MCO 3093.3
C4
15 Jun 2011

MARINE CORPS ORDER 3093.3

From: Commandant of the Marine Corps
To: Distribution List

Subj: MARINE CORPS POLICY FOR COORDINATED IMPLEMENTATION OF
        MILITARY STANDARDS 6017, 2045-47001, AND 188-220

Ref: (a) VARIABLE MESSAGE FORMAT (VMF) Interface Standard,
            MIL-STD-6017B, dtd 30 Oct 09
        (b) Connectionless Data Transfer Application Layer
            Standard, MIL-STD-2045-47001D Ch 1, dtd 23 Jun 08
        (c) Digital Message Transfer Device Subsystem,
            MIL-STD-188-220D Ch 1, dtd 23 Jun 08
        (d) Assistant Secretary of Defense Policy for DoD Fire
            Support Standards for Tactical Communication Systems,
            December 9, 1991
        (e) OASD (NII) Joint Tactical Data Enterprise Services
            Migration Plan (JTMP 2008) dtd 31 Oct 2008
        (f) CJCSI 6610.01C, "Tactical Data Link Standardization
            Implementation Plan," July 16, 2007
        (g) DC AVN ltr, Marine Aviation Digital Systems
            Interoperability, dtd 29 Aug 07
        (h) SECNAV M-5214.1

Encl: (1) Request for Exemption - NAVMC 11503 (EF)

Report Required: Request for Exemption (NAVMC 11503) (Report
                  Control Symbol EXEMPT) par 4b and encl (1).

1. Situation. Variable Message Format (VMF) messages provide a
digital data exchange capability to supplement or replace
selected existing voice radio nets. VMF is used to fill the
void that exists between Tactical Data Links (TDLs) that support
air control and air defense Command and Control Facilities
(C2FAC), and man-readable United States Message Text Format
(USMTF) messages that support other C2FACs in the Marine Air
Ground Task Force (MAGTF). Currently, developmental systems
implement different versions of references (a) through (c) and
are fielded independently regardless of their need to exchange

information. This approach leads to non-interoperability
between mission essential Command, Control, Communications, and
Computers (C4) and Intelligence, Surveillance, and
Reconnaissance (ISR) systems. These shortcomings will be
mitigated through a planned cyclic fielding approach for Marine
Corps digital messaging systems and a coordinated implementation
of specific versions of references (a) through (c) within each
cycle.

2. Mission. To establish Marine Corps coordinated
implementation policy for references (a) through (c) for all
Marine Corps tactical C4 and ISR systems. This Order provides
the policy for coordinated implementation of military standards
(MIL-STD) 6017, 2045-47001, and 188-220; identifies a core VMF
Message set for all Marine Corps Tactical C4/ISR systems (Table
1); and provides the current schedule for standards publication,
system implementation, and the fielded baselines (Table 2).
This schedule will aid in coordination efforts by standardizing
each cycle of systems upgrades throughout the Marine Corps and
Marine aviation systems by Naval Air Systems Command.

    a. Reference (a) is the Department of Defense (DoD)
interface standard for the VMF. VMF is a bit-oriented message
interface standard with some limited character-oriented fields
that are designed to support the exchange of digital data
between combat units with diverse needs for volume and detail of
information using various communications media.

    b. Reference (b) addresses the header used to support the
application layer of the Open Systems Interconnection (OSI)
reference model.

    c. Reference (c) is the DoD standard for Digital Message
Transfer Device Subsystems, and addresses the physical layer and
link layer of the Open Systems Interconnection (OSI) reference
model.

    d. References (b) and (c) address the communication
protocols and procedures for the exchange of information among
digital message transfer devices (DMTD), among C4 and/or ISR
systems, and between DMTDs and C4/ISR systems participating in
inter- and intra-Service tactical networks to ensure Joint,
Combined, and Service interoperability.

e. Reference (d) established the VMF message as a common standard for fire support digital entry device information exchange over tactical broadcast communication systems.

f. Reference (e) standardizes C4 and ISR messaging and data elements, and provides a seamless, flexible data link environment. It established the "J-Series" family (VMF, Link 16, and Link 22) of TDLs and mandates the use of the J-Series TDLs on C4 and ISR systems. Reference (e) recognizes that no single TDL supports every C4/ISR system, nor that any one link is able to operate in all battlefield environments.

g. Reference (f) is the TDL Standardization Implementation Plan for the DoD. This instruction establishes policy to achieve and maintain interoperability among those DoD National Security Systems (NSS) that implement TDLs. Policies in this instruction are primarily focused on achieving interoperability through the standardization of message format, content, and implementation.

h. Reference (g) establishes VMF as the digital Close Air Support, Assault Support, and Casualty Evacuation standard for Marine Corps Aviation.

i. Reference (h) implements the policy set forth in SECNAVINST 5210.8D, the Department of the Navy Records Management Program.

3. Execution

a. Commander's Intent and Concept of Operations

(1) Commander's Intent. It is necessary for systems implementing the standards described in references (a) through (c) to use the same versions of those standards. Achieving this goal requires coordinated implementation, meaning that all systems expected to interoperate are updated in unison. In addition to being on the same version of references (a) through (c), these systems will be required to implement all the fields jointly agreed upon and designated for minimum implementation.

(2) Concept of Operations

(a) Marine Corps tactical C4 and ISR systems, including tactical data systems, shall implement references (a) through (c) to provide a digital data exchange capability to

supplement or replace selected existing voice radio nets. All
tactical C4/ISR systems implementing VMF shall migrate to the
standards contained in references (a) through (c) no later than
April 2012. These cycles will be subject to yearly review and
adjustment as required by programmatic and operational
requirements. Modifications will be published as Marine Corps
Bulletins.

(b) The Marine Corps coordinated implementation of
reference (a) requires that all tactical C4/ISR systems
implementing VMF shall implement the messages identified in the
Marine Corps VMF Core Message Set (Table 1). This set of
messages is considered the minimum VMF message capability
required to support common information exchange between MAGTF
Operational Facilities (OPFAC), nodes, and individual Marines on
the battlefield. Additional VMF messages shall be implemented,
as required, to support system specific warfighting functions
and as data exchange requirements are identified.

(c) Programs identified as software applications
(e.g., Joint Warning and Reporting Network) that will be hosted
on another system may rely upon the host platform for their
Marine Corps VMF Core message set implementation. However,
these software applications shall still conform to the standards
implementation cycle.

(d) Additionally, the mandatory profiles defined in
references (b) and (c) shall be implemented by all tactical C4
and ISR systems, and aviation platforms. Optional profiles may
be implemented as required to support system specific
warfighting functions.

Message Number	Message Title
K01.1	Free Text
K01.2	Unit Reference Query/Response
K02.1	Check Fire
K02.4	Call for Fire
K02.14	Message to Observer
K02.15	Fire Support Coordination
K02.16	End of Mission and Surveillance
K02.22	Subsequent Adjust
K02.25	End of Mission Notification
K02.27	Close Air Support Request

K02.33	Close Air Support Aircrew Briefing
K04.1	Observation Report
K04.13	Basic Weather Report
K05.1	Position Report
K05.2	NBC 1 Report
K05.13	Threat Warning Message
K05.14	Situation Report
K05.15	Field Orders
K05.17	Overlay Message
K07.1	MEDEVAC
K07.3	Logistics Report
K07.4	Personnel Report
K07.10	Emergency Resupply Request

Table 1.--Marine Corps VMF Core Message Set

(3) Standards Implementation Cycles

(a) References (a) through (c) are regularly updated and republished every 2 years. This 2-year configuration management cycle allows time for developing Interface Change Proposals (ICP) to correct message deficiencies created by new or changing requirements, message processing errors, or editorial mistakes. The standards implementation cycles (Table 2) originate with this 2-year update cycle and include an additional 2-year period for software development, integration, and testing, culminating with a fielding decision, a fielding date, and identification of the period of time the version will be fielded. The beginning of the 2-year configuration management cycle should coincide with the planning, programming, and budgeting cycle so programs can schedule and fund for implementation at the end of the configuration management cycle.

(b) Once configuration management is completed for the first cycle and the standards are published, these documents become the baseline version to be implemented in cycle 1. Configuration management commences for cycle 2 while implementation is being accomplished for cycle 1. Once the cycles are established, systems will know their standards implementation requirement dates and be able to achieve them in a timely and coordinated fashion. Urgent or priority change requests to correct operational or safety deficiencies can be submitted at any time.

(c) The following definitions are provided for clarity.

1. Configuration Management Cycle. The period during which standards are updated and corrected to accommodate deficiencies uncovered during the last implementation cycle or to accommodate new requirements. This cycle ends when a new baseline is frozen and the standards are republished.

2. Implementation Cycle. The period identified for software development, software integration, and system/software testing. This cycle ends when joint interoperability certification testing is completed in accordance with reference (f) and the system/software is approved for fielding.

3. Fielding Cycle. The length of time the approved implementation baseline will be fielded on Marine Corps systems.

(4) Standards Modification Procedures. Program managers, project officers, developers, or operators shall request assistance from the Interoperability Branch (IOB), Marine Corps Tactical Systems Support Activity (MCTSSA), when they require modification of any of the standards. Requests for assistance can include support for evaluation of system VMF message requirements, the development of new VMF messages, modification of existing VMF messages, and modification of existing communication protocols and application header standards.

CYCLE	FROM	TO
CYCLE 1		
Configuration Management	December 2009	December 2011
Standards Published	April 2012	
Implementation	April 2012	April 2014
Fielded Baseline	April 2014	April 2016
CYCLE 2		
Configuration Management	December 2011	December 2013
Standards Published	April 2014	
Implementation	April 2014	April 2016
Fielded Baseline	April 2016	April 2018

CYCLE 3		
Configuration Management	December 2013	December 2015
Standards Published	April 2016	
Implementation	April 2016	April 2018
Fielded Baseline	April 2018	April 2020
CYCLE 4		
Configuration Management	December 2015	December 2017
Standards Published	April 2018	
Implementation	April 2018	April 2020
Fielded Baseline	April 2020	April 2022
CYCLE 5		
Configuration Management	December 2017	December 2019
Standards Published	April 2020	
Implementation	April 2020	April 2022
Fielded Baseline	April 2022	April 2024
CYCLE 6		
Configuration Management	December 2019	December 2021
Standards Published	April 2022	
Implementation	April 2022	April 2024
Fielded Baseline	April 2024	April 2026

Table 2.--Standards Implementation Cycles

b. Subordinate Element Missions

(1) The Deputy Commandants for Aviation; Installations and Logistics; Plans, Policies, and Operations; Programs and Resources; Combat Development and Integration; the Director, Command, Control Communication, and Computers/Marine Corps Chief Information Officer (CIO); the Director, Intelligence; the Commanding General, Marine Corps Combat Development Command, and the Commanding General, Marine Corps Systems Command (MARCORSYSCOM) shall ensure all agencies/entities under their sponsorship or direction comply with the provisions of this Order.

(2) Program Managers developing C4/ISR systems for the Marine Corps must submit a NAVMC 11503 Request for Exemption (RFE), using enclosure (1) of this Order, to request a waiver from the implementation cycle, the Marine Corps VMF Core Message Set, or references (b) and (c) requirements.

(a) Program Managers within MARCORSYSCOM will submit the NAVMC 11503 RFE to the Deputy Commander, Systems Engineering, Interoperability, Architecture, & Technology (SIAT).

(b) Program Managers external to the Marine Corps or MARCORSYSCOM will submit the NAVMC 11503 RFE via their Marine Corps sponsor (e.g., Naval Aviation Systems Command would submit via DC Aviation) to the Deputy Commander, SIAT.

(c) The NAVMC 11503 RFE must be specific, provide justification outlining the major reasons the system cannot comply with the implementation cycle for references (a) through (c), or implementation of the core message set, and identify interoperability and operational impacts.

(d) The MARCORSYSCOM MAGTF Systems Integration Board (MSIB) will evaluate the request and forward their recommendation for final approval to the Deputy Commander, SIAT, for granting exemptions.
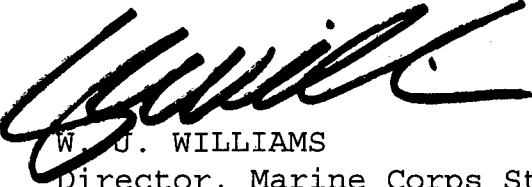
4. <u>Administration and Logistics</u>

a. All requests for VMF standards support will be submitted to the Marine Corps representative to the VMF subgroup (SG). The VMF SG representative is resident in the IOB, MCTSSA. The VMF SG representative will work with the requesting agency to define message requirements and develop the ICPs required for new messages or modifications to existing messages. Once completed, the ICPs will be reviewed by the Technical Interoperability Standards Working Group (TISWG), and submitted to the MSIB for approval. Upon approval, the ICPs will be forwarded to the joint forum for review, approval, and inclusion in reference (a).

b. All requests for reference (b) and (c) support will be submitted to the Marine Corps representative to the Combat Net Radio Working Group (CNRWG). The CNRWG representative is resident in the IOB, MCTSSA. The CNRWG representative will work with the requesting agency to identify the new requirements or modifications, and develop the ICP request required to modify references (b) and (c). Once completed, the ICPs will be reviewed by the TISWG, and submitted to the MSIB for approval. Upon approval, the ICPs will be forwarded to the joint forum for review, approval, and inclusion in reference (b) or (c).

5. <u>Command and Signal</u>

    a. <u>Command</u>. This Order is applicable to the Marine Corps
Total Force.

    b. <u>Signal</u>. This Order is effective the date signed.

                              W. J. WILLIAMS
                              Director, Marine Corps Staff

DISTRIBUTION: PCN 10203659000