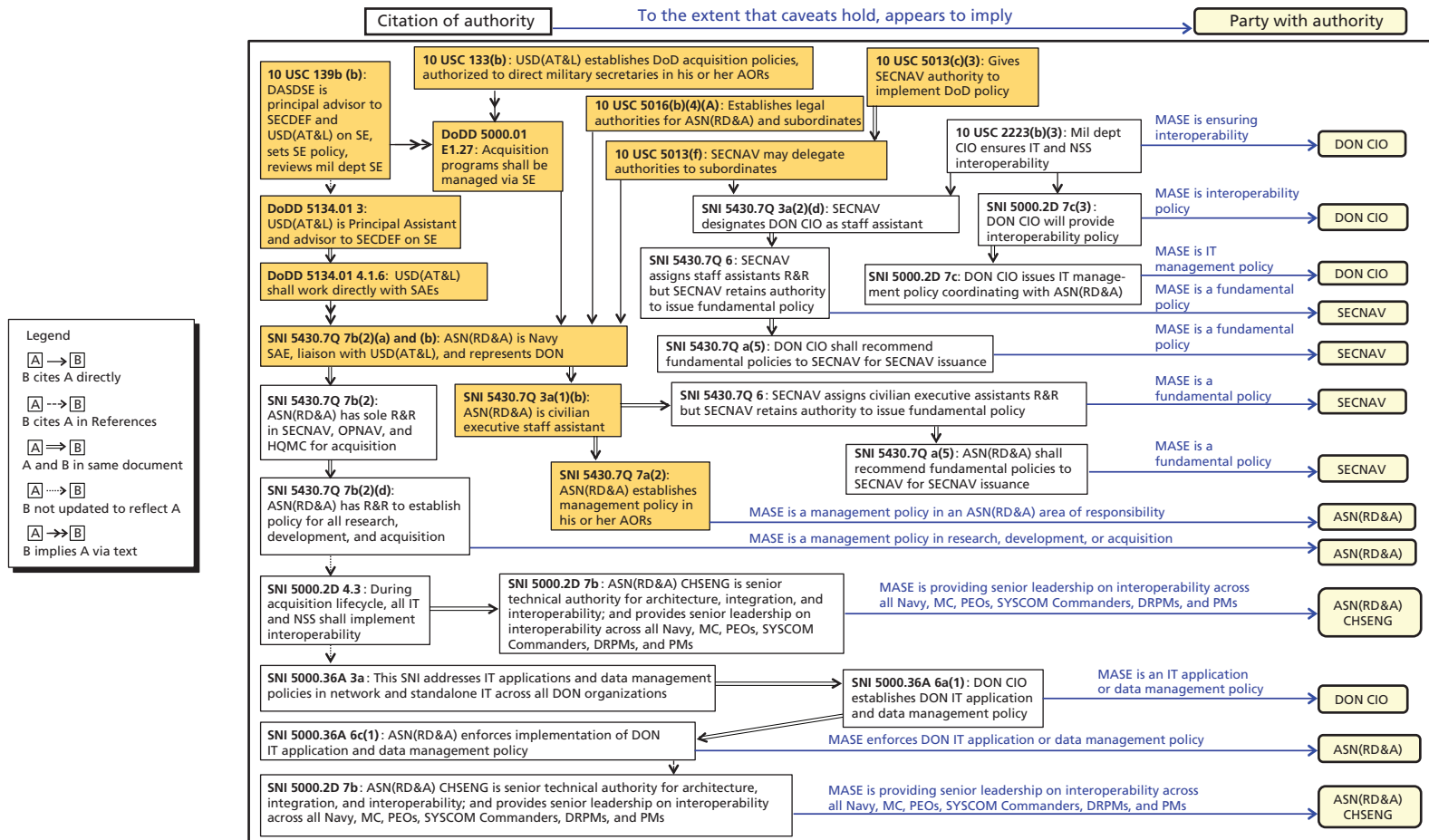
Document	Title	Date	Section	Extract
Title 10 -- Armed Forces United States Code (2006 Edition with Supplement IV)	Under Secretary of Defense for Acquisition, Technology, and Logistics	Posted on May 18, 2011	10 USC 133(b)	(b) Subject to the authority, direction, and control of the Secretary of Defense, the Under Secretary of Defense for Acquisition, Technology, and Logistics shall perform such duties and exercise such powers relating to acquisition as the Secretary of Defense may prescribe, including— . . . (2) establishing policies for acquisition (including procurement of goods and services, research and development, developmental testing, and contract administration) for all elements of the Department of Defense; . . . (5) the authority to direct the Secretaries of the military departments and the heads of all other elements of the Department of Defense with regard to matters for which the Under Secretary has responsibility.
Title 10 -- Armed Forces United States Code (2006 Edition with Supplement IV)	Deputy Assistant Secretary of Defense for Systems Engineering	Posted on May 18, 2011	10 USC 139(b)	Section 139d(b) DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR SYSTEMS ENGINEERING.— . . . (3) SUPERVISION.—The Deputy Assistant Secretary shall be subject to the supervision of the Under Secretary of Defense for Acquisition, Technology, and Logistics and shall report to the Under Secretary. . . . (5) DUTIES.—The Deputy Assistant Secretary. . . (A) develop policies and guidance for—(i) the use of systems engineering . . . (D) provide advocacy, oversight, and guidance to elements of the acquisition workforce responsible for systems engineering . . . (F) periodically review the organizations and capabilities of the military departments with respect to systems engineering, development planning, and lifecycle management and sustainability, and identify needed changes or improvements to such organizations and capabilities. . .
Title 10 -- Armed Forces United States Code (2006 Edition with Supplement IV)	Secretary of the Navy	Posted on May 18, 2011	10 USC 5013(c) (3)	Section 5013 Secretary of the Navy . . . (c) Subject to the authority, direction, and control of the Secretary of Defense, the Secretary of the Navy is also responsible to the Secretary of Defense for— . . . (3) the effective and timely implementation of policy, program, and budget decisions and instructions of the President or the Secretary of Defense relating to the functions of the Department of the Navy; . . .
Title 10 -- Armed Forces United States Code (2006 Edition with Supplement IV)	Secretary of the Navy	Posted on May 18, 2011	10 USC 5013(f)	Section 5013 Secretary of the Navy . . . (f) The Secretary of the Navy may assign such of his functions, powers, and duties as he considers appropriate to the Under Secretary of the Navy and to the Assistant Secretaries of the Navy. Officers of the Navy and the Marine Corps shall, as directed by the Secretary, report on any matter to the Secretary, the Under Secretary, or any Assistant Secretary.
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Assistant Secretaries of the Navy	Posted on May 18, 2011	10 USC 5016(b) (4)(A)	Section 5016 Assistant Secretaries of the Navy. . . (b)(4)(A) One of the Assistant Secretaries shall be the Assistant Secretary of the Navy for Research, Development, and Acquisition. The principal duty of the Assistant Secretary shall be the overall supervision of research, development, and acquisition matters of the Department of the Navy.

Table 4.4—Continued

Document	Title	Date	Section	Extract
DoDD 5000.01	The Defense Acquisition System	May 12, 2003	E1.27	E1.27. Systems Engineering. Acquisition programs shall be managed through the application of a systems engineering approach that optimizes total system performance and minimizes total ownership costs. A modular, open-systems approach shall be employed, where feasible.
DoDD 5134.01	Under Secretary of Defense For Acquisition, Technology, and Logistics (USD(AT&L))	April 1, 2008	3	The Under Secretary of Defense for Acquisition, Technology, and Logistics is the Principal Staff Assistant and advisor to the Secretary of Defense for all matters relating to the DoD Acquisition System; . . . systems engineering; . . .
DoDD 5134.01	Under Secretary of Defense For Acquisition, Technology, and Logistics (Usd(AT&L))	April 1, 2008	4.1.6.	USD(AT&L) shall: . . . 4.1.6. Work directly with the Service Acquisition Executives.
SNI 5430.7Q	Assignment of Responsibilities And Authorities in the Office of the Secretary of the Navy	August 17, 2009	7b(2)(a)	ASN(RD&A) shall: (a) Act as liaison with the Under Secretary of Defense (Acquisition, Technology, and Logistics) and with Assistant Secretaries of Defense, as appropriate and relevant, in matters of mutual concern.
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	7b(2)(b)	ASN(RD&A) shall: . . . (b) Serve as the Navy acquisition executive with responsibility for overseeing the performance of the DON's acquisition system and representing the DON with the Under Secretary of Defense (Acquisition, Technology and Logistics) and Congress on all matters related to acquisition policy and programs.
SNI 5430.7Q	Assignment of Responsibilities And Authorities in the Office of the Secretary of the Navy	August 17, 2009	7b(2)	The ASN (RD&A) has sole responsibility within the Office of the SECNAV, OPNAV, and HQMC for the acquisition function, except for military requirements determinations and operational test and evaluation.
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	7b(2)(d)	ASN(RD&A) shall: . . . (d) Establish policy and procedures and be responsible for all research, development, and acquisition.

NOTE: Contents of table are based on laws and policies current as of July 7, 2011.

Figure 4.6
Path 5: ASN(RD&A) CHSENG Authority to Issue Navy MASE Policy (Indirect)



NOTE: Figure is based on laws and policies current as of July 7, 2011.

RAND RR357-4.6

Table 4.5
Trace of Citations of Authority for Path 5

The ASN(RD&A) CHSENG can recommend that the ASN(RD&A) issue MASE policy as part of establishing management policy in an ASN(RD&A) area of responsibility.

Document	Title	Date	Section	Extract
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Under Secretary of Defense for Acquisition, Technology, and Logistics	Posted on May 18, 2011	10 USC 133(b)	(b) Subject to the authority, direction, and control of the Secretary of Defense, the Under Secretary of Defense for Acquisition, Technology, and Logistics shall perform such duties and exercise such powers relating to acquisition as the Secretary of Defense may prescribe, including— . . . (2) establishing policies for acquisition (including procurement of goods and services, research and development, developmental testing, and contract administration) for all elements of the Department of Defense; . . . (5) the authority to direct the Secretaries of the military departments and the heads of all other elements of the Department of Defense with regard to matters for which the Under Secretary has responsibility.
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Deputy Assistant Secretary of Defense for Systems Engineering	Posted on May 18, 2011	10 USC 139(b)	Section 139d(b) DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR SYSTEMS ENGINEERING.— . . . (3) SUPERVISION.—The Deputy Assistant Secretary shall be subject to the supervision of the Under Secretary of Defense for Acquisition, Technology, and Logistics and shall report to the Under Secretary. . . . (5) DUTIES.—The Deputy Assistant Secretary. . . (A) develop policies and guidance for—(i) the use of systems engineering . . . (D) provide advocacy, oversight, and guidance to elements of the acquisition workforce responsible for systems engineering . . . (F) periodically review the organizations and capabilities of the military departments with respect to systems engineering, development planning, and lifecycle management and sustainability, and identify needed changes or improvements to such organizations and capabilities. . .
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Secretary of the Navy	Posted on May 18, 2011	10 USC 5013(c) (3)	Section 5013 Secretary of the Navy . . . (c) Subject to the authority, direction, and control of the Secretary of Defense, the Secretary of the Navy is also responsible to the Secretary of Defense for— . . . (3) the effective and timely implementation of policy, program, and budget decisions and instructions of the President or the Secretary of Defense relating to the functions of the Department of the Navy; . . .
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Secretary of the Navy	Posted on May 18, 2011	10 USC 5013(f)	Section 5013 Secretary of the Navy . . . (f) The Secretary of the Navy may assign such of his functions, powers, and duties as he considers appropriate to the Under Secretary of the Navy and to the Assistant Secretaries of the Navy. Officers of the Navy and the Marine Corps shall, as directed by the Secretary, report on any matter to the Secretary, the Under Secretary, or any Assistant Secretary.
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Assistant Secretaries of the Navy	Posted on May 18, 2011	10 USC 5016(b) (4)(A)	Section 5016 Assistant Secretaries of the Navy. . . (b)(4)(A) One of the Assistant Secretaries shall be the Assistant Secretary of the Navy for Research, Development, and Acquisition. The principal duty of the Assistant Secretary shall be the overall supervision of research, development, and acquisition matters of the Department of the Navy.

Table 4.5—Continued

Document	Title	Date	Section	Extract
DoDD 5000.01	The Defense Acquisition System	May 12, 2003	E1.27	E1.27. Systems Engineering. Acquisition programs shall be managed through the application of a systems engineering approach that optimizes total system performance and minimizes total ownership costs. A modular, open-systems approach shall be employed, where feasible.
DoDD 5134.01	Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L))	April 1, 2008	3	The Under Secretary of Defense for Acquisition, Technology, and Logistics is the Principal Staff Assistant and advisor to the Secretary of Defense for all matters relating to the DoD Acquisition System; . . . systems engineering; . . .
DoDD 5134.01	Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L))	April 1, 2008	4.1.6.	USD(AT&L) shall: . . . 4.1.6. Work directly with the Service Acquisition Executives.
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	7b(2)(a)	ASN(RD&A) shall: (a) Act as liaison with the Under Secretary of Defense (Acquisition, Technology, and Logistics) and with Assistant Secretaries of Defense, as appropriate and relevant, in matters of mutual concern.
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	7b(2)(b)	ASN(RD&A) shall: . . . (b) Serve as the Navy acquisition executive with responsibility for overseeing the performance of the DON's acquisition system and representing the DON with the Under Secretary of Defense (Acquisition, Technology and Logistics) and Congress on all matters related to acquisition policy and programs.
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	3a(1)(b)	(1) The civilian executive assistants are: . . . (b) The Assistant Secretary of the Navy (Research, Development and Acquisition) (ASN (RD&A));
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	7a(2)	. . . each civilian executive assistant and staff assistant, within their assigned area of responsibility, shall: . . . (2) Establish management policies, strategic direction, systems, procedures, standards, or make decisions that are necessary for effective administration in their respective areas of responsibility.

NOTE: Contents of table are based on laws and policies current as of July 7, 2011.

As described previously, a logical reading of the statements of authority indicates that the ASN(RD&A) CHSENG can use this indirect path to issue MASE policy by recommending a MASE policy to the ASN(RD&A), and, if he or she concurs, then the ASN(RD&A) would issue the policy under his or her authority to establish policy for effective administration of systems engineering. For the CHSENG to use this path, the MASE policy that the CHSENG recommends would have to be management policy for systems engineering.

Path 6: Indirect Path for the ASN(RD&A) CHSENG to Issue Navy MASE Policy

Path 6 shows the most indirect path for the ASN(RD&A) CHSENG to issue a MASE policy. This indirect path stems from the root of Section 3a(1)(b) of SNI 5430.7Q, which states that the ASN(RD&A) is a civilian executive assistant. Section 6 of the same document states that the SECNAV assigns DON-wide responsibilities for areas essential to the efficient administration of the DON and to and among civilian executive assistants, but that the SECNAV retains control of these and related policy matters, including establishment of fundamental policy.

The CHSENG can utilize this Path 6 to issue MASE policy by recommending a MASE policy to the ASN(RD&A), and, if he or she concurs, then the ASN(RD&A) would have to recommend the MASE policy to the SECNAV. If the SECNAV also concurs, then the SECNAV would issue the recommended MASE policy as fundamental policy. In order for the CHSENG to use this most indirect path, the MASE policy he or she recommends must be fundamental policy. Figure 4.7 shows Path 6.

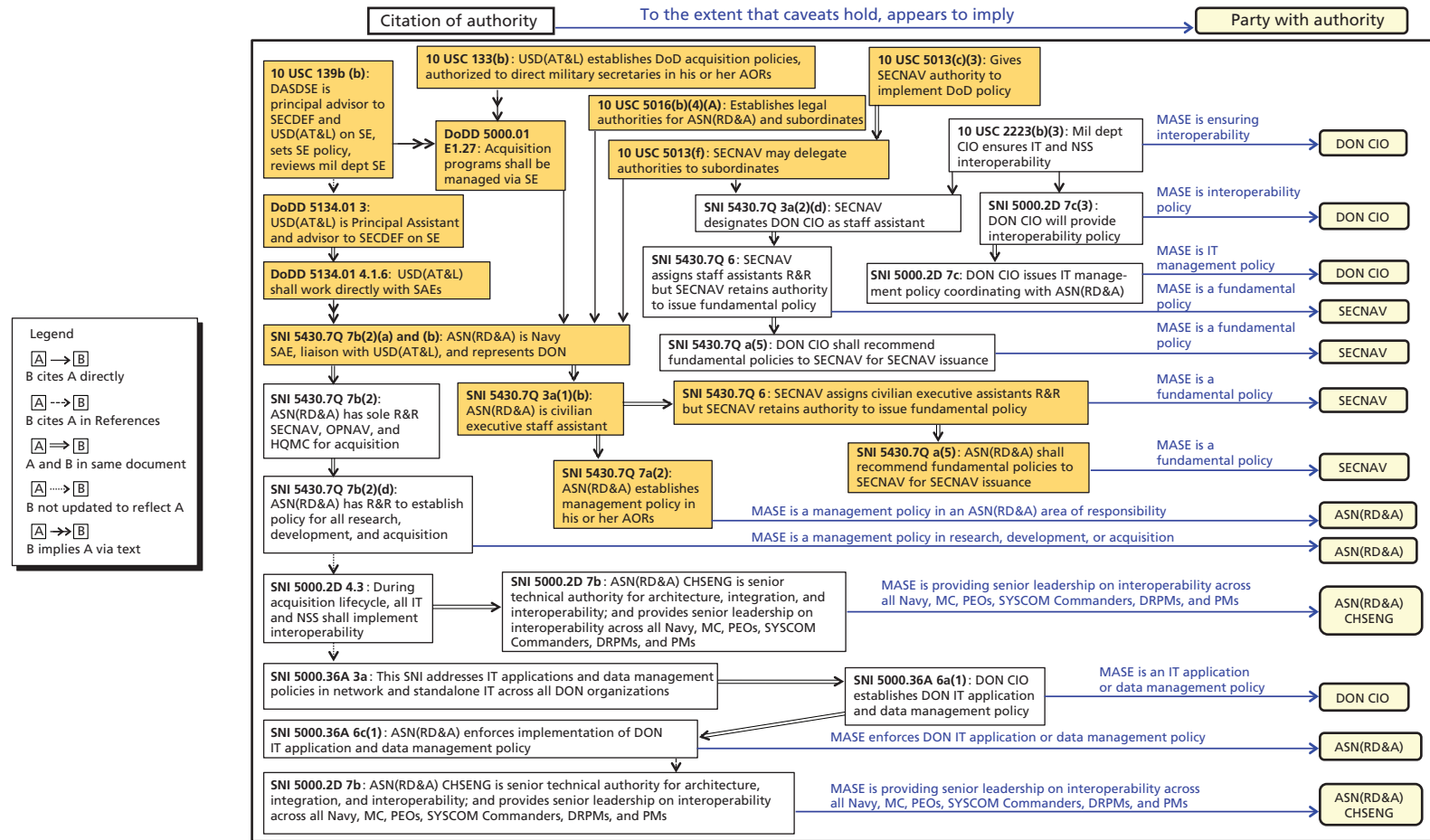
Table 4.6 shows the statements of authority cited for Path 6. As with similar tables for other paths, the first column of the table shows the document identifier (e.g., SNI 5000.2D). The second column shows the title of the document. The third column shows the date of the document. The fourth column shows the section or paragraph number where the statement of authority can be found. The fifth column shows the statement of authority. In most cases, the statement of authority is a word-for-word extraction from the document—i.e., a direct quote. In the case of extracting text from Title 10, only the relevant passages are included because the entire paragraph is too lengthy for inclusion. Appendix B contains more complete quotes of the passages that are too lengthy for inclusion in the table.

As described previously, a logical reading of the statements of authority indicate that the ASN(RD&A) CHSENG can use this indirect path to issue MASE policy by recommending a MASE policy to the ASN(RD&A), and if he or she concurs, then ASN(RD&A) would have to recommend the MASE policy to the SECNAV. If the SECNAV also concurs, then the SECNAV would issue the recommended MASE policy as fundamental policy. In order for the CHSENG to use this most indirect path, the MASE policy that her or she recommends must be fundamental policy.

ASN(RD&A) CHSENG Authority to Issue MASE Policy

Analysis of the R&R network of guidance relevant to interoperability shows that there are six paths, all traceable to federal law, that the ASN(RD&A) CHSENG can use to issue Navy MASE policy. Two paths give the ASN(RD&A) CHSENG direct authority to issue MASE policy for the Navy if providing senior leadership includes issuing MASE policy. Since the Navy has not defined what providing senior leadership entails, it is not clear that the CHSENG can use this possible direct authority. Links also exist in the guidance to allow the CHSENG to use

Figure 4.7
Path 6: ASN(RD&A) CHSENG Authority to Issue Navy MASE Policy (Indirect)



NOTE: Figure is based on laws and policies current as of July 7, 2011.

RAND RR357-4.7

Table 4.6
Trace of Citations of Authority for Path 6

The ASN(RD&A) CHSENG can recommend issuance of MASE policy to the ASN(RD&A), who can, in turn, recommend SECNAV issuance of MASE policy as fundamental policy.

Document	Title	Date	Section	Extract
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Under Secretary of Defense for Acquisition, Technology, and Logistics	Posted on May 18, 2011	10 USC 133(b)	(b) Subject to the authority, direction, and control of the Secretary of Defense, the Under Secretary of Defense for Acquisition, Technology, and Logistics shall perform such duties and exercise such powers relating to acquisition as the Secretary of Defense may prescribe, including— . . . (2) establishing policies for acquisition (including procurement of goods and services, research and development, developmental testing, and contract administration) for all elements of the Department of Defense; . . . (5) the authority to direct the Secretaries of the military departments and the heads of all other elements of the Department of Defense with regard to matters for which the Under Secretary has responsibility.
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Deputy Assistant Secretary of Defense for Systems Engineering	Posted on May 18, 2011	10 USC 139(b)	Section 139d(b) DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR SYSTEMS ENGINEERING.— . . . (3) SUPERVISION.—The Deputy Assistant Secretary shall be subject to the supervision of the Under Secretary of Defense for Acquisition, Technology, and Logistics and shall report to the Under Secretary. . . . (5) DUTIES.—The Deputy Assistant Secretary. . . (A) develop policies and guidance for—(i) the use of systems engineering . . . (D) provide advocacy, oversight, and guidance to elements of the acquisition workforce responsible for systems engineering . . . (F) periodically review the organizations and capabilities of the military departments with respect to systems engineering, development planning, and lifecycle management and sustainability, and identify needed changes or improvements to such organizations and capabilities. . .
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Secretary of the Navy	Posted on May 18, 2011	10 USC 5013(c) (3)	Section 5013 Secretary of the Navy . . . (c) Subject to the authority, direction, and control of the Secretary of Defense, the Secretary of the Navy is also responsible to the Secretary of Defense for— . . . (3) the effective and timely implementation of policy, program, and budget decisions and instructions of the President or the Secretary of Defense relating to the functions of the Department of the Navy; . . .
Title 10— Armed Forces United States Code (2006 Edition with Supplement IV)	Secretary of the Navy	Posted on May 18, 2011	10 USC 5013(f)	Section 5013 Secretary of the Navy . . . (f) The Secretary of the Navy may assign such of his functions, powers, and duties as he considers appropriate to the Under Secretary of the Navy and to the Assistant Secretaries of the Navy. Officers of the Navy and the Marine Corps shall, as directed by the Secretary, report on any matter to the Secretary, the Under Secretary, or any Assistant Secretary.
Title 10 -- Armed Forces United States Code (2006 Edition with Supplement IV)	Assistant Secretaries of the Navy	Posted on May 18, 2011	10 USC 5016(b) (4)(A)	Section 5016 Assistant Secretaries of the Navy. . .(b)(4)(A) One of the Assistant Secretaries shall be the Assistant Secretary of the Navy for Research, Development, and Acquisition. The principal duty of the Assistant Secretary shall be the overall supervision of research, development, and acquisition matters of the Department of the Navy.

Table 4.6—Continued

Document	Title	Date	Section	Extract
DoDD 5000.01	The Defense Acquisition System	12-May-2003	E1.27	E1.27. Systems Engineering. Acquisition programs shall be managed through the application of a systems engineering approach that optimizes total system performance and minimizes total ownership costs. A modular, open-systems approach shall be employed, where feasible.
DoDD 5134.01	Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L))	April 1, 2008	3	The Under Secretary of Defense for Acquisition, Technology, and Logistics is the Principal Staff Assistant and advisor to the Secretary of Defense for all matters relating to the DoD Acquisition System; . . . systems engineering; . . .
DoDD 5134.01	Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L))	April 1, 2008	4.1.6.	USD(AT&L) shall: . . . 4.1.6. Work directly with the Service Acquisition Executives.
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	7b(2)(a)	ASN(RD&A) shall: (a) Act as liaison with the Under Secretary of Defense (Acquisition, Technology, and Logistics) and with Assistant Secretaries of Defense, as appropriate and relevant, in matters of mutual concern.
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	7b(2)(b)	ASN(RD&A) shall: . . . (b) Serve as the Navy acquisition executive with responsibility for overseeing the performance of the DON's acquisition system and representing the DON with the Under Secretary of Defense (Acquisition, Technology and Logistics) and Congress on all matters related to acquisition policy and programs.
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	3a(1)(b)	(1) The civilian executive assistants are: . . . (b) The Assistant Secretary of the Navy (Research, Development and Acquisition) (ASN (RD&A));
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	6	6. Governance. SECNAV assigns Department-wide responsibilities for areas essential to the efficient administration of the DON to and among the civilian executive assistants and staff assistants. The SECNAV retains control of these and related policy matters, including the establishment of fundamental policies and the issuance of such orders and directives as are deemed necessary, per reference (g).
SNI 5430.7Q	Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy	August 17, 2009	7a(5)	. . .each civilian executive assistant and staff assistant, within their assigned area of responsibility, shall: . . . (5) Recommend fundamental policies, orders, or directives for issuance by the SECNAV, in executing the responsibilities described in paragraph 4, which are considered necessary for the effective administration of the DON and beyond the scope of their individual responsibilities.

NOTE: Contents of table are based on laws and policies current as of July 7, 2011.

indirect means to issue interoperability and MASE policy. Specifically, the CHSENG can recommend an interoperability or MASE policy to the ASN(RD&A), and, if he or she concurs, the ASN(RD&A) can issue the policy. Two of these indirect options for the CHSENG require the recommended policy to be ASN(RD&A) management policy in research, development, and acquisition. A third indirect path requires that the MASE policy recommended by the CHSENG be an ASN(RD&A) issuance for enforcing DON IT application or management policy.

A fourth indirect path requires concurrence from both the ASN(RD&A) and the SECNAV. If the CHSENG recommends a policy to the ASN(RD&A) that falls outside of the ASN(RD&A)'s authority to issue, the ASN(RD&A) can recommend the policy to the SECNAV for issuance as fundamental policy. This indirect path for the ASN(RD&A) CHSENG to influence interoperability policy would be at the discretion of both the ASN(RD&A) and the SECNAV.

Implications of Multiple Paths of Authority

This case study illustrates that this methodology can be used to determine which parties have authority to establish policy in key defense areas. In particular, the methodology can be used to eliminate potential legal conflicts, illuminate dilution of authority, clarify distinct roles and responsibilities among defense executives, and indicate areas where collaboration among several communities will be needed. This case study shows that the authority to issue interoperability policy in the area of systems engineering involves the CIO and acquisition communities. Specific roles and responsibilities of the various officials depend on the particular components of a proposed MASE policy because the components need to be known in order to determine whether the caveats are satisfied. Hence, identification of specific ambiguities, overlaps, or gaps is best addressed with respect to specific proposed MASE policies.

Recommendations and Closing Remarks

Synopsis of the Study

We have presented a methodology and framework that can be used to create a network of guidance relevant to a particular issue. By applying the framework to the network of guidance, the analyst can create an R&R network of authority that identifies all parties with roles, responsibilities, or authorities with respect to the issue being investigated. Moreover, the R&R network shows the scope of the authority each official is assigned by guidance documents via the caveats the law and relevant policy place on the authority of each official. Hence, an analyst can compare the scopes of authority and either (1) identify the single official responsible for handling the issue being investigated; (2) show that the issue being investigated does not meet any of the caveats and hence a gap in the guidance exists because no official can claim responsibility to address the issue being investigated; or (3) identify multiple officials whose scopes of responsibility include the issue being investigated and hence show that the guidance is potentially ambiguous, inconsistent, overlapping, or redundant.

We applied the methodology to authority to issue Navy interoperability policy related to MASE. The resulting R&R network of authority relevant to issuing Navy MASE policy shows that there are 13 different paths of authority that could be cited by four different parties to claim authority to issue interoperability or interoperability-related MASE policy. Five of the paths stem from 10 USC § 2223(b)(3), and the other eight stem from 10 USC § 133(b), 10 USC § 139b, 10 USC § 5013, and 10 USC § 5016.

Four paths show that the SECNAV retains authority to issue Navy interoperability policy. Four different paths show that the DON CIO has authority to issue Navy interoperability policy. Three other paths, distinct from the eight already mentioned, give the ASN(RD&A) authority to establish Navy interoperability policy. Finally, two separate paths give the authority to issue Navy interoperability policy related to MASE directly to the ASN(RD&A) CHSENG if issuing MASE policy is part of “providing senior leadership”¹ for interoperability. In the ASN(RD&A) CHSENG case study, we show that the two direct paths traceable to federal law and available to the ASN(RD&A) CHSENG to issue Navy MASE policy both require that the MASE policy provide senior technical authority on interoperability.

However, if the MASE policy is not providing senior technical authority, there are four other paths all also traceable to federal law that the CHSENG can use to influence MASE policy. All four of these indirect paths require the CHSENG to recommend the MASE policy to the ASN(RD&A). If the recommended policy is (1) enforcing implementation of

¹ The Navy does not specify what “providing senior leadership” entails.

DON IT application or data management policy; (2) policy for research, development, or acquisition; or (3) management policy in an area where the ASN(RD&A) has responsibility, then the ASN(RD&A) can issue the MASE policy recommended by the CHSENG. If the recommended MASE policy falls outside of the ASN(RD&A)'s scope of responsibility, the ASN(RD&A) can, in turn, recommend the MASE policy to the SECNAV for the SECNAV to issue as fundamental policy.

Recommendations

Our analysis shows that the body of guidance relevant to interoperability yields many paths of authority traceable to U.S. law and as many as four officials having responsibility for various aspects of interoperability. In such a situation, determining which official has responsibility for a particular facet of interoperability may not be straightforward, as illustrated in our case study of the ASN(RD&A) CHSENG's authority for issuing Navy MASE policy. We recommend that all stakeholders, and particularly the ASN(RD&A) and the DON CIO, take proactive steps to increase the routine communications necessary to maintain and grow collaborative working environments. Such actions will enable teamed approaches to quickly come to a shared understanding on issues of mutual interest. Guidance stipulates that various caveats must be met for particular officials to determine their specific roles and responsibilities. The components of a specific proposed MASE policy must be known to determine which caveats are satisfied. Hence, identification of ambiguities, gaps, or overlaps of responsibility is best addressed with respect to a particular proposed MASE policy. We recommend that the technique described in this report be applied to proposed MASE policies to determine whether gaps, overlaps, or ambiguities in authority exist for any components of the policy. This approach reinforces the need for various Navy officials to collaborate during the policy formulation stage.

In our case study, the organizations involved are primarily Navy agencies and hence fall under the authority of the SECNAV. The framework and methodology are applicable to more diverse collections of entities on any variety of topics. We recommend applying the framework and methodology to another area with a more diverse collection of players to further illustrate the utility of the approach. Two candidate examples follow.

The framework and methodology could be applied to identify potential inconsistencies, conflicts, ambiguities, and gaps in information sharing guidance in counterdrug/counterterrorism activities by tracing the flow of authorities, roles, and responsibilities of government executives from federal law to multiple departments, such as the Department of Homeland Security and DoD, and through the myriad of federal and local law enforcement agencies involved.

A second candidate area is testing where a complex network of policies govern test activities. For example, the framework and methodology could be applied to the body of guidance for testing during acquisition of Navy systems to examine the interrelationship of authorities for developmental, operational, and integrated testing. Agencies involved in such an application include the Office of the Secretary of Defense Director of Operational Test and Evaluation; the Deputy Assistant Secretary of the Navy for Research, Development, Test, and Evaluation (DASN RDT&E); the Navy's Operational Test and Evaluation Force; Navy PEOs; and Navy SYSCOMs.

Next Steps

In addition to the recommended actions, additional research can enhance the government's capability to address potential inconsistencies, ambiguities, and gaps in policy:

- Research can serve to mitigate the probability of potential conflicts:
 - Additional proactive research can identify potential policy gaps, inconsistencies, ambiguities, and overlaps in complex areas that intersect many arenas. Such research can enable policy fixes before potential conflicts arise. Candidate areas for proactive research include more aspects of interoperability, information assurance, and cyberspace.
 - Inconsistencies in policy can arise from unsynchronized policies. Research and development of techniques that can help identify unsynchronized policies when existing policies are updated and when new policies are issued would serve to anticipate areas of potential conflict and thus provide forewarning to effect solutions before potential conflicts can occur. Such techniques can also help ensure consistency within and among bodies of policy.
- Collaborative approaches can go a long way in mitigating and avoiding potential conflicts when policy is not clear. Research in collaborative approaches and organizational management concepts that promote routine exchange of information and viewpoints and proactively foster collaborative working environments will increase management's arsenal of tools to address situations when policy is not clear.

Closing Remarks

This report presents an approach for determining which parties have authority to issue Navy interoperability policy, the origins and implementation paths of the authority, and the extent of the authority. The approach includes rigorous analysis by researchers to identify pertinent authorities in federal law supplemented by a means to facilitate discovery of roles and responsibilities in DoD and Service-level policies. Comparisons of the scopes of roles, responsibilities, and authorities of executives assigned duties in official defense guidance allow researchers to create a network of authority for interoperability policy. This approach and the complementary analytic techniques that we suggest be researched and developed can provide the government with the ability to create and maintain consistent and comprehensive bodies of policy that will ensure the effective and efficient operation of defense agencies.

Electronic Policy Improvement Capability (EPIC)

The Electronic Policy Improvement Capability or EPICTM is an automated tool that uses a policy analysis framework to enable keyword searches of DoD or Service-level policy documents.¹ EPIC searches for syntactically combined occurrences of user-selected keywords from built-in lists of actors, actions, and products in policy documents. *Actors* are the parties assigned roles and responsibilities in policy documents or federal law. *Actions* express what the policy or law directs the actor to do. *Products* are the outcome of the action executed by the actor. In the application of EPIC to facilitate identification of parties with authority to issue interoperability policy, all actors were of interest because we were trying to discover which parties have authority to issue interoperability policy. The actions of interest were issuing or establishing. The products of interest were interoperability policy, MASE policy, and systems engineering policy. The syntactic combination of words of interest in this case are shown in Table A.1.

Table A.1
Syntactic Combinations of Words of Interest

Actor	Action	Product
<i>Any</i>	Issues Establishes	Interoperability policy MASE policy Systems engineering policy

EPIC automatically records sentences from a searched document that contain combinations of the user-selected keywords in a Microsoft (MS) Excel worksheet. The user can manually parse, sort, and filter through results relatively quickly to determine relevance. EPIC also outputs a version of the scanned policy as an Extensible Markup Language (XML) document with the actors, actions, and products of interest highlighted. An analyst can review the document to determine the completeness of the Excel results worksheet. Hence, for this study, EPIC provided a starting point for the analyst to identify relevant roles and responsibilities in DoD and Navy policies.

The EPIC tool is an MS Office–based program written in Visual Basic for Applications (VBA). It runs on the MS Windows platform with MS Office 2003 Professional or MS Office 2007.

¹ The current version of EPIC (Version 5.6.8.1) is incompatible with the formats in the United States Code. Hence, in this study, EPIC was used to scan only DoD and Navy policies. Analysts identified all relevant passages in federal law.

Statements of Authority

Title 10 United States Code

Section 133(b) Under Secretary of Defense for Acquisition, Technology, and Logistics

(a) There is an Under Secretary of Defense for Acquisition, Technology, and Logistics, appointed from civilian life by the President, by and with the advice and consent of the Senate. The Under Secretary shall be appointed from among persons who have an extensive management background.

(b) Subject to the authority, direction, and control of the Secretary of Defense, the Under Secretary of Defense for Acquisition, Technology, and Logistics shall perform such duties and exercise such powers relating to acquisition as the Secretary of Defense may prescribe, including—

- (1) supervising Department of Defense acquisition;
- (2) establishing policies for acquisition (including procurement of goods and services, research and development, developmental testing, and contract administration) for all elements of the Department of Defense;
- (3) establishing policies for logistics, maintenance, and sustainment support for all elements of the Department of Defense;
- (4) establishing policies of the Department of Defense for maintenance of the defense industrial base of the United States; and
- (5) the authority to direct the Secretaries of the military departments and the heads of all other elements of the Department of Defense with regard to matters for which the Under Secretary has responsibility.

(c) The Under Secretary—

- (1) is the senior procurement executive for the Department of Defense for the purposes of section 1702(c) of title 41;
- (2) is the Defense Acquisition Executive for purposes of regulations and procedures of the Department providing for a Defense Acquisition Executive; and

(3) to the extent directed by the Secretary, exercises overall supervision of all personnel (civilian and military) in the Office of the Secretary of Defense with regard to matters for which the Under Secretary has responsibility, unless otherwise provided by law.

(d) (1) The Under Secretary shall prescribe policies to ensure that audit and oversight of contractor activities are coordinated and carried out in a manner to prevent duplication by different elements of the Department. Such policies shall provide for coordination of the annual plans developed by each such element for the conduct of audit and oversight functions within each contracting activity.

(2) In carrying out this subsection, the Under Secretary shall consult with the Inspector General of the Department of Defense.

(3) Nothing in this subsection shall affect the authority of the Inspector General of the Department of Defense to establish audit policy for the Department of Defense under the Inspector General Act of 1978 and otherwise to carry out the functions of the Inspector General under that Act.

(e) (1) With regard to all matters for which he has responsibility by law or by direction of the Secretary of Defense, the Under Secretary of Defense for Acquisition, Technology, and Logistics takes precedence in the Department of Defense after the Secretary of Defense and the Deputy Secretary of Defense.

(2) With regard to all matters other than matters for which he has responsibility by law or by direction of the Secretary of Defense, the Under Secretary takes precedence in the Department of Defense after the Secretary of Defense, the Deputy Secretary of Defense, and the Secretaries of the military departments.

Section 139b(b) DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR SYSTEMS ENGINEERING.—

(1) APPOINTMENT.— There is a Deputy Assistant Secretary of Defense for Systems Engineering, who shall be appointed by the Secretary of Defense from among individuals with an expertise in systems engineering and development planning.

(2) PRINCIPAL ADVISOR FOR SYSTEMS ENGINEERING AND DEVELOPMENT PLANNING.—The Deputy Assistant Secretary shall be the principal advisor to the Secretary of Defense and the Under Secretary of Defense for Acquisition, Technology, and Logistics on systems engineering and development planning in the Department of Defense.

(3) SUPERVISION.—The Deputy Assistant Secretary shall be subject to the supervision of the Under Secretary of Defense for Acquisition, Technology, and Logistics and shall report to the Under Secretary.

(4) COORDINATION WITH DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR DEVELOPMENTAL TEST AND EVALUATION.—The Deputy Assistant Secretary of Defense for Systems Engineering shall closely coordinate with the Deputy Assistant Secretary of Defense for Developmental Test and Evaluation to ensure that the developmental test and evaluation activities of the Department of Defense are fully integrated into and consistent with the systems engineering and development planning processes of the Department.

(5) DUTIES.—The Deputy Assistant Secretary shall—

(A) develop policies and guidance for—

(i) the use of systems engineering principles and best practices, generally;

(ii) the use of systems engineering approaches to enhance reliability, availability, and maintainability on major defense acquisition programs;

(iii) the development of systems engineering master plans for major defense acquisition programs including systems engineering considerations in support of lifecycle management and sustainability; and

(iv) the inclusion of provisions relating to system engineering and reliability growth in requests for proposals;

(B) review and approve the systems engineering master plan for each major defense acquisition program;

(C) monitor and review the systems engineering and development planning activities of the major defense acquisition programs;

(D) provide advocacy, oversight, and guidance to elements of the acquisition workforce responsible for systems engineering, development planning, and lifecycle management and sustainability functions;

(E) provide input on the inclusion of systems engineering requirements in the process for consideration of joint military requirements by the Joint Requirements Oversight Council pursuant to section 181 of this title, including specific input relating to each capabilities development document;

(F) periodically review the organizations and capabilities of the military departments with respect to systems engineering, development planning, and lifecycle management and sustainability, and identify needed changes or improvements to such organizations and capabilities; and

(G) perform such other activities relating to the systems engineering and development planning activities of the Department of Defense as the Under Secretary of Defense for Acquisition, Technology, and Logistics may prescribe.

(6) ACCESS TO RECORDS.—The Deputy Assistant Secretary shall have access to any records or data of the Department of Defense (including the records and data of each military department and including classified and proprietary information as appropriate) that the Deputy Assistant Secretary considers necessary to review in order to carry out the Deputy Assistant Secretary’s duties under this subsection.

Sec. 2223(b) Additional Responsibilities of Chief Information Officer of Military Departments

In addition to the responsibilities provided for in chapter 35 of title 44 and in section 11315 of title 40, the Chief Information Officer of a military department, with respect to the military department concerned, shall –

- (1) review budget requests for all information technology national security systems;
- (2) ensure that information technology and national security systems are in compliance with standards of the Government and the Department of Defense;
- (3) ensure that information technology and national security systems are interoperable with other relevant information technology and national security systems of the Government and the Department of Defense; and
- (4) coordinate with the Joint Staff with respect to information technology and national security systems.

Sec. 5013(c)(3) Secretary of the Navy

(c) Subject to the authority, direction, and control of the Secretary of Defense, the Secretary of the Navy is also responsible to the Secretary of Defense for—

- (3) the effective and timely implementation of policy, program, and budget decisions and instructions of the President or the Secretary of Defense relating to the functions of the Department of the Navy;

Sec. 5013(f) Secretary of the Navy

The Secretary of the Navy may assign such of his functions, powers, and duties as he considers appropriate to the Under Secretary of the Navy and to the Assistant Secretaries of the Navy. Officers of the Navy and the Marine Corps shall, as directed by the Secretary, report on any matter to the Secretary, the Under Secretary, or any Assistant Secretary.

Sec. 5016(b)(4)(A) Assistant Secretaries of the Navy

One of the Assistant Secretaries shall be the Assistant Secretary of the Navy for Research, Development, and Acquisition. The principal duty of the Assistant Secretary

shall be the overall supervision of research, development, and acquisition matters of the Department of the Navy.

Department of Defense Directive 5000.01, *The Defense Acquisition System*

E1.27. Systems Engineering. Acquisition programs shall be managed through the application of a systems engineering approach that optimizes total system performance and minimizes total ownership costs. A modular, open-systems approach shall be employed, where feasible.

Department of Defense Directive 5134.01, *Under Secretary of Defense for Acquisition, Technology, and Logistics (USD[AT&L])*

3. Responsibilities and Functions

The Under Secretary of Defense for Acquisition, Technology, and Logistics is the Principal Staff Assistant and advisor to the Secretary of Defense for all matters relating to the DoD Acquisition System; research and development (R&D); modeling and simulation (M&S); systems engineering; advanced technology; developmental test and evaluation; production; systems integration; logistics; installation management; military construction; procurement; environment, safety, and occupational health management; utilities and energy management; business management modernization; document services; and nuclear, chemical, and biological defense programs.

4.1. In the performance of assigned responsibilities and functions, the USD(AT&L) shall:

4.1.6. Work directly with the Service Acquisition Executives.

Secretary of the Navy Instruction 5430.7Q, *Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy*

3. Organization. Per reference (a), the DON is organized under the Secretary of the Navy (SECNAV) and is composed of:

a. The Office of the SECNAV, which includes the Under Secretary of the Navy (UNSECNAV), civilian executive assistants, and staff assistants.

(1) The civilian executive assistants are:

(b) The Assistant Secretary of the Navy (Research, Development and Acquisition) (ASN (RD&A))

(2) The staff assistants are:

(d) The Chief Information Officer (CIO);

6. Governance.

SECNAV assigns Department-wide responsibilities for areas essential to the efficient administration of the DON to and among the civilian executive assistants and staff assistants. The SECNAV retains control of these and related policy matters, including the establishment of fundamental policies and the issuance of such orders and directives as are deemed necessary, per reference (g).

7. Civilian Executive Assistants and Staff Assistants

a. **General Responsibilities.** Civilian executive assistants and staff assistants are authorized and directed to act for the SECNAV and the UNSECNAV within their assigned areas of responsibility and to supervise all functions and activities internal to their offices and assigned field activities, if any. They are ultimately responsible to the SECNAV and the UNSECNAV for the use of resources and the functioning and efficiency of all activities under their supervision or control. This instruction delegates to the civilian executive assistants and the staff assistants only those duties and authorities which by law the SECNAV can properly delegate. Under the direction, authority, and control of the SECNAV and the UNSECNAV, each civilian executive assistant and staff assistant, within their assigned area of responsibility, shall:

(2) Establish management policies, strategic direction, systems, procedures, standards, or make decisions that are necessary for effective administration in their respective areas of responsibility.

(5) Recommend fundamental policies, orders, or directives for issuance by the SECNAV, in executing the responsibilities described in paragraph 4, which are considered necessary for the effective administration of the DON and beyond the scope of their individual responsibilities.

b. Civilian Executive Assistants

(2) The Assistant Secretary of the Navy (Research, Development and Acquisition) (ASN (RD&A)). The ASN (RD&A) has sole responsibility within the Office of the SECNAV, OPNAV, and HQMC for the acquisition function, except for military requirements determinations and operational test and evaluation. The ASN (RD&A) will be assisted in the execution of duties by two principal deputies, one military and one civilian. The ASN(RD&A) shall:

(a) Act as liaison with the Under Secretary of Defense (Acquisition, Technology, and Logistics) and with Assistant Secretaries of Defense, as appropriate and relevant, in matters of mutual concern.

(b) Serve as the Navy acquisition executive with responsibility for overseeing the performance of the DON's acquisition system and representing the DON with the Under Secretary of Defense (Acquisition, Technology and Logistics) and Congress on all matters related to acquisition policy and programs.

(d) Establish policy and procedures and be responsible for all research, development, and acquisition.

Secretary of the Navy Instruction 5000.2D, *Implementation and Operation of the Defense Acquisition System and the Joint Capabilities Integration and Development System*

7. Responsibilities

b. The ASN(RD&A) Chief Systems Engineer (CHSENG) is the senior technical authority within the acquisition structure for the overall integrated architecture, integration and interoperability of current and future DON weapon system and IT system acquisition programs. ASN(RD&A) CHSENG provides senior leadership and focus within the acquisition structure on integration and interoperability across all Navy and Marine Corps PEOs, SYSCOM Commanders, DRPMs, and PMs.

c. The DON Chief Information Officer (CIO) is responsible for developing and issuing IT management policies and ensuring the creation, maintenance, and implementation of the DON IT Enterprise Architecture and Standards in coordination with ASN(RD&A) CHSENG, CNO/CMC, and SYSCOMs. The DON CIO is also responsible for confirming (or certifying for Major Automated Information Systems (MAIS)) that Mission Critical (MC) or Mission Essential (ME) IT systems comply with the Clinger-Cohen Act (CCA) and are registered in the DON database <https://www.dadms.navy.mil/>. Additionally, per the CCA, the DON CIO recommends to the Secretary of the Navy (SECNAV) whether to continue, modify, or terminate IT programs. The DON CIO will:

- (1) Review and direct development and use of a capability-related, outcome-based mission and business area integrated architectures to ensure interoperability of IT, including National Security Systems (NSS), throughout the DON.
- (2) Implement the provisions of Division E of the CCA of 1996, per 40 United States Code (U.S.C.) Chapter 25, as amended.
- (3) Provide policy on interoperability and supportability of IT, including NSS, per 10 U.S.C. Section 2223 and 40 U.S.C. Subtitle III.

Chapter 4.3 Information Integration and Interoperability

Information integration and interoperability enables effective net-centric warfighting and combat support operations, both within DON and with Joint activities, with our allied and coalition partners and non-DoD agencies. During the acquisition life cycle, all IT, including NSS, programs shall implement interoperability, supportability, and data management processes, procedures, and tools per reference (b) through (g).

Secretary of the Navy Instruction 5000.36A, *Department of the Navy Information Technology Applications and Data Management*

3. Scope and Applicability

- a. This instruction addresses DON IT applications and data management policy as it applies to networked and standalone IT applications, data, and data exchanges within and across all DON organizations.

6. Responsibilities. The pervasive nature of DON IT applications and data management requires the collective and proactive involvement of Senior Leaders, Functional Area Managers/Resource Sponsors, Acquisition Managers, and Echelon II/Major Commanders. Responsibilities are as follows:

- a. The DON CIO shall:

- (1) Establish DON IT applications and data management policy, planning, guidance, and metrics, consistent with the DON Enterprise Architecture, for ensuring the interoperability of IT (including NSS) throughout the DON in accordance with references (d) through (g) and (0).

- c. The Assistant Secretary of the Navy (Research, Development and Acquisition) (ASN (RD&A)) shall:

- (1) Enforce implementation of DON IT application and data management policies, standards, and metrics by all acquisition programs.

Authority of Other Officials

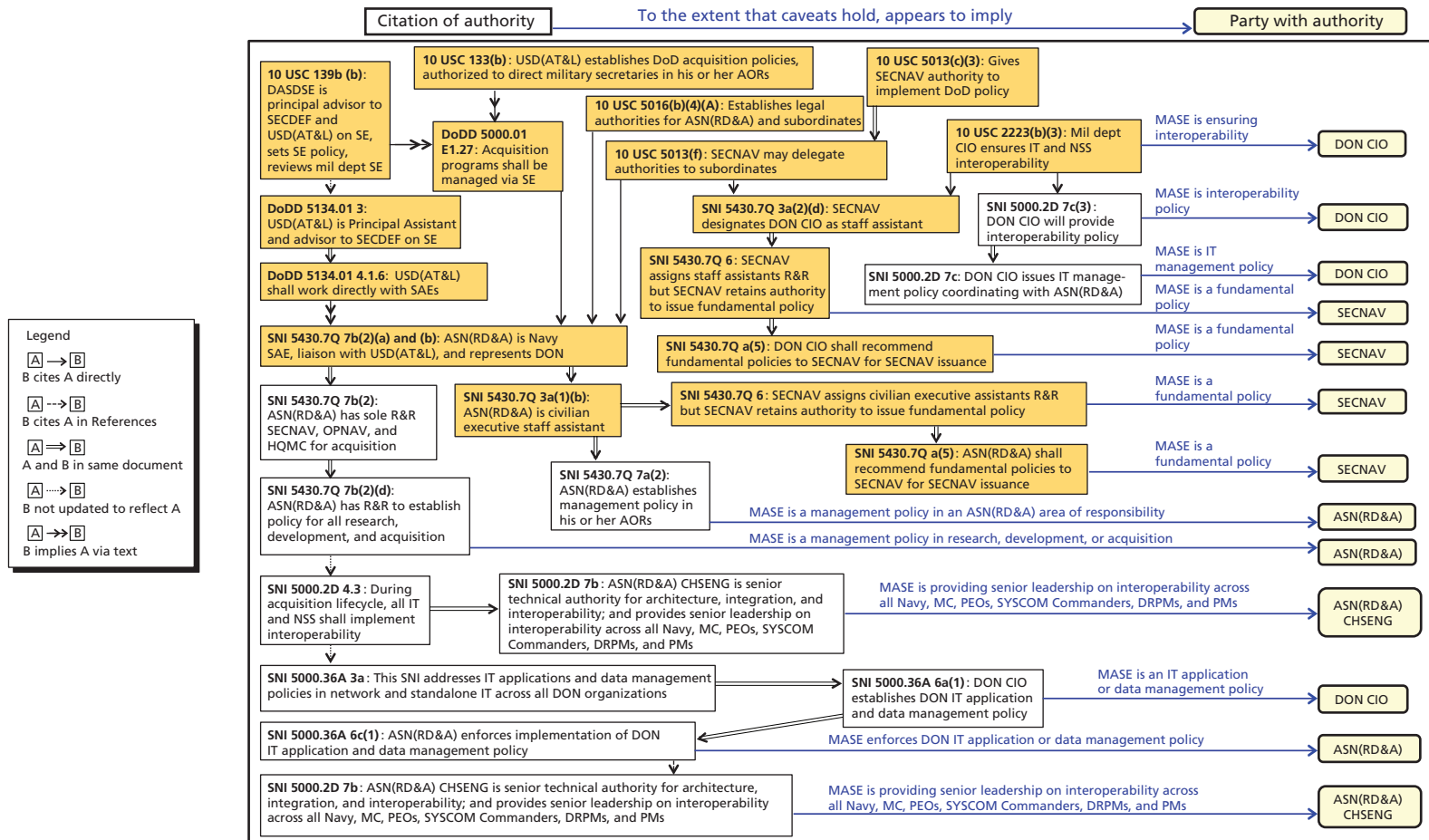
Secretary of the Navy

The SECNAV can also cite authority to issue Navy interoperability policy related to MASE. Figure C.1 shows, in aggregate, lines of authority that may be available to the SECNAV.

DON CIO

The DON CIO also has lines of authority that can be cited to issue Navy interoperability policy related to MASE. Of the four lines of authority available to the DON CIO, three stem from 10 USC § 2223(b)(3), and one is traceable to 10 USC § 139b(b). The DON CIO is the only official assigned responsibilities regarding interoperability by two sections of the United States Code. The four lines of authority are shown in aggregate in Figure C.2.

Figure C.1
Aggregate Lines of Authority Available to the Secretary of the Navy to Issue MASE Policy



NOTE: Figure is based on laws and policies current as of July 7, 2011.

RAND RR357-C.1

References

- Department of Defense Directive 5000.01, *The Defense Acquisition System*, Washington, D.C.: Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, May 12, 2003.
- Department of Defense Directive 5134.01, *Under Secretary of Defense for Acquisition, Technology and Logistics (USD[AT&L])*, Washington, D.C.: Office of the Secretary of Defense, Director of Administration and Management, December 9, 2005.
- Department of Defense Instruction 5000.02, *Operation of the Defense Acquisition System*, Washington, D.C.: Undersecretary of Defense for Acquisition, Technology, and Logistics, December 2, 2008.
- Gonzales, Daniel, Carolyn Wong, Eric Landree, and Leland Joe, *Are Law and Policy Clear and Consistent? Roles and Responsibilities of the Defense Acquisition Executive and the Chief Information Officer*, Santa Monica, Calif.: RAND Corporation, MG-958-NAVY, 2010. As of July 8, 2013: <http://www.rand.org/pubs/monographs/MG958.html>
- Public Law 111-23, Weapon Systems Acquisition Reform Act of 2009, May 22, 2009.
- Public Law 111-383, Ike Skelton National Defense Authorization Act for Fiscal Year 2011, January 7, 2011.
- Secretary of the Navy Instruction 5000.2D, *Implementation and Operation of the Defense Acquisition System and the Joint Capabilities Integration and Development System*, Washington, D.C.: Office of the Secretary of the Navy, October 16, 2008.
- Secretary of the Navy Instruction 5000.36A, *Department of the Navy Information Technology Applications and Data Management*, Washington, D.C.: Office of the Secretary of the Navy, December 19, 2005.
- Secretary of the Navy Instruction 5430.7Q, *Assignment of Responsibilities and Authorities in the Office of the Secretary of the Navy*, Washington, D.C.: Office of the Secretary of the Navy, August 21, 2009.
- United State Code Title 10: Armed Forces. The version used for this research was current as of July 7, 2011. This version is called the “2006 Edition with Supplement IV” and was the version available on the U.S. House of Representatives website on July 7, 2011.
- Wong, Carolyn, Daniel Gonzales, Chad J. R. Ohlandt, Eric Landree, and John Hollywood, *Using EPIC to Find Conflicts, Inconsistencies, and Gaps in Department of Defense Policies*, Santa Monica, Calif.: RAND Corporation, TR-1277-NAVY, 2013. As of July 8, 2013: http://www.rand.org/pubs/technical_reports/TR1277.html

Achieving interoperability among systems is instrumental to enabling critical functions, such as timely information exchange during operations and efficiencies in acquisition, so it is important to understand what parties have authority to issue policy that governs the facets of interoperability. This report presents an approach and framework for determining what parties have authority to issue interoperability policy, the legal and policy origins and implementation paths of the authority, and the extent of the authority. The approach includes rigorous analysis by researchers to identify pertinent authorities in federal law supplemented by a means to facilitate discovery of roles and responsibilities in Department of Defense and Service-level policies. The approach results in a roles and responsibilities network that traces the paths of authority available to issue interoperability policy. The authors use as a case study the authority of the Assistant Secretary of the Navy, Research, Development, and Acquisition, Chief Systems Engineer to issue Navy interoperability policy related to mission area systems engineering (MASE) to demonstrate the use of the framework and methodology. They find that there are 13 different paths of authority that could be cited by four different parties to claim authority to influence interoperability policy related to MASE. The approach used in this report might be developed, along with complementary analytic techniques, to provide the government with the ability to create and maintain consistent and comprehensive bodies of policy that will ensure the effective and efficient operation of defense agencies.



www.rand.org

\$32.95

ISBN 978-0-8330-8177-3



53295