NIEM milops

National Information Exchange Model (NIEM)

Military Operations Domain

Strategic Plan

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Deputy Director for Cyber and Command,
Control, Communications and Computers Integration, J6

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No.	Approver	Date	Description
1	Domain Steward Representative	TBD	Initial release

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1. Purpose

Share information within and outside of DOD channels in order to facilitate "whole of government" information sharing across the Joint Interagency Intergovernmental Multinational (JIIM) community. Enhance Situational Awareness / Command Decision Making by providing the Joint Force Commander key and vital information via net-centric services on the disposition of friendly, enemy, neutral, and unknown forces allowing for the effective implementation of Joint Command and Control.

Enable Commanders to make timely and informed operational decisions across all levels of operations at the speed of the problem by transforming data into actionable information to close long-standing data integration gaps and resolve recommendations from the decade of War Lessons Learns, CBA Analysis, and Gap Analysis.

2. Problem

Interoperability was challenge within coalitions. Use of different and non-interoperable systems limited the utility of available capabilities. For example, digital data links in Iraq did not consistently exchange information among coalition nations, leading to incomplete operating pictures, reduced battlespace awareness, and increased risk to forces. Friendly fire was observed to result in cases where information on friendly force location was available but not presented to operators due to lack of interoperable systems.[1]

To date, there is no known comprehensive implementation of standardized data exchanges that support all U.S. and Coalition requirements. Consequently, in a DOD Service Oriented Architecture (SOA) / net-centric environment, the inability to establish standardized XML data exchanges both in episodic and enduring environments is a significant obstacle to effective operational decision-making by warfighters at all echelons.

3. Vision

The NIEM Military Operations Domain will facilitate the adoption of NIEM to resolve DOD and mission partner information and data Interoperability challenges in both modernized and new information exchange environments.

4. Background

In reference (d), The Department of Defense Chief Information Officer (DOD CIO) identified the National Information Exchange Model (NIEM) as the best suited standards-based approach for enhancing the interoperability and standardization of DOD information exchange content.

NIEM offers a proven approach for developing standardized, reusable information exchange packages that has been adopted across international, federal, state, local, and tribal agencies. As one part of the overall DOD NIEM adoption, the DOD CIO requested the Joint Staff J6

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[1] Derived from 9/11and decade of War report, Lesson 8: Coalition Operations, Interoperability, p29

become the Domain Steward for the Military Operations (MilOps) Domain. The JS J6 established a new Military Operations (MilOps) Domain within the NIEM construct.

In combination with the existing NIEM Core and domains, the NIEM MilOps Domain supports development of information exchange specifications across the full range of military operations.[2] The purpose of the MilOps Domain is to provide and maintain unique military operations and missions data components used to define NIEM Information Exchange Package Documents (IEPDs) that satisfies mission critical information / data sharing requirements within DOD, and/or with other Federal government agencies, and Mission Partners

5. Strategic Guidance

Assist the CJCS in providing the best military advice while advancing cyber defense, joint/coalition interoperability and C2 capabilities required by the Joint Force to preserve the Nation's Security.[3]

Enable warfighter access to authoritative data sources and improves data interoperability by establishing common C2 data and service standards, integrating these standards into capability requirements, and facilitating implementation within programs of record.[4]

DHS and the Joint Staff will enhance unclassified information sharing and safeguarding among their respective mission partners.[5]

6. Strategic Objectives

Objective 1: Make NIEM more accessible by migrating existing XML standardized interfaces to NIEM Standardized Information exchanges.

Objective 2: Promote "The Enterprise" view of information exchanges by developing and implementation NIEM conformant interfaces for the DoD enterprise.

Objective 3: Build Strong Communities by constructing stakeholder advocacy, support, and champions across whole of government and mission partners.

7. Strategic Goals

The following high level goals support the objectives in Section 6. Appendix A provides an additional details of these goals and associated activities.

Goal 1: Continue to support and expand NIEM adoption across DoD by fostering a "whole of government" throughout the period this strategic plan remains in effect.[6]

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[2] Joint Staff J6 Memorandum dtd 12 April 2013.
[3] Joint Staff Mission Statement.
[4] Joint Staff J6 Mission Statement.
[5] Reference P.
[6] Value 1 - Reference: i., p. 4.

<u>Goal 2</u>: Continue implementing proven practices of NIEM sound and transparent governance activities in the management of the MilOps Domain throughout the period this strategic plan remains in effect. Examples include: Configuration Control Board (CCB) meetings, Technical Design Reviews (TDR), etc. as appropriate.

<u>Goal 3</u>: Submit the specifications supporting the NIEM technical architecture to the DoD IT Standards Registry (DISR) in FY18.

8. Appendix A: Resources

MilOps Domain has a plethora of technical and model management resources to further the creation of standardized XML data exchanges.

MilOPs Domain leverages the authority and oversight of the DOD CIO, OSD AT&L, Joint Staff J6, DDC5I along with the NIEM PMO, NBAC, NTAC to ensure that new and modernized DOD capabilities within DOD comply with the DODI 8320.07.

Further, in accordance with the Deputy Secretary of Defense Memorandum Improvements to DoD Unclassified Shared Situational Awareness:

> "Commander. U.S. Northern Command, and Commander, U.S. Pacific Command, will use the National Information Exchange Model (NIEM) in accordance with DoD Instruction 8320.07, Implementing the Sharing of Data, Information, and Information Technology (IT) Services in the Department of Defense, leveraging existing DoD capabilities, to provide DoD mission partners with a clear and concise DoD central authoritative data source for the sharing of unclassified information related to disasters. NIEM is a proven and existing approach for data and information exchange with a broad functional community of interest."

9. Appendix B: Acronyms

DOD CIO - The Department of Defense Chief Information Officer

NIEM – National Information Exchange Model

MilOps – NIEM Military Operations Domain

IT – Information Technology

OSD CIO – Office Secretary of Defense Chief Information Officer

DOD – Department of Defense

NBAC – NIEM Business Architecture Committee

NTAC – NIEM Technical Architecture Committee

MCJROTC – Marine Corps Junior Reserve Officer Training Command

CR – Change Request

COI – Community of Interest

USD (AT&L) – Under Secretary of Defense (Acquisition, Technology, and Logistics

DISR -.DOD IT Standards Registry

10. Appendix C: References

a. DOD Information Enterprise Architecture (DOD IEA), Version 2.0, 10 August 2012
b. NIEM Military Operations Domain Charter, September 8, 2016
c. NIEM Military Operations & Maintenance Plan, September 8, 2016
d. DOD CIO memo, Adoption of the National Information Exchange Model with the Department of Defense, 28 March 2013
e. NIEM Military Operations Domain Stewardship Agreement signed 13 November 2013
f. DODI 8320.07, Implementing the Sharing of Data, Information, and Information Technology (IT) Services in the Department of Defense, 3 August 2015
g. Deputy Secretary of Defense, Memorandum for Secretaries of the Military Departments, Improvements to DoD Unclassified Shared Situational Awareness, dtd 17 January 2017
h. Project Management Institute, Strategic Plan, Prepared by the Board of Directors, revised 30 November 2012.
i. FY2017 - 2018 NIEM Business Architecture Committee (NBAC) Roadmap
j. Department of Homeland Security (DHS) – Joint Staff J6, DDC5I Discussions 21 March 2017 – Proposed way ahead
k. NIEM Strategy, Final v0.1 June 01, 2010
l. Colonel J/ P. Holder, MCJROTC Resources, http://flashmedia.glynn.k12.ga.us/webpages/jholder/resources.cfm?subpage=37836
m. Chron, Meaning of Professionalism and Work Ethic., http://smallbusiness.chron.com/meaning-professionalism-work-ethic-746.html
n. Wikipedia https://www.google.com/search?biw=1539&bih=937&q=Technical+Know-how&oq=Technical+Know-how&gs_l=psy-ab.3..0l3.3976.11889.0.13265.24.20.4.0.0.0.169.2144.11j9.20.0....0...1.1.64.psy-ab..0.24.2172...0i131k1j0i67k1.R7wv3nlu_4I
o. ESDP Tiger Team DoD Adoption of NIEM – Identification of Exceptions to Policy Data Call Final Report, 25 Sep 2014
p. Memorandum of Understanding between the DHS and the Joint Staff for collaborative information interoperability efforts.
q. 9/11and Decade of War report

Appendix D: Goals, Objectives, and Associated Activities

Goal 1: Continue to support and expand NIEM adoption across DOD by fostering a "whole of government" approach throughout the period this strategic plan remains in effect.

> **Objective 1.1** Explore with NBAC reviving cyber domain. Consider, defensive cyber in supporting IEPDs around continuous monitoring and validation of enforcement of information sharing and safeguarding policy. (Goal 4 – Ref i., p. 5)

> **Objective 1.2** Explore with NBAC reviving the intelligence domain. Adopt a conservative approach in adding intelligence community identifiers (ICID) as Intelligence model content. (Goal 4 – Ref i., p. 5)

> **Objective 1.3**   Participate in demonstrating U.S. Federal Government commitment to international interoperability by making preparation to validate NIEM as a key pillar at the October 2017 NATO meeting. (NBAC April Meeting Minutes)

> **Objective 1.4**: Reengage bringing DOD CIO and USD (AT&L) back into NEIM discussions. Participate in discussions among DHS HSIN and MPE. Continue after actions of HSIN-MPE meeting and draft MOU. Maintain action on AT&L Acquisition Guidance for DOD CIO's NIEM-First Policy Compliance. (Ref j)

>> **Activity** 1.4.1 MilOps supports the JS J6 coordinated technical exchange meeting with DHS, DoD CIO, DISA, USNORTHCOM, JS J3,to further examine lessons learned (standardization and reuse to achieve whole of government approach). To develop and refine the DoD Enterprise Service Lifecycle Management Framework, and identify opportunities to enhance delivery of ECOP/UDOP visualization and data management services. (Ref j)

>> **Activity** 1.4.2 MilOps supports to the Joint Staff J6 initiated requirements review of HSIN and APAN with DISA and PWC. Focus will be to determine opportunities to leverage HSIN collaboration capabilities and support existing APAN COIs via HSIN capabilities. HISN predominantly supports U.S. domestic operations (i.e., interagency, intergovernmental, local, tribal, etc.), while APAN supports international mission partners and non-governmental organizations. (Ref j)

>> **Activity** 1.4.3 National Information Exchange Model (NIEM) – MilOps will participate in the DHS and JS J6 exploration of the expansion of NIEM domains to include a new cyber defense domain. Also work together to address Office of the Director of National Intelligence (ODNI) lack of interest and/or execution as the domain steward. (Ref j)

>> **Activity** 1.4.4 Complex Catastrophe Memo – MilOps will participate in follow-on efforts from the deep dive held on 17 Jan 2017 in reference to the Complex Catastrophe Memo, with focus on CCMD and NGB roles in the Data Standardization and Fusion Responsibility paragraphs. (Ref j)

> **Objective** 1.5 Facilitate and support on-going DoD CIO and USD (AT&L) NIEM discussions In drafting NIEM Acquisition Guidance that adheres to NIEM compliance policy per DODI 8320.07. (Ref f, o)

Activity 1.5.1 Recommend Implementation of "Consider NIEM First" referenced in DODI 8320.07(Ref f)

Activity 1.5.2 Recommend Implementation of the exception to the "Consider NIEM First" referenced in DODI 8320.07(Ref o)

Objective 1.6 Develop a proposal for the Milestone Decision Authority to make the determination that an emerging or modernized capability has met all the specifications of DODI 8320.07 as part of the exit criteria from the Material Solutions Analysis (MSA) Phase by the Material Development Decision (MDD) (Milestone A) allowing it to proceed into the Technology Maturation & Risk Reduction (TD) Phase (Figure 1).
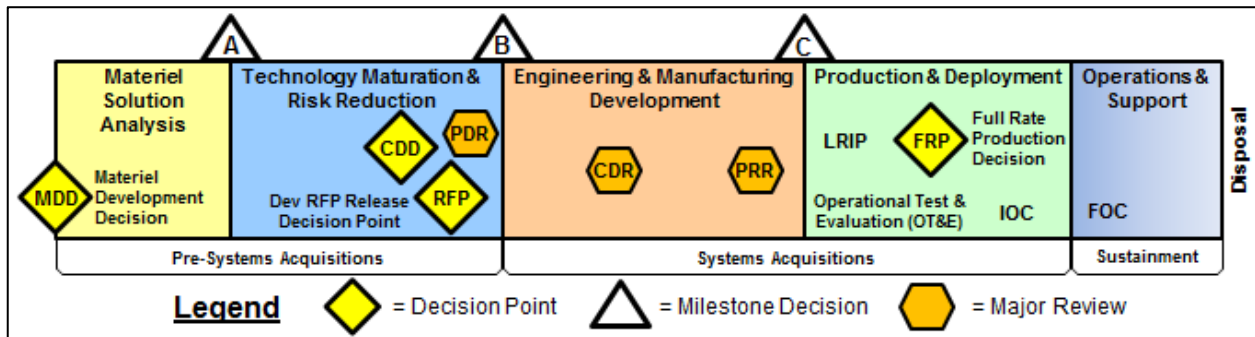

Figure 1

Objective 1.7 Develop a NIEM Interoperability "compelling narrative" for the whole of Government. Present this narrative when marketing the value of utilizing the NIEM XML standardized Naming and Design Rules (NDRs) when organizations create new or modernized web-based services.

Goal 2: Continue implementing proven practices of NIEM sound and transparent governance activities in the management of the MilOps Domain throughout the period this strategic plan remains in effect.

Objective 2.1 Advocate for NIEM data exchange best practices among DOD Constituents.

Activity 2.1.1 Provide Technical Assistance to MilOps COI Stakeholders who intend to build IEPDs.

Activity 2.1.2 Upon request, provide Technical consultation to DoD CIO in the development of a whole of Government / DoD-wide compliance to NIEM policy codified in DODI 8320.02

Goal 3: Submit the specifications supporting the NIEM technical architecture to the DoD IT Standards Registry (DISR) in FY18.

Objective 3.1 The NIEM technical specifications (Naming and Design Rules, etc.) will be posted in the DOD IT Standards Registry (DISR).

Activity: 3.1.1 Submit a Change Request to post the NIEM NDRs into the DISR.

Objective 3.2 Update the NIEM Conformance Specifications from v3.0 to 4.0 in the DOD IT Standards Registry (DISR)

> **Activity** 3.2.1 Submit a DISR change request (CR) that specifies general conformance principles and rules for the Military Operations (MilOps) Domain within the National Information Exchange Model (NIEM) v 4.0. MilOps community supports the inclusion of NIEM version 4.0 as a DISR Information/Standards document