



NAVMSMO
Navy Modeling & Simulation Management Office

Navy M&S Standards Policy & Procedures Manual

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TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page #</u>
	Table of Figures.....	ii
	Appendices.....	iii
1	Introduction and scope.....	1
2	Definitions.....	2
3	Organization.....	3
3.1	Navy M&S Standards Steering Group (MS3G).....	4
3.1.1	MS3G Membership.....	4
3.1.2	MS3G Responsibilities.....	4
3.2	Subgroups.....	4
3.2.1	Subgroup Membership.....	4
3.2.1.1	Application Planning and Review Groups (APRGs).....	5
3.2.1.2	Technology Area Groups (TAGs).....	5
3.2.1.3	Special Interest Groups (SIGs).....	5
3.2.1.4	Interrelationship of Subgroups.....	5
4	Policy.....	6
4.1	MS3G Meetings.....	6
4.1.1	Quorum.....	6
4.1.2	Meeting frequency.....	6
4.1.3	Meeting room arrangements.....	6
4.1.4	Meeting Announcement and Agenda.....	6
4.1.5	Meeting minutes.....	6
4.2	Voting.....	6
4.2.1	Voting Procedure.....	7
4.2.2	Consensus.....	7
4.2.3	Ballot Approval.....	7
4.3	Legal issues.....	8
4.4	File Retention.....	8
4.4.1	Administrative Documents.....	8
4.4.2	Technical Documents.....	8
5	Standards Nomination, Evaluation, Advocacy and Central Repository System (SNEACRS).....	9
6	Process for standards review and approval.....	9
6.1	Types of standards.....	12
6.2	Standards Review and Approval Process Stages.....	12
6.2.1	Stage One - Initial Submission.....	12
6.2.1.1	Description of Stage One.....	12
6.2.1.2	Process Summary of Steps for Stage One.....	12
6.2.1.3	Stage One Steps.....	13
6.2.2	Stage Two - Evaluation by MS3G Chair and Primary Subgroup.....	15
6.2.2.1	Description of Stage Two.....	15
6.2.2.2	Process Summary of Steps for Stage Two.....	15
6.2.2.3	Stage Two Steps.....	16
6.2.3	Stage Three - Evaluation by NAVMSMO and MS3G.....	17

Navy M&S Standards Policy and Procedures Manual

6.2.3.1	Description of Stage Three	17
6.2.3.2	Process Summary of Steps for Stage Three	17
6.2.3.3	Stage Three Steps.....	18
6.2.4	Stage Four - Navy M&S Community Review	18
6.2.4.1	Description of Stage Four	18
6.2.4.2	Process Summary of Steps for Stage Four.....	18
6.2.4.3	Stage Four Steps	20
6.2.5	Stage Five - Determine Disposition & MS3G Vote	20
6.2.5.1	Description of Stage Five.....	20
6.2.5.2	Process Summary of Steps for Stage Five	20
6.2.5.3	Stage Five Steps.....	23
6.2.6	Stage Six - Determine Disposition – Director, NAVMSMO	24
6.2.6.1	Description of Stage Six	24
6.2.6.2	Process Summary of Steps for Stage Six.....	24
6.2.6.3	Stage Six Steps.....	25
6.2.7	Stage Seven - Promulgate and Advocate Standard.....	25
6.2.7.1	Description of Stage Seven.....	25
6.2.7.2	Process Summary of Steps for Stage Seven	25
6.2.7.3	Stage Seven Steps:	26
6.2.8	Stage Eight – Periodic Review by Primary Subgroup.....	26
6.2.8.1	Description of Stage Eight.....	26
6.2.8.2	Process Summary of Steps for Stage Eight.....	27
6.2.8.3	Stage Eight Steps	28
7	Adopting other standards.....	28
8	Liaisons	28
9	Appeals options during the standards review process	29

TABLE OF FIGURES

<u>Section</u>	<u>Title</u>	<u>Page #</u>
	<i>Figure 3-1 - Navy Modeling and Simulation Organization</i>	3
	<i>Figure 3.2.1.4-1 - Navy M&S Standards Organizational Relationships</i>	5
	<i>Figure 6-1 - Modeling and Simulation Standards Conceptual Process</i>	10
	<i>Table 6.2.1.3-1 - Stage One “Initial Submission”</i>	14
	<i>Table 6.2.2.3-1 - Stage Two “Evaluation by MS3G Chair and Technical Subgroup”</i>	17
	<i>Table 6.2.3.3-1 - Stage Three “Evaluation by NAVMSMO and MS3G”</i>	18
	<i>Table 6.2.4.3-1 - Stage Four “Navy Community Review”</i>	20
	<i>Table 6.2.5.3-1 - Stage Five “Determine Disposition & MS3G Vote”</i>	23
	<i>Table 6.2.6.3-1 - Stage Six “Determine Disposition – Director, NAVMSMO”</i>	25
	<i>Table 6.2.7.3-1 - Stage Seven “Promulgate and Advocate Standard”</i>	26
	<i>Table 6.2.8.3-1 - Stage Eight “Periodic Review by Technical Subgroup”</i>	28

Navy M&S Standards Policy and Procedures Manual

APPENDICES

<u>Section</u>	<u>Title</u>	<u>Page #</u>
A	Navy M&S Standards Project Charter	A-1
B	Stage 2 SND Review Form	B-1
C	Stage 3 SND Review Form	C-1
D	Stage 3 SND Periodic Review Form	D-1

1 INTRODUCTION AND SCOPE

From its inception the Navy Modeling and Simulation (M&S) Standards Project has been driven by the M&S user/developer community.

The Navy-wide standards initiative evolved from discussions between the Navy M&S Management Office (NAVMSMO) and members of the Navy M&S community. NAVMSMO explored ways to establish Navy M&S standards, including reviewing ongoing standards activities of the Army Model and Simulation Office (AMSO) and the Simulation Interoperability Standards Organization (SISO). NAVMSMO then established the Navy M&S Standards Project. (See the Navy M&S Standards Charter provided as Appendix A.).

The Navy M&S Standards Project is structured to make every effort to ensure that appropriate M&S standards are available when needed for Navy M&S development, acquisition, deployment, and life-cycle support. It also ensures that the necessary infrastructure is present and applied to the Navy M&S Standards Process. Standards endorsed by this process will be categorized as mandatory or recommended.

In particular, Navy M&S Standards are necessary to achieve meaningful:

- Interoperability: To enable simulations and stimulations to provide and accept data, algorithmic results, objects or services from one another,
- Reuse and commonality: To establish a baseline for reusing Navy models, simulations and stimulations, and associated data as well as associated protocols, techniques and processes,
- Credibility: To improve acceptance of M&S representations, and
- Consistency: To ensure consistent understanding of data and functional descriptions for use in simulated and stimulated operations.

Key contributors and recipients of the products of this process include:

- Chief of Naval Operations (OPNAV), Department of the Navy (DoN) Secretariat, the Fleets,
- Programs, large and small, such as Joint Strike Fighter (JSF), Destroyer (DD(X)), and the Virginia Class Submarine, as well as
- Laboratories, Industry and Academia.

The project will continue to maintain close liaison with other Service M&S offices, professional organizations and advisors to ensure that the Navy M&S Standards Project vision is realized.

2 DEFINITIONS

<i>Acronym</i>	<i>Definition</i>
ADS	Authoritative Data Sources
AMSO	Army Model and Simulation Group
ANSI	American National Standards Institute
API	Application Programming Interface
APRG	Application Planning and Review Group
ASTARS	Army Standards Repository System
C4ISR	Command, Control, Communications, Computers, Intelligence and Reconnaissance
DDDS	Defense Data Dictionary System
DoD	Department of Defense
DoN	Department of the Navy
DONMSMO	Department of the Navy Modeling and Simulation Office
EIA	Electronic Industries Alliance
FFRDC	Federally Funded Research and Development Center
GUI	Graphical User Interface
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IPT	Integrated Product Team
ISO	International Organization for Standardization
M&S	Modeling and Simulation
MCMSMO	Marine Corps Modeling and Simulation Management Office
NAVMSMO	Navy Modeling and Simulation Management Office
MS3G	Navy M&S Standards Steering Group
NMSIS	Navy Modeling and Simulation Information System
OMG	Object Management Group
OPNAV	Chief of Naval Operations
PEO	Program Executive Officer
SAE	Society of Automotive Engineers
SC	Standards Coordinator
SNEACRS	Standards Nomination, Evaluation, and Advocacy Central Repository System
SECNAV	Secretary of the Navy
SIG	Special Interest Group
SISO	Simulation Interoperability Standards Organization
SNAP	Standards Nomination and Approval Process
SND	Standards Needs Document
SNE	Synthetic Natural Environment
TAG	Technical Area Group
TSG	Technical Support Group
UARC	University Affiliated Research Center
USPRO	U.S. Product Data Association
VV&A	Verification, Validation and Accreditation

Table 2-1 - Acronym Definitions

3 ORGANIZATION

SECNAV Instruction 5200.38A, Department of the Navy Modeling and Simulation Management, establishes the NAVMSMO (N61M) in the Office of the Chief of Naval Operations. NAVMSMO is directed by reference SECNAV Instruction 5200.38A to “establish standards as necessary to manage the Navy's Modeling and Simulation Program”.

To assist in the accomplishment of this task, NAVMSMO instituted the Navy M&S Standards Project. The Project Director, who chairs the Navy M&S Standards Steering Group (MS3G), reports to Director, NAVMSMO, as depicted in Figure 3-1.

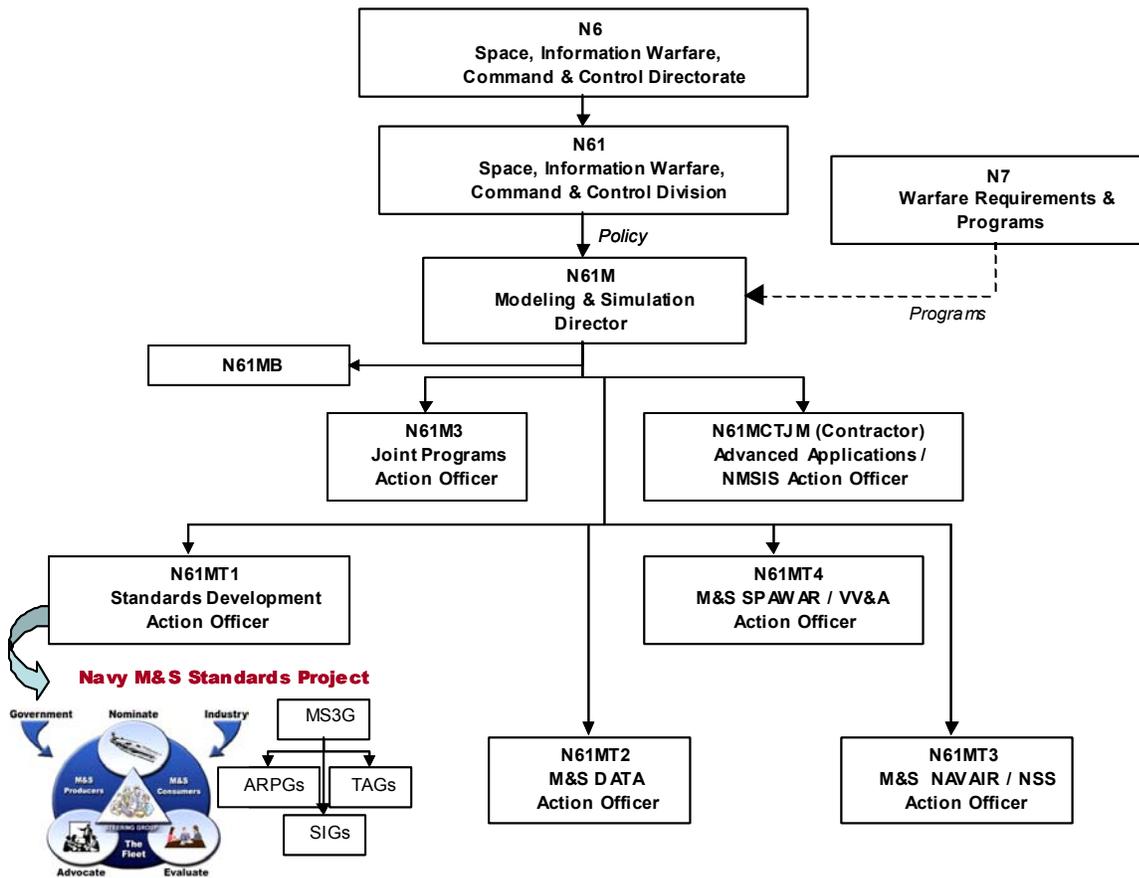


Figure 3-1 - Navy Modeling and Simulation Organization

3.1 Navy M&S Standards Steering Group (MS3G)

3.1.1 MS3G Membership

The MS3G has representation from the Navy Secretariat, Office of the Chief of Naval Operations, Fleets, Systems Commands, laboratories, Federally Funded Research and Development Centers (FFRDCs) and University Affiliated Research Centers (UARCs). This broad participation and team effort ensures that candidate standards are rigorously evaluated and appropriately promoted. Participation in the MS3G is limited to Government personnel and their designated representatives.

Organizations interested in membership in the MS3G may contact the MS3G Chair and request appointment. Such appointment will be approved by the Director of NAVMSMO, based on recommendations of the MS3G Chair.

3.1.2 MS3G Responsibilities

The mission of the MS3G is to oversee the operation of the Navy M&S Standards Process, rather than act as a technical deliberation body. Technical reviews of candidate standards will be delegated to specialized subgroups. In addition to providing advisory support to the Navy M&S Standards Project, the MS3G is specifically responsible for executing the Navy M&S Standards Process, ensuring that approved standards are reviewed and published as best practices, recommended specifications and standards for developers or users of Navy M&S.

Navy M&S Standards include any algorithm, architecture, data, policy, practice, procedure, process, protocol, or technique that is documented; proven over time by use; empowered by process improvement; accepted by a community of naval experts; and identified as a naval M&S best practices guide, recommended specification, or standard.

The MS3G increases the effectiveness of this Navy standards initiative by establishing and maintaining relationships with other experts in the DoD M&S community, academia and industry.

3.2 Subgroups

3.2.1 Subgroup Membership

The MS3G is responsible for oversight of all areas of the Navy M&S Standards Project. Technical expertise is provided by the M&S Standards Subgroups, each focused on a specific area (applications, such as logistics; or technologies, such as data or VV&A). These subgroups are permanent in nature; each subgroup is chaired by a member of the MS3G and is appointed by the Director, Navy M&S Standards Project. Membership in M&S Standards Subgroups is open to representatives from government, industry and academia. Personnel interested in such membership may contact the subgroup leader and request appointment.

Thus, M&S Standards Subgroups may have members who are not eligible for membership in the MS3G. The M&S Standards Subgroups are responsible for a Navy M&S standard from the time the need is identified to the time it is approved, promulgated and advocated. The subgroups also participate in the periodic review of the standards approved in their area.

3.2.1.1 Application Planning and Review Groups (APRGs)

APRGs identify specific application needs for potential Navy M&S Standards, and represent experts in functional areas of the Navy M&S Community. The number of APRGs will grow based on advocacy.

3.2.1.2 Technology Area Groups (TAGs)

TAGs address needs as they are identified, in the appropriate area of technology, by researching, analyzing, and reviewing M&S standards submissions. The number of TAGs will grow based on need.

3.2.1.3 Special Interest Groups (SIGs)

When the need for a standard is identified and there is no existing APRG or TAG to address this need, a Special Interest Group (SIG) will be established by the MS3G Chair. The responsibilities of a SIG are the same as that of an APRG or TAG, as determined by the MS3G Chair. As the need for standards grow in this SIG area, a regular APRG or TAG may evolve.

3.2.1.4 Interrelationship of Subgroups

Figure 3.2.1.4-1 below depicts the relationship between the APRG, TAG and SIG organizations. Critical to the philosophy of the Navy M&S Standards project, these groups have different roles and responsibilities. Each APRG has the responsibility to ensure that each TAG is aware of existing application needs. Each TAG has the responsibility to ensure that each APRG is aware of proposed technology standards.

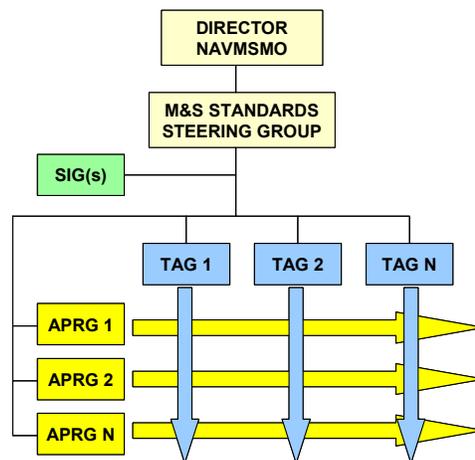


Figure 3.2.1.4-1 - Navy M&S Standards Organizational Relationships

4 POLICY

4.1 MS3G Meetings

4.1.1 Quorum

All participating organizations are to be represented at each meeting of the Navy M&S MS3G unless specifically exempted. The Navy M&S MS3G Chair may, from time to time, call meetings of specific members, subgroups or specially formed Integrated Product Teams (IPTs) to address specific issues.

A quorum for the MS3G is defined as a simple majority of the listed voting members of the MS3G (more than one half). If a member organization fails to attend two consecutive meetings, the MS3G Chair shall notify the organization that it will lose its right to vote and be placed on an inactive membership list unless represented at the next meeting. If the organization is not then represented, it shall be considered inactive and a nonvoting member, and not counted as a member for quorum purposes.

4.1.2 Meeting frequency

MS3G meetings will be scheduled to occur quarterly. Additional meetings may be convened as required by the MS3G Chair.

4.1.3 Meeting room arrangements

Meeting logistical information such as location and security requirements will be disseminated with the meeting announcement. Display equipment and special facility arrangements will be coordinated with the host facility.

4.1.4 Meeting Announcement and Agenda

Agendas and meeting announcements will be established and distributed by the MS3G Chair a minimum of two weeks in advance of the meeting.

4.1.5 Meeting minutes

Minutes and action items, once approved by the MS3G Chair, will be recorded and published by the Navy M&S Standards Coordinator (SC) on the private MS3G library web site. APRG and TAG leaders are responsible for ensuring their meeting minutes and action items are recorded and posted. Once minutes are posted, a MS3G reflector message will be sent to the MS3G membership informing them that minutes are available on the web site. Once APRG and TAG minutes are available, an appropriate subgroup reflector message will be sent.

4.2 Voting

MS3G voting occurs on a nominated standard utilizing the online web system and only in the 5th Stage of the Navy M&S Standards Process, “Determine Disposition & MS3G Vote”. The

Standards Nomination, Evaluation, Advocacy and Central Repository System (SNEACRS), which is described in section 5, provides this web capability. The voting pool is dynamic and unique, as determined by the MS3G and the MS3G Chair, for each proposed standard undergoing review.

4.2.1 Voting Procedure

The procedures for voting on nominated standards includes the following steps:

- The MS3G Chair drafts a balloting pool, using input provided by the MS3G, for each nominated standard that goes through the 5th Stage of the standards process. The balloting pool member list includes subject matter experts who will provide a final review and vote on the nominated standard.
- A read-ahead notice is provided to each balloting pool member of the upcoming ballot with a short overview of the standards process and the nominated standard.
- The balloting pool members are entered into the SNEACRS voting application and assigned to the related Standards Needs Document (SND).
- The MS3G Chair initiates the 30-day balloting period.
- At the end of the balloting period the balloting results are collected and tallied. Balloting results along with the comments received are reported to the MS3G Chair and Primary Subgroup Leader.
- The MS3G Chair reviews the balloting results and provides a summary report to the MS3G.

4.2.2 Consensus

Consensus is achieved through a process of reflector discussions and deliberations. *Consensus*, according to the MS3G definition, means agreement among the majority of respondents. It does *not* mean unanimity. The MS3G and subgroup reflectors complement the online web system's capabilities to capture and record comments provided during the review process. A historical record of these comments is compiled as part of the overall evaluation findings package.

4.2.3 Ballot Approval

As described above, ballots are posted through the online web system by members designated in the voting pool established for a particular standard under review. The balloting period is constrained by a start and end date provided to the voting pool members before the vote begins.

A ballot on a proposed standard shall be considered "approved" when:

- The MS3G Chair receives affirmative votes from at least two-thirds (2/3) of the listed voting pool members, and
- Not more than one-quarter (1/4) of the total number of votes cast are negative.

4.3 Legal issues

A potential Navy M&S Standard may already be accepted by a recognized standards organization, such as ISO, IEC, ANSI, IEEE, EIA, OMG, SAE, USPRO, etc.. Proposed standards not already approved by a recognized standards organization can still be considered as Navy M&S standards candidates and Navy M&S users can still use them to meet their needs. If a specific standard identified by the Navy M&S community is later approved as a government or DoD standard, it will be identified as approved by a different authority.

Because of copyright laws, copyrighted standards submitted for review cannot be posted publicly. Licensed copies of copyrighted material used by members of the review team will be obtained separately.

4.4 File Retention

4.4.1 Administrative Documents

For MS3G meeting proceedings and related documents, the SC is responsible for maintaining active and archival files for the MS3G meeting proceedings and any other document produced by or for the MS3G in the conduct of Navy M&S Standards activities. These files shall be retained for a minimum of five years and shall include the following:

- Meeting announcements,
- Published agendas,
- Meeting minutes, and
- Meeting presentations (project and guest briefings).

4.4.2 Technical Documents

For Navy M&S Standards technical findings and associated documents, the SC is responsible for maintaining active and archival files for nominated and approved standards.

Publicly available documentation for specific SNDs will be made available through the SNEACRS web site. These files may include, but are not limited to:

- Application guides,
- Users Manual, and
- Specifications.

Private working documents used during the review of individual standards will be maintained in separate folders on the restricted Navy M&S Standards Steering Group Document Library. These files may include, but are not limited to:

- Test scenarios,
- Test data,
- Stage 2 and Stage 3 completed review forms,

- Documented review findings, and
- Other associated documentation.

5 STANDARDS NOMINATION, EVALUATION, ADVOCACY AND CENTRAL REPOSITORY SYSTEM (SNEACRS)

The Navy M&S Standards Process is supported by the SNEACRS. This web-based capability hosts a set of supporting functions which include: 1) a set of Navy M&S Standards informational web pages; 2) a dynamic online standards tracking application; and 3) a repository system for storing and searching nominated and approved M&S standards.

SNEACRS is based on, and is leveraged from, the Army Standards Nomination and Approval Process (SNAP) and the Army Standards Repository System (ASTARS). SNAP and ASTARS are web-based software systems that were developed for the Army Model and Simulation Office (AMSO) as a component of their Army M&S Standards Development Process.

The Navy SNEACRS system provides the MS3G, APRG, TAG and SIG working elements of the Navy M&S Standards Project the capability to internally track nominated standards through the eight stages in the nomination, approval and advocacy process, as well as provides a storage facility to host approved standards and associated documentation. SNEACRS also supports the Navy M&S users through a dynamic interface for standards submission and browsing.

The Navy M&S Standards Web site and system applications will comply with policy set forth by the Navy Modeling and Simulation Management Office (NAVMSMO), the Navy Modeling and Simulation Information System (NMSIS), as well as DoD policy and guidelines.

6 PROCESS FOR STANDARDS REVIEW AND APPROVAL

The vision of the Navy M&S Standards Project is to promote a common set of standards (supporting protocols, techniques, best practices, etc.) for the use and reuse of Navy models, simulations, and data. It is not intended to create a set of written standards that remain unused in the Navy M&S Standards repository. It is important to apply a process that permits the Navy M&S community to keep pace with, rather than react to, technological advances.

The Navy M&S Standards conceptual process consists of three key activities: 1) Nominate, 2) Evaluate and 3) Advocate Navy M&S Standards as depicted in Figure 6-1. Essential to these key elements are: automated web tools; collaboration and facilitated support to address and resolve issues; and M&S experts to review, leverage and refine the appropriate standards.

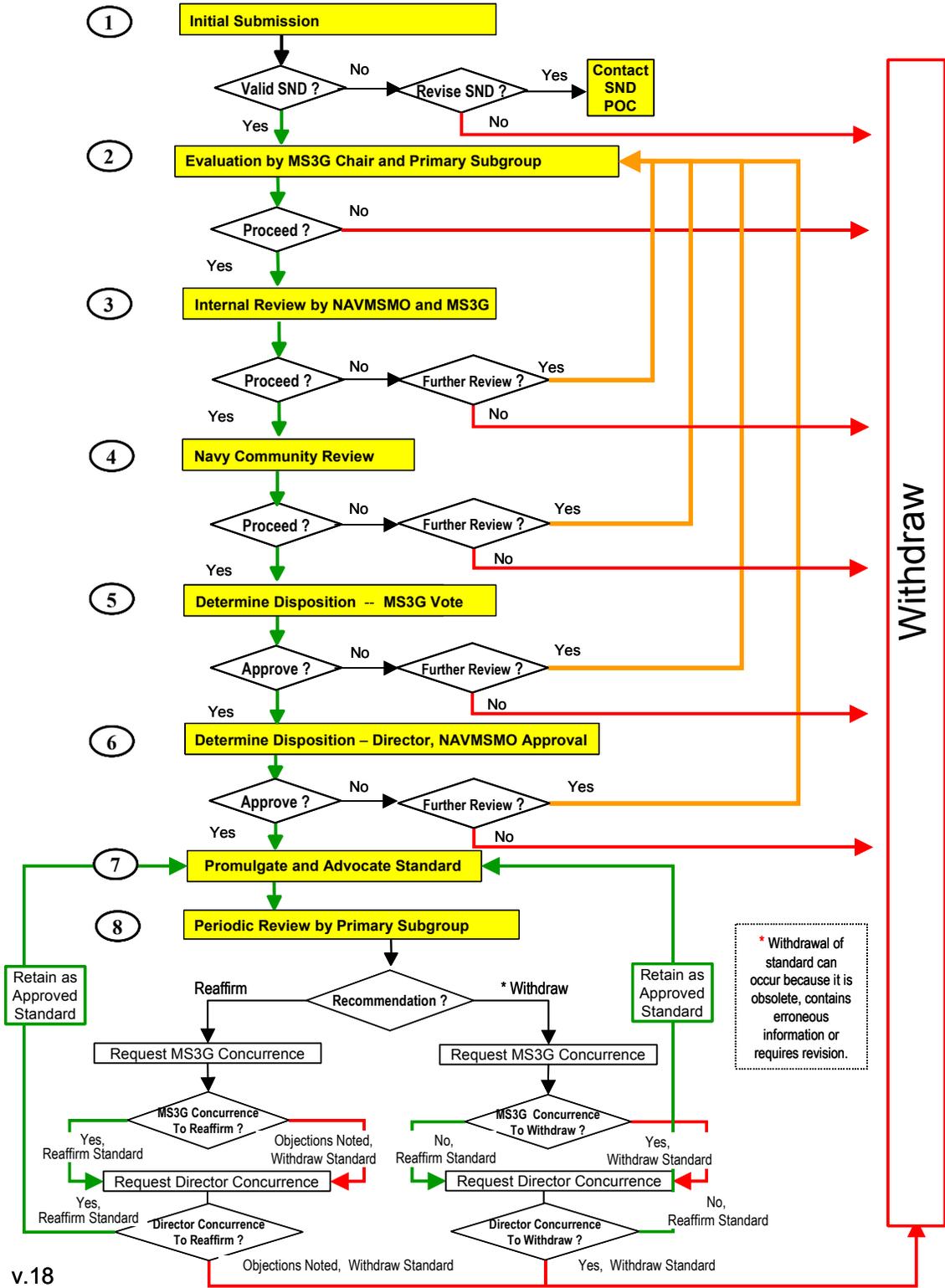


Figure 6-1 - Modeling and Simulation Standards Conceptual Process

The activities that support this concept are broken down into eight stages or milestones. These eight stages are listed below and also depicted in Figure 6-2.

- Initial submission,
- Evaluation by MS3G Chair and Primary Subgroup,
- Internal review by NAVMSMO and MS3G,
- Navy Community Review,
- Determine Disposition – MS3G Vote,
- Determine Disposition – Director, NAVMSMO Approval,
- Promulgate and advocate standard, and
- Periodic review by Primary Subgroup.

Navy M&S Standards Evaluation Process



v.18

Figure 6-2 - Modeling and Simulation Standards Process Flow Diagram

6.1 Types of standards

The Navy M&S Standards process supports the submission of nominated standards that are recommended in particular technical and application areas as well by the type of standard the submission provides.

An online submission form is available in the online Standards Nomination, Evaluation, Advocacy and Central Repository System (SNEACRS) for submitting a potential Navy M&S standard. The SNEACRS process begins with the nomination of a standard entered via a simple, electronic input form. Immediately upon submission, the nomination is assigned a system-generated number for tracking purposes. Now called a Standards Needs Document (SND), the nomination is identified throughout the system by this assigned number, which takes the format SND_XXXXX.

The SND moves through the system undergoing reviews by the M&S Standards Subgroups (APRGs, TAGs and SIGs), the MS3G and the general Navy M&S community. During the standards process the nominated standard can be sent back to an earlier stage for further review or withdrawn entirely.

6.2 Standards Review and Approval Process Stages

This section provides a detailed description of each of the eight stages described in the process discussion above. In order to execute the Navy M&S Standards process, an understanding of the flow of activities, their relationships, dependencies and associated data is required. A table that lists each step is provided for each of the eight stages of the Navy M&S Standards process. The dynamic, electronic capability to support the management of the process and storage of associated enabled through the SNEACRS system facilitates the administration of the process. To access the SNEACRS system, link to the NAVMSMO Home Page at: <<http://navmsmo.hq.navy.mil/>>, select the “M&S Projects” menu, then select the “Standards” menu item.

6.2.1 Stage One - Initial Submission

6.2.1.1 Description of Stage One

A SND is submitted to either recommend the adoption of an existing product as a Navy M&S standard or to describe a need that is not yet met. The submitted SND is initially evaluated for completeness and category validity. The step-by-step process is described below.

6.2.1.2 Process Summary of Steps for Stage One

- **Step 1.1: Activate online SND submission form:** The process begins with the SND Submitter using SNEACRS to complete and submit a SND. The proposed standard includes the SND description, along with the identification of a Primary Category.

Navy M&S Standards Policy and Procedures Manual

- **Step 1.2: Submit SND:** When the SNEACRS submission form is complete, the Submitter requests a submit action via the SNEACRS GUI.
- **Step 1.3: Notify Primary Subgroup Leader:** SNEACRS notifies the MS3G Chair, the Submitter-identified Primary Subgroup Leader, and the leaders of the other technical subgroups with an auto-generated message.
- **Step 1.4: Follow-up with phone call to Subgroup Leader to ensure notification is received:** In conjunction with the MS3G Chair, the SC follows up the SNEACRS notification with phone calls to the Subgroup Leaders to ensure that all addressed parties received the SND notification.
- **Step 1.5: Ensure required fields of SND form are complete (valid):** The SC and Primary Subgroup Leader verifies that the required fields are complete. If they are not complete, the SC contacts the submitter for additional information.
- **Step 1.6: Confirm Category:** The MS3G Chair, assisted by the SC, reviews the submitted SND and confirms that the SND selected category is in the domain of the Navy M&S community. If the category is not appropriate, the SC contacts the appropriate Subgroup Leaders and determines the correct primary category as well as contact the submitter to clarify. At this time, the MS3G Chair may withdraw the SND if deemed appropriate.
- **Step 1.7: Send Request to MS3G Chair to update SND status in SNEACRS:** The SC notifies the MS3G Chair that the SND is ready to proceed in the process and asks the MS3G Chair to update the status of the SND to Stage 2 in the process.
- **Step 1.8: Update SND status in SNEACRS to Stage 2:** The MS3G Chair uses SNEACRS to update the SND to Stage 2, “Under Evaluation by MS3G Chair and Primary Subgroup”.
- **Step 1.9: Notify MS3G Chair, all Subgroup Leaders of status change:** When the MS3G Chair updates the status in SNEACRS, SNEACRS automatically sends out an email message to the MS3G Chair and the Subgroup Leaders informing them of the change to the next stage.
- **Step 1.10: Notify Submitter of SND status:** The SNEACRS system also sends a message to the submitter that “Your SND_XXXXX, “*SND title*” submission has passed the initial submission milestone and is now under evaluation by the Primary Subgroup.”

6.2.1.3 Stage One Steps

The following table displays the Stage One steps and lists the roles, any criteria and follow-up action required.

Navy M&S Standards Policy and Procedures Manual

Step	Description	Role	Criteria	Follow-up Actions
1	Stage 1: Initial Submission Stage			
1.1	Activate online SND submission form	Submitter		
1.2	Submit SND	Submitter, SNEACRS		
1.3	Notify Primary Subgroup Leader	SNEACRS		
1.4	Follow-up with phone call to subgroup lead to ensure notification is received.	SC	Confirmation of notification of new SND submissions.	
1.5	Ensure required fields of SND form are complete (valid)	SNEACRS Edit Function and the SC	Required Fields Completed?	If fields incomplete then SC contacts submitter for additional information.
1.6	Confirm Category	MS3G SC Subgroup Leader	Is the category selected in the domain of the Navy M&S community?	If category incorrect then SC revises category.
1.7	Send Request to MS3G Chair to update SND status in SNEACRS	SC		
1.8	Update SND status in SNEACRS to Stage 2.	MS3G Chair		
1.9	Notify MS3G Chair, All Subgroup Leaders of status change	SNEACRS		
1.10	Notify Submitter of SND status	SNEACRS		Proceed to Stage 2.

Table 6.2.1.3-1 - Stage One "Initial Submission"

6.2.2 Stage Two - Evaluation by MS3G Chair and Primary Subgroup

6.2.2.1 Description of Stage Two

The second stage of the process, “Under Evaluation by MS3G Chair and Primary Subgroup”, involves the assigned subgroup evaluating the SND against the defined Nomination Criteria. The step-by-step process is described below.

6.2.2.2 Process Summary of Steps for Stage Two

- **Step 2.1: Direction to Start:** The “SND XXXXX is ready for Subgroup Evaluation” message sent in Stage 1 serves as a direction to start for the Primary Subgroup.
- **Step 2.2: Evaluate against Nomination Criteria:** The Primary Subgroup Leader reviews the submitted SND to ensure that the description of the SND is clear, that the required fields are completed and the category appropriate as identified by the submitter for this Primary Subgroup.
- **Step 2.3: Identify Technical Team Leader:** A Technical Lead for the review is identified by the Subgroup Leader.
- **Step 2.4: Collect Available Documentation in Repository:** The review continues with the collection of available documentation by the Technical Lead.
- **Step 2.5: Identify Technical Team:** A specific technical team within the subgroup is then organized.
- **Step 2.6: Evaluate Against Business Case Criteria:** The technical team evaluates the SND against business case criteria (with respect to requirements, competing standards, sanctioning body, application area, identified users and user experience).
- **Step 2.7: Evaluate against General Technical Criteria:** The Technical Team evaluates the SND against the defined criteria listed in the Stage 2 Evaluation Form (Appendix B).
- **Step 2.8: Evaluate against individual subgroup criteria:** The Stage 2 Evaluation Form (Appendix B) also contains additional evaluation criteria specific to each Subgroup area.
- **Step 2.9: Document Findings:** The findings are then documented under the direction of the Technical Lead and forwarded to the Subgroup Leader.

Navy M&S Standards Policy and Procedures Manual

- **Step 2.10: Forward to MS3G Chair:** The Subgroup Leader forwards the documentation to the MS3G chair along with a request to update the status of the SND. The subgroup may recommend proceeding, revision or withdraw of the SND.
- **Step 2.11: Update status in SNEACRS:** Based on the decision, the MS3G Chair updates the status in SNEACRS to “Under Internal MS3G Review” (Stage 3) or withdraws the SND.
- **Step 2.12: Send request to MS3G for Internal Review:** The MS3G Chair sends a message to the MS3G that an internal review of the SND is about to begin.
- **Step 2.13: Notify (email) MS3G Chair, other leads to “Begin MS3G Review”:** SNEACRS notifies the MS3G and the Subgroup Leader to “Begin MS3G Review”.
- **Step 2.14: Notify Submitter of SND status:** The SNEACRS system sends an automatic message to the submitter that the SND is now under evaluation by the MS3G.

6.2.2.3 Stage Two Steps

The following table displays the Stage Two steps and lists the roles, any criteria and follow-up action required.

Step	Description	Role	Criteria	Follow-up Actions
2	Stage 2: Under evaluation by MS3G Chair and Primary Subgroup			
2.1	Direction to Start	SNEACRS		
2.2	Evaluate against Nomination Criteria	Subgroup Lead	Clear, Required Fields completed, Category Correct	
2.3	Identify Tech Team Leader	Subgroup Leader		
2.4	Collect Available Documentation in Repository	Technical Leader		
2.5	Identify Technical Team	Technical Leader		
2.6	Evaluate Against Business Case Criteria	Technical Team	Ref. Stage 2 Evaluation Form	
2.7	Evaluate against General Technical Criteria	Technical Team	Ref. Stage 2 Evaluation Form	
2.8	Evaluate against individual subgroup criteria	Technical Team	Ref. Stage 2 Evaluation Form	
2.9	Document Findings	Technical Leader		Store in subgroup folder in document library
2.10	Forward to MS3G Chair	Subgroup Leader		
2.11	Update status in SNEACRS	MS3G Chair		
2.12	Send request to MS3G for Internal Review	MS3G Chair		
2.13	Notify (email) MS3G Chair, other leads to “Begin MS3G Review”	SNEACRS		
2.14	Notify Submitter of SND status	SNEACRS		Proceed to Stage 3.

Table 6.2.2.3-1 - Stage Two “Evaluation by MS3G Chair and Technical Subgroup”

6.2.3 Stage Three - Evaluation by NAVMSMO and MS3G

6.2.3.1 Description of Stage Three

In the third stage of the process, the MS3G determines if it is appropriate to make the proposed standard available to the general Navy M&S community.

6.2.3.2 Process Summary of Steps for Stage Three

- **Step 3.1: Review results and recommendation from subgroup review:** MS3G reviews the results and recommendations from the Primary Subgroup review.
- **Step 3.2: Determine if proposed standard should be made available to the general Navy M&S Community:** During this Stage 3 review, members of the MS3G SND review team who have been identified to review and provide feedback on a particular SND, will complete and submit the Stage 3 SND Review Form (Appendix C). Based on this feedback from members of the MS3G, the MS3G Chair will make a determination on whether to proceed to the fourth stage in the standards process.
- **Step 3.3: Enter results into SNEACRS:** The MS3G Chair updates SND status in SNEACRS with information from the results and recommendations.
- **Step 3.4: Request Voting Pool Members:** During this stage, a preliminary voting pool for the SND under consideration is drafted through discussion between the MS3G Chair, the MS3G, and the Primary Subgroup Leader and entered into SNEACRS by the MS3G Chair. No official notification of members of the pool is made at this time.
- **Step 3.5: Review final SND description and SND files:** Each SND description and associated document files must be certified for compliance with NAVMSMO web site policy. It is the responsibility of each MS3G Subgroup Leader to certify compliance with the policy for each SND under that subgroup's purview. Refer to the SNEACRS Users Manual for detailed information and instructions on the procedures and specific requirements for certifying compliance with this policy as well as accessing, revising and uploading SND descriptions and files.
- **Step 3.6: Send request to MS3G chair to update SND status in SNEACRS:** A message is sent to the MS3G Chair to request a status update to Stage 4.
- **Step 3.7: Update SND status in SNEACRS to Stage 4:** The MS3G Chair updates the status in SNEACRS to Stage 4.
- **Step 3.8: Notify MS3G Chair, MS3G, all Subgroup Leaders of Status:** When the SND's status is updated in SNEACRS, an email message is automatically sent

Navy M&S Standards Policy and Procedures Manual

to the MS3G Chair, the MS3G, and all Subgroup Leaders to inform them of the submission of the proposed standard to Navy M&S community for public review.

- **Step 3.9: Notify Submitter of SND status:** The SNEACRS system sends an automatic message to the submitter that the SND is now under review by the Navy M&S Community.

6.2.3.3 Stage Three Steps

The following table displays the Stage Three steps and lists the roles, any criteria and follow-up action required.

Step	Description	Role	Criteria	Follow-up Actions
3	Stage 3: Under evaluation by NAVMSMO and MS3G			
3.1	Review results and recommendation from subgroup review	MS3G	Ref. Stage 3 Evaluation Form	
3.2	Determine if proposed standard should be made available to the general Navy M&S Community	MS3G		IF no MS3G concurrence THEN MS3G Chair determines action (further review at Stage 2 or withdraw the SND)
3.3	Enter results into SNEACRS	MS3G Chair		
3.4	Request voting pool members	MS3G Chair, Subgroup Leader, SNEACRS		
3.5	Review SND description and SND files	SND Submitter, Subgroup Leader	See SNEACRS Users Manual	
3.6	Send request to MS3G chair to update SND status in SNEACRS	Subgroup Leader		
3.7	Update SND status in SNEACRS to Stage 4	MS3G Chair		
3.8	Notify MS3G Chair, MS3G, all Subgroup Leaders of Status	SNEACRS		
3.9	Notify Submitter of SND status	SNEACRS		Proceed to Stage 4.

Table 6.2.3.3-1 - Stage Three “Evaluation by NAVMSMO and MS3G”

6.2.4 Stage Four - Navy Community Review

6.2.4.1 Description of Stage Four

The fourth stage of the process, “Navy Community Review,” involves a review of the proposed standard by the general Navy community. The step-by-step process is described below.

6.2.4.2 Process Summary of Steps for Stage Four

- **Step 4.1: Send out NMSIS Newsgram announcing availability of new proposed standard recently posted to Navy M&S standards repository**

Navy M&S Standards Policy and Procedures Manual

(SNEACRS): The MS3G Chair begins the review by the general Navy M&S community by sending a email addressed to the Navy M&S Standards General Reflector announcing the availability of the newly proposed standard in the Navy M&S Standards Repository, SNEACRS. The MS3G Chair will specify a closing date for comment submission in this announcement.

- **Step 4.2: Members of the Navy community submit comments and recommendations on the proposed standard to the MS3G Chair:** The members of the Navy community review the standard and submit their comments and recommendations by email to the MS3G Chair with a courtesy copy to the MS3G Coordinator.
- **Step 4.3: Collect and summarize comments:** These comments will be collected and summarized by the SC and a summary report provided to the MS3G Chair.
- **Step 4.4: Determine status of voting pool members:** To keep the identification of voting pool members on schedule, the MS3G Chair reviews the status of the voting pool member list with the SC and the Primary Subgroup Lead.
- **Step 4.5: Provide MS3G results of Stage 4 review:** The MS3G Chair compiles the comments received during the Navy Community Review and provides them to the MS3G.

6.2.4.3 Stage Four Steps

The following table displays the Stage Four steps and lists the roles, any criteria and follow-up action required.

Step	Description	Role	Criteria	Follow-up Actions
4	Stage 4: Under Navy Community Review			
4.1	Send out MS3G General Reflector email message announcing availability of new proposed standard recently posted to Navy M&S standards repository (SNEACRS)	MS3G Chair		Use General Reflector
4.2	Members of the Navy community submit comments and recommendations on the proposed standard to the MS3G Chair and MS3G Coordinator	Navy Community		
4.3	Collect and integrate comments	SC MS3G Chair		
4.4	Determine status of voting pool members	SC MS3G Chair		
4.5	Provide MS3G results of Stage 4 review.	MS3G Chair		If Navy community concurrence received then proceed to Stage 5. Otherwise, the SND could go back to Stage 3 for further review or withdrawn.

Table 6.2.4.3-1 - Stage Four “Navy Community Review”

6.2.5 Stage Five - Determine Disposition & MS3G Vote

6.2.5.1 Description of Stage Five

The fifth stage of the process, “Determine Disposition & MS3G Vote,” involves final MS3G deliberation and the voting process. The step-by-step process is described below.

6.2.5.2 Process Summary of Steps for Stage Five

- **Step 5.1: Review results and recommendation from Navy Community public review:** The MS3G reviews the results from the Navy Community Review. If no objections are received, the SND proceeds to Stage 5 for the voting process. If objections are received, the MS3G and the MS3G Chair will review the objections and determine whether the SND should be withdrawn.
- **Step 5.2: Thank members of Navy M&S community who submitted the comments / recommendations:** The SC responds to all members of the M&S community who submitted comments and recommendations during the community review. The purpose of the response is to thank the contributors for

Navy M&S Standards Policy and Procedures Manual

participating and to inform them, if appropriate, of the disposition of the specific comment.

- **Step 5.3: Prepare voting package in coordination with MS3G chair:** The SC prepares a voting package that includes documentation on the SND and instructions to the voting pool. This includes establishing open and closing dates for the vote, and making balloting instructions available. Specific rules governing the voting process can be found in Section 4.3.1 of this guide.
- **Step 5.4: Finalize voting pool data in SNEACRS:** If MS3G consensus is that the SND is qualified to enter the voting process, the MS3G Chair, the MS3G, and the Primary Subgroup Leader finalize the list of voting pool members. The SC updates the voting pool membership list in SNEACRS.
- **Step 5.5: Update SND status in SNEACRS to Stage 5:** The MS3G Chair updates the status of the SND in SNEACRS to Stage 5.
- **Step 5.6: Notify MS3G and subgroup leaders of status:** SNEACRS sends an automatic message to the Subgroup Leaders of the change in status to Stage 5.
- **Step 5.7: Notify Submitter of SND status:** SNEACRS sends an automatic message to the submitter of the change in status to “Review by Director, NAVMSMO”.
- **Step 5.8: Initiate voting:** The MS3G Chair initiates the voting through SNEACRS for that SND.
- **Step 5.9: Close voting:** The ballot is closed when the closing date is met or if votes of all eligible voting members have been placed.
- **Step 5.10: Notify MS3G Chair and Subgroup leader of the voting tally:** The voting results are extracted from the SNEACRS voting application and summarized to provide to the MS3G Chair and Primary Subgroup Leaders. A sanity check is made of the tally to verify that the votes didn’t exceed the eligible number.
- **Step 5.11: Send MS3G results of Stage 5 ballot:** The MS3G Chair provides the MS3G a summary of the results of the Stage 5 ballot. If the SND is approved by ballot, the SND proceeds to Stage 6 for the approval by the Director of NAVMSMO. If the SND is not approved the MS3G and the MS3G Chair will review the objections and determine whether the SND should be withdrawn.
- **Step 5.12: Prepare notification for NAVMSMO Director:** If approved, the MS3G Chair prepares an email memorandum forwarding a summary of the results of the review process and requests final approval by the NAVMSMO Director.

Navy M&S Standards Policy and Procedures Manual

- **Step 5.13: Update SND status in SNEACRS to Stage 6:** If the SND is approved by ballot, the MS3G Chair updates the SND's status in SNEACRS to “Determine Disposition Director, NAVMSMO Approval”.
- **Step 5.14: Notify Director, NAVMSMO that SND is ready for review:** The MS3G chair will contact the Director of NAVMSMO, confirm he has received the memorandum and invite him to review the nominated standard, as well as address any questions he may have.
- **Step 5.15: Notify Submitter of SND status:** The SNEACRS system sends an automatic message to the submitter that the SND is now under review by the Director of NAVMSMO.

Navy M&S Standards Policy and Procedures Manual

6.2.5.3 Stage Five Steps

The following table displays the Stage Five steps and lists the roles, any criteria and follow-up action required

Step	Description	Role	Criteria	Follow-up Actions
5	Stage 5: Determine Disposition - MS3G Vote			
5.1	Review results and recommendation from Navy community public review	MS3G		IF MS3G has objections then MS3G: -Can update SND -Can return SND to Stage 2 -May resolve issues w/o updates -Can withdraw SND
5.2	Thank members of Navy community who submitted the comments / recommendations	SC		
5.3	Prepare voting package in coordination with MS3G chair	SC Subgroup Leader		-Voting closing date established -Balloting instructions available
5.4	Finalize voting pool data in SNEACRS	MS3G Chair, Subgroup leader, SNEACRS		
5.5	Update SND status in SNEACRS to Stage 5	MS3G Chair		
5.6	Notify MS3G and Subgroup leaders of status	SNEACRS		
5.7	Notify Submitter of SND status	SNEACRS		
5.8	Initiate voting	MS3G Chair, SNEACRS		
5.9	Close voting	MS3G Chair, SNEACRS		Ballot closed when official closing date has been reached.
5.10	Notify MS3G Chair and Subgroup leader of the voting tally	SC SNEACRS	Sanity Check: Tally does not exceed count for voting pool members	
5.11	Send MS3G results of Stage 5 ballot			IF SND approved proceed to step 5.12. If MS3G approval not received SND may be withdrawn or further review may be required in Stage 2.
5.12	Prepare notification for NAVMSMO Director			
5.13	Update SND status in SNEACRS to Stage 6	MS3G Chair		
5.14	Notify director, NAVMSMO that SND is ready for review.	MS3G Chair		
5.15	Notify Submitter of SND status	SNEACRS		Proceed to Stage 6, Director, NAVMSMO

Table 6.2.5.3-1 - Stage Five “Determine Disposition & MS3G Vote”

6.2.6 Stage Six - Determine Disposition – Director, NAVMSMO

6.2.6.1 Description of Stage Six

The sixth stage of the process, “Determine Disposition – Director, NAVMSMO,” is the determination of the final disposition of the SND by the Director, NAVMSMO. The step-by-step process is described below.

6.2.6.2 Process Summary of Steps for Stage Six

- **Step 6.1: Review recommendations from MS3G:** The Director of NAVMSMO reviews the comments and recommendations from the MS3G and the results of the balloting and makes a determination on whether to approve the SND.

If the Director approves the SND, the SND proceeds to Stage 7 so that the MS3G Chair can promulgate the approved standard and facilitate activities to advocate the standard.

If the SND is not approved, the MS3G and the MS3G Chair will review the objections and determine whether the SND should be withdrawn.

- **Step 6.2: Update SND status in SNEACRS to “Promulgate and Advocate”:** The MS3G Chair updates the SND status in SNEACRS to Stage 7 of the process.
- **Step 6.3: Notify MS3G and Subgroup leaders of SND approval:** SNEACRS automatically sends an email message to NAVMSMO, the MS3G reflector, and the Subgroup Leaders to inform them that the SND has been approved as a Navy M&S standard.
- **Step 6.4: Notify Submitter of SND status:** The SNEACRS system sends an automatic message to the submitter that the SND has been approved by the Director of NAVMSMO.

6.2.6.3 Stage Six Steps

The following table displays the Stage Six steps and lists the roles, any criteria and follow-up action required

Step	Description	Role	Criteria	Follow-up Actions
6	Stage 6: Determine Disposition - Director, NAVMSMO			
6.1	Review recommendations from MS3G	Director, NAVMSMO		IF SND not accepted, Then Director can: -Return SND to MS3G to reevaluate or resolve -Withdraw SND
6.2	Update SND status in SNEACRS to "Promulgate and Advocate"	MS3G Chair		
6.3	Notify MS3G and Subgroup Leaders of SND approval	SNEACRS		
6.4	Notify Submitter of SND status	SNEACRS		Proceed to Stage 7

Table 6.2.6.3-1 - Stage Six “Determine Disposition – Director, NAVMSMO”

6.2.7 Stage Seven - Promulgate and Advocate Standard

6.2.7.1 Description of Stage Seven

The 7th stage of the process, “Promulgate and Advocate Standard” provides the approved standard to the public. The step-by-step process is described below.

6.2.7.2 Process Summary of Steps for Stage Seven

The 7th stage of the evaluation process is the publication of the standard.

- **Step 7.1: Send out an message announcing new Navy M&S Standard:** The MS3G Chair sends an email message that announces the availability of the new Navy M&S standard via the Navy M&S Standards general reflector.
- **Step 7.2: Update 8-Minute Navy M&S Standards Overview Brief:** The MS3G Chair ensures that any standards briefing packages that include a listing of all approved standards are updated to include the new standard and that at least one slide is made available describing the critical elements of the new standard.
- **Step 7.3: Notify other Service M&S programs of availability of new Navy M&S standard:** The MS3G Chair will notify other Service M&S standards programs of the availability of the new standard.
- **Step 7.4: Identify and schedule on-site presentation for approved standard to applicable Navy M&S audience (e.g., PEOs):** As appropriate, the MS3G Chair and Primary Subgroup Leader will provide a briefing to the appropriate audience.

Navy M&S Standards Policy and Procedures Manual

- **Step 7.5: Schedule periodic Navy M&S standards workshop sessions:** The MS3G Chair will schedule periodic workshops for the new standard.
- **Step 7.6: Initialize date for periodic review:** The SC will initialize a review date for the approved SND in a tracking mechanism in order to schedule the periodic review based on the recommendations from the Primary Subgroup review.

6.2.7.3 Stage Seven Steps:

The following table displays the Stage Seven steps and lists the roles, any criteria and follow-up action required.

Step	Description	Role	Criteria	Follow-up Actions
7	Stage 7: Promulgate Standard			
7.1	Send out an email message announcing the new Navy M&S Standard	MS3G Chair		Use General Reflector
7.2	Update 8-Minute Navy M&S Standards Overview Brief		-Summary slide of all approved standards. -Add slide to describe new Navy standard	
7.3	Notify other Service M&S programs of availability of new Navy M&S standard	MS3G Chair		
7.4	Identify and schedule on-site presentation for approved standard to applicable Navy M&S audience (e.g. PEOs)	MS3G Chair		
7.5	Schedule periodic Navy M&S standards workshops / training sessions	MS3G Chair		
7.6	Initialize anniversary date for annual periodic review	SC		

Table 6.2.7.3-1 - Stage Seven “Promulgate and Advocate Standard”

6.2.8 Stage Eight – Periodic Review by Primary Subgroup

6.2.8.1 Description of Stage Eight

The 8th stage of the process, “Periodic Review by Primary Subgroup”, is the last stage of the process and ensures all approved standards remain current and applicable.

The purpose of this stage is to ensure that there is a process and a mechanism for the periodic review of approved Navy M&S Standards products. It is critical that an effective maintenance process is in place to ensure the continued applicability of the product after it is approved and promulgated.

Navy M&S Standards Policy and Procedures Manual

Each approved standard should be reviewed according to the periodicity recommended by the Primary Subgroup that conducted the original review of the SND. The Primary Subgroup will be notified prior to the SND reaching its review date. The Subgroup's periodic review of the existing approved standard must produce one of two recommendations:

- Reaffirm the existing approved standard (by exception from the MS3G), or
- Withdraw the existing approved standard (an explanation is required).

If action is not initiated by the review date of the approved standard to reaffirm, or withdraw the SND, then an administrative withdrawal will be exercised until the review process can be completed.

Definition of periodic review recommendations:

Reaffirmation: The standard continues to reflect the state of the art and contains no significant obsolete or erroneous information. The standard is still being maintained as an approved Navy standard.

Withdrawal: The standard is no longer useful in that it contains significant obsolete or erroneous information that requires that the standard be withdrawn

The step-by-step process is described below.

6.2.8.2 Process Summary of Steps for Stage Eight

- **Step 8.1: Track the review date of approved standards:** The MS3G will establish a mechanism to track the review dates for all approved SNDs.
- **Step 8.2: Notify Primary Subgroup Leader that periodic review deadline approaching:** The scheduling mechanism shall notify the MS3G Chair, SC and the Primary Subgroup Leader that the existing standard is approaching its review date and a review is required.
- **Step 8.3: Subgroup reviews SND and makes recommendation to the MS3G to reaffirm or withdraw the SND:** When the review date of the existing standard is reached the Primary Subgroup establishes a team to review the existing SND. Members of the review team complete and submit the Stage 8 SND Periodic Review Form (Appendix D).
- **Step 8.4: A request is sent to the MS3G for concurrence on the Primary Subgroup's recommendation to reaffirm or withdraw the standard:** If the Primary Subgroup's recommendation is to reaffirm or withdraw the existing standard, the Primary Subgroup initiates a notification to the MS3G recommending concurrence. The process then proceeds to the next step to request concurrence from the Director, NAVMSMO.

- **Step 8.5: A request is sent to the Director, NAVMSMO for concurrence on the Primary Subgroup’s recommendation to reaffirm or withdraw the standard:**

For Reaffirmation Recommendations: If the Director, NAVMSMO concurs with the MS3G to reaffirm the standard, the standard remains an approved Navy M&S Standard. If the Director notes objections and does not reaffirm the standard, the standard is withdrawn.

For Withdraw Recommendations: If the Director, NAVMSMO concurs with the MS3G to withdraw the standard, the standard is withdrawn. If the Director notes objections to withdrawing the standard, the standard remains an approved Navy M&S standard.

6.2.8.3 Stage Eight Steps

The following table displays the Stage Eight steps and lists the roles, any criteria and follow-up action required.

Step	Description	Role	Criteria	Follow-up Actions
8	Stage 8: Periodic Review by Technical Subgroup			
8.1	Track periodic review date of approved standards	SC Subgroup Leader SNEACRS **		
8.2	Notify Subgroup Leader that designated review deadline is approaching	SC SNEACRS **	Send notification one month before the identified review date.	
8.3	Subgroup reviews SND and makes recommendation to the MS3G.	Subgroup Leader	Periodic review criteria.	
8.4	MS3G provides recommendation to the Director, NAVMSMO to reaffirm or withdraw standard.	MS3G Members		
8.5	Director, NAVMSMO confirms decision to reaffirm or withdrawn standard.	Director, NAVMSMO		

Table 6.2.8.3-1 - Stage Eight “Periodic Review by Technical Subgroup”

7 ADOPTING OTHER STANDARDS

The above stated process will be used for adjudicating the adoption of all other standards.

8 LIAISONS

Liaisons will be maintained with the Army, Air Force, Institute of Electrical and Electronics Engineers (IEEE), SISO and any other applicable standards groups that will benefit the Navy standards process.

9 APPEALS OPTIONS DURING THE STANDARDS REVIEW PROCESS

TBD.

CHARTER
DEPARTMENT OF THE NAVY
MODELING AND SIMULATION
STANDARDS PROJECT

This Charter establishes the purpose, authority, and roles and responsibilities of the Navy Modeling & Simulation (M&S) Standards Steering Group (MS3G), the Subgroups and interactions with other members of the Navy M&S Community.

I. PURPOSE:

The purpose of the Navy MS3G is to promote a common set of standards for the use and reuse of Navy models, simulations, and data; as well as supporting protocols, techniques and processes.

II. AUTHORITY:

The Navy MS3G was established under the authority of the Navy Modeling and Simulation Management Office (NAVMSMO) (OPNAV N6M) on 8 Nov 99.

III. NAVY M&S STANDARDS PROJECT – GENERAL:

The Navy M&S Standards Project is structured to make every effort to ensure that appropriate M&S standards are available when needed for Navy M&S development, acquisition, deployment, and life-cycle support. It also ensures that the necessary infrastructure is present and applied to the Navy M&S Standards Process. Standards endorsed by this process may be promulgated as mandatory or advisory (recommended).

The Project will identify and establish a strategy for achieving future Navy M&S Standards evolution. To ensure that appropriate Navy M&S Standards are available when needed by the Navy M&S Community, frequent and effective interactions will be required among the various participants in the Navy M&S Standards Process. The participants are listed and described below. The details of the interactions will be articulated in specific memoranda between the respective groups.

IV. PARTICIPANTS:

- Director, NAVMSMO sponsors and provides requirements and policy guidance for the project,
- Project Director chairs the Navy MS3G and is appointed by the Director, NAVMSMO,
- The Navy M&S User Community produces and utilizes M&S Standards,

Navy M&S Standards Policy and Procedures Manual
Navy M&S Standards Project Charter
Appendix A

- The Navy M&S MS3G is comprised of government personnel and their designates, as well as representatives from Federally Funded Research and Development Centers (FFRDCs) and University Affiliated Research Centers (UARCs), with each NAVMSMO-approved organization providing an empowered voting member to the Steering Group,
- The Navy M&S Standards Subgroups are comprised of M&S subject matter experts from government, industry, academia, and laboratories as well as individual analysts. The concept for organizing and managing the Navy M&S Standards Subgroups is focused on two areas: 1) Technology and 2) Application Planning and Review. Both of these concepts are focused on the needs of the Navy M&S user community.
 - Application Planning and Review Groups (ARPGs) identify specific application area needs for potential Navy M&S standards, and
 - Technology Area Groups (TAGs) address these needs in the appropriate technology area by providing M&S standards products to support the application areas.
- Other Navy M&S Projects,
- OPNAV, Department of the Navy (DoN) Secretariat, the Fleets, and Systems Commands,
- Programs, large and small, such as Joint Strike Fighter, DD(X), and the New Attack Submarine (VIRGINIA Class), and
- Advisors and liaisons from the Services' M&S Offices and other Department of Defense (DoD) M&S related agencies.

V. ROLES AND RESPONSIBILITIES:

- Director of NAVMSMO:
 - Management oversight of Navy M&S Standards Project,
 - Review, approve and forward recommended standard to appropriate authorities for further approval, and
 - Disapprove standard recommendations.
- Navy M&S Standards Project Director (MS3G Chairperson):
 - Provides for overall execution of Navy M&S Standards Project.
- Navy M&S Standards Coordinator (SC):
 - Provides day-to-day coordination of Navy M&S Standards Project,
 - Oversee the supporting web sites that include SNEACRS and the MS3G Document Library and provide user support, and
 - Provide logistical and planning support for MS3G meetings.
- Navy MS3G:
 - Headed by MS3G Chairperson,

Navy M&S Standards Policy and Procedures Manual
Navy M&S Standards Project Charter
Appendix A

- Reviews and provides early input to the Navy M&S Standards Process,
 - Executes the Navy M&S Standards Process,
 - Promulgates best practices, recommended specifications and standards for users of Navy M&S for products such as models, simulations, architectures, data standards, algorithms, protocols, techniques, processes for government, commercial, or non-government standards,
 - Establishes and maintain relationships with other experts in the DoD M&S community, academia, and industry, and
 - Forward recommendations to Director, NAVMSMO.
- MS3G Members:
 - Represent their organization in Steering Group Meetings. (e.g. assume the responsibility to obtain principals' concurrence on issues),
 - Is their organization's primary point of contact,
 - Identify M&S issues for steering group deliberation,
 - Participate in the resolution of issues,
 - Perform assigned action items, and
 - Suggest opportunities for streamlining the Navy M&S Standards Process.
 - Subgroups (ARPGs, TAGs and SIGs):

The role of the ARPG is to:

- Identify specific application area needs for M&S Standards,
- Submit these needs to the appropriate TAG,
- Support the functional review of these standards,
- Support the integration of approved standards back into the respective applications by advocating and promoting these standards in their functional areas,
- Coordinate technical recommendations through the Navy M&S Standards Process, and
- Conduct Annual Review of SND.

The role of the TAG is to:

- Champion the proposed M&S Standard through the Navy M&S Standards Process,
- Provide technical recommendations,
- Document proposed Standards,
- Review comments and feedback,
- Provide subsequent technical reviews as required,
- Identify and support the resolution of M&S issues,
- Work assigned action items to closure,
- Monitor existing standards for applicability and modification, and
- Conduct Annual Review of SND.

Navy M&S Standards Policy and Procedures Manual
Navy M&S Standards Project Charter
Appendix A

The role of the SIG is to:

- Identify specific application area needs for M&S Standards,
- Submit these needs to the appropriate TAG or APRG,
- Support the functional review of these standards,
- Support the integration of approved standards back into the respective applications by advocating and promoting these standards in their functional areas,
- Coordinate technical recommendations through the Navy M&S Standards Process, and
- Support Annual Review of SND.

VI. GENERAL PROCEDURES:

- All functions/organizations are to be represented at each meeting of the Navy M&S MS3G unless specifically delineated otherwise. The Navy M&S MS3G Chairperson may, from time to time, call meetings or conference calls for specific members and/or subgroups to address specific issues.
- Meetings will be scheduled as required by the Navy M&S MS3G Chairperson. Agendas and meeting announcements will be established and distributed by the Chairperson a minimum of two weeks in advance of the meeting.
- Meeting logistical information such as location, security requirements, display equipment, etc., will be disseminated with the meeting announcement.
- Minutes and action items, once approved by the Chairperson of the Navy M&S MS3G, will be recorded and published by the Navy M&S SC unless otherwise assigned. The Primary Subgroup leaders are responsible for ensuring their meeting minutes and action items are recorded, approved published.

*Navy M&S Standards Policy and Procedures Manual
Stage 2 SND Review Form
Appendix B*

Stage 2 SND Review Form Evaluation by MS3G Chair and Primary Subgroup		
SND Title	SND Number:	
	SND Review Date:	
Technical Subgroup:	Technical Subgroup Representative:	
I.1	Technical Review and Response Summary Decision	
	Proceed to Stage 3? Yes <input type="checkbox"/> No <input type="checkbox"/> (To be completed after answering questions)	
I.2	Technical Subgroup Overall Recommendation	
I.3	Recommended Periodicity: Annual Review ? Yes <input type="checkbox"/> No <input type="checkbox"/> Other ? <input type="checkbox"/> Please indicate recommended review periodicity:	
II.	Technical Subgroup SND Review Feedback	Technical Subgroup Response <i>For those responses indicating a Yes/No response, you may also provide additional comments in the text box provided.</i>
II.1	Is this standard already required in higher-level documentation?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.2	Does this standard address current problems and meet a need?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.3	What is the application area?	
II.4	What are the anticipated benefits?	
II.5	Are there competing standards?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.5.a	Please describe the competing standards.	
II.6	Is it identified as a standard? If so, who is the sanctioning body?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.7	Is there documentation? If so is it clear?	Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
II.8	Are there application guides?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.9	Are there test scenarios?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.10	Is test data available?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.11	If this is acceptable as a Navy standard should we propose it as a Joint Technical Architecture standard at the DoD level?	Yes <input type="checkbox"/> No <input type="checkbox"/>

Navy M&S Standards Policy and Procedures Manual
Stage 2 SND Review Form
Appendix B

II.12	Is the proposed standard sufficiently well-developed to support a business case?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.13	Does the proposed standard require further development? If so, does the proposed standard need MS3G to be an advocate?	Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
II.14	The following address usage for this proposed standard.	
II.14.a	Has any Service or DoD already endorsed this standard?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.14.b	Is the proposed standard in use by any Service or DoD programs?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.14.c	Have the results of using this standard been reported?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.14.d	If you answered YES to III.F.6, in what documents? Are those documents available?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.14.e	Has any Service or DoD already endorsed this standard?	Yes <input type="checkbox"/> No <input type="checkbox"/>
III.	Specific Questions for Individual Category (as applicable)	Technical Subgroup Response
III.A.	C4ISR:	
III.A.1	How is Command and Control represented in this work? Has this approach been validated?	
III.A.2	How is Intelligence function represented? Are other programs currently using this approach?	Yes <input type="checkbox"/> No <input type="checkbox"/>
III.A.3	How is communication and networking represented?	
III.A.4	Do messages, imagery, video and voice representation follow any standard?	Yes <input type="checkbox"/> No <input type="checkbox"/>
III.A.5	Have models been built and using this standard?	Yes <input type="checkbox"/> No <input type="checkbox"/>
III.B.	Data:	
III.B.1.a	Have the data entities and attributes been pulled from in the Defense Data Dictionary System (DDDS) or DoD XML Namespace Registry where they are identical?	Yes <input type="checkbox"/> No <input type="checkbox"/>
III.B.1.b	Was the DDDS or DoD XML Namespace Registry used in labeling the attributes?	Yes <input type="checkbox"/> No <input type="checkbox"/>
III.B.2	Do we need to propose additions to the DDDS or DoD XML Namespace Registry?	Yes <input type="checkbox"/> No <input type="checkbox"/>
III.C.	Interoperability:	

Navy M&S Standards Policy and Procedures Manual
Stage 2 SND Review Form
Appendix B

III.C.1	Does the proposed standard, best practice address interoperability in the general sense or is it specific to a particular domain? Please describe the particular domain.	Yes <input type="checkbox"/> No <input type="checkbox"/>
III.C.2	Does the proposal support the goals of seamless interoperability between models, simulations and across federations?	Yes <input type="checkbox"/> No <input type="checkbox"/>
III.C.3	Will the standard, best practice move us forward in achieving interoperability between models, simulations and systems?	Yes <input type="checkbox"/> No <input type="checkbox"/>
III.C.4	Does the proposed standard, best practice address interoperability in a manner that lends itself to becoming a standard, best practice across the M&S community?	Yes <input type="checkbox"/> No <input type="checkbox"/>
III.C.5	Is the proposed standard, best practice currently being used in the M&S community? If so, where, how and how well accepted?	Yes <input type="checkbox"/> No <input type="checkbox"/>
III.C.6	How complete is the proposed standard and/or best practice? Is it complete, accurate, consistent, simple or complicated, can it be easily tailored and is it easy to communicate etc.?	
III.D.	Logistics:	
III.D.1	What logistical areas does the standard apply to: supply, maintenance, transportation, or other?	
III.D.2	What command areas does the standard apply to: surface, air, sub-surface, infrastructure, or other?	
III.D.3	At what level does the standard apply: acquisition, strategic, operational, tactical, or other?	
III.D.4	What other standard categories does this logistics standard apply to: process, data, or interoperability?	
III.D.5	Does this standard have joint service application?	Yes <input type="checkbox"/> No <input type="checkbox"/>
III.E.	SNE:	
III.E.1	How is the synthetic natural environment represented (SNE)?	
III.E.2	Is the SNE representation based on currently available models and algorithms?	Yes <input type="checkbox"/> No <input type="checkbox"/>
III.E.3	Does the SNE approach conform to any current standards?	Yes <input type="checkbox"/> No <input type="checkbox"/>

Navy M&S Standards Policy and Procedures Manual
Stage 2 SND Review Form
Appendix B

III.E.4	Does what's proposed, a standard, best practice, etc., add to the body of knowledge for SNE representations?	Yes <input type="checkbox"/> No <input type="checkbox"/>
III.E.5	Is the proposal general or domain specific (air, ocean, space, terrain)? If general, is it consistent across domain boundaries?	Yes <input type="checkbox"/> No <input type="checkbox"/>
III.E.6	Does the proposed standard, best practice etc, address interoperability across domains?	Yes <input type="checkbox"/> No <input type="checkbox"/>
III.F.	VV&A:	
III.F.1	Does the proposed standard conform with DON VV&A policies? Would the use of the standard require a change to DON VV&A policy?	Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
III.F.2	Can the proposed standard be used for the VV&A of M&S in the Navy – i.e. C4ISR, weapons systems, threat systems, budgeting, training, etc.?	Yes <input type="checkbox"/> No <input type="checkbox"/>
III.F.2.a	If you answered NO to III.F.2, what are the specific types of M&S that can use the proposed standard?	
III.F.3	Does the proposed standard specifically pertain to the use of models and simulations (versus operational software)?	Yes <input type="checkbox"/> No <input type="checkbox"/>
III.F.3.a	If you answered NO to III.F.3, what changes are required to adapt it for use in modeling and simulation?	
III.F.4	Will VV&A efforts be improved by implementing this standard?	Yes <input type="checkbox"/> No <input type="checkbox"/>
III.F.5	Are there any negative impacts to using this standard?	Yes <input type="checkbox"/> No <input type="checkbox"/>
III.F.5.a	If you answered YES to III.F.5, what are the impacts?	

Navy M&S Standards Policy and Procedures Manual
Stage 3 SND Review Form
Appendix C

Stage 3 SND Review Form Internal Review by NAVMSMO and MS3G <i>(Please complete and submit to the MS3G Coordinator)</i>		
SND Title	SND Number:	
	SND Review Date:	
MS3G Member Name:	MS3G Member Organization:	
I.1	MS3G Review and Response Summary Decision Proceed to Stage 4? Yes <input type="checkbox"/> No <input type="checkbox"/> (To be completed after answering questions)	
I.2	MS3G Member Overall Comments: [What are your major concerns and issues?]	
II.	MS3G SND Review Feedback	MS3G Member Response
II.1	Is this standard already required in higher-level documentation?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.2	Does this standard address current problems and meet a need?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.3	Does the Stage 2 review support continuation of evaluation process?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.4	Have competing standards been identified?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.4.a	If so, describe these competing standards	
II.5	Is this SND identified as a standard?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.5.a	If so, who is the sanctioning body for this SND?	
II.6	Is there documentation for this SND?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.6.a	If so, is the documentation clear? You may elaborate in the text box.	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.7	Are there application guides for this SND?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.8	Are there test scenarios/test cases?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.9	Is there test data available?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.10	Have users been identified?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.10.a	Please describe any additional users of this SND.	
II.11	If this proposed standard is accepted as a Navy standard, should we propose it as a Joint Technical Architecture (JTA) standard at the DoD level? You may elaborate in the text box.	Yes <input type="checkbox"/> No <input type="checkbox"/>

Navy M&S Standards Policy and Procedures Manual
Stage 8 SND Periodic Review Form
Appendix D

Stage 8 SND Periodic Review Form Periodic Review by Primary Subgroup <i>(Completed by Subgroup members initially and MS3G members and Director, NAVMSMO during confirmation reviews. Please complete and submit to the MS3G Coordinator)</i>		
SND Title	SND Number:	
	SND Review Date:	
Your role: Subgroup Member, MS3G Member, Director, NAMSMO)		
Name:	Member Organization:	
I.1	Periodic Review Summary Decision Recommend Reaffirmation OR Withdrawal Reaffirmation <input type="checkbox"/> Withdrawal <input type="checkbox"/> (To be completed after answering questions)	
I.2	Overall Comments: [What are your major concerns and issues?]	
II	Periodic Review Criteria	Response Your responses below provide guidance in determining the summary response above.
II.1	The standard under review has known users.	Yes <input type="checkbox"/> - Supports Reaffirmation No <input type="checkbox"/> - Supports Withdrawal
II.1.a	If <u>Yes</u> , list the users. (Please enter text in the box to the right.)	
II.2	The standard under review continue to reflect the state of the art.	Yes <input type="checkbox"/> - Supports Reaffirmation No <input type="checkbox"/> - Supports Withdrawal
II.3	The standard contains NO significant obsolete or erroneous information.	Yes <input type="checkbox"/> - Supports Reaffirmation No <input type="checkbox"/> - Supports Withdrawal
II.4	Is the standard under review the latest revision/version?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.4.a	If <u>No</u> , how does the latest revision/version differ from the standard under review? (Please enter text in the box to the right) Should this latest revision/version replace the standard under review as a Navy Standard?	Yes <input type="checkbox"/> - Replaces the current standard No <input type="checkbox"/> - Does not replace
II.5	Is the standard required in higher-level guidance.	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.5.a	If <u>Yes</u> , what is that guidance? (Please enter text in the box to the right.)	
II.6	Do any competing standards exist?	Yes <input type="checkbox"/> No <input type="checkbox"/>
II.6.a	If Yes, name the competing standard and identify the sanctioning body. (Please enter text in the box to the right.)	