Sara is Here to Stay

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Sara is Here to Stay
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To
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Statistically, flying military aircraft is a dangerous business.  The USMC adopted several programs in the 1990s to reduce aviation mishaps to a lower, more acceptable level. One such initiative, Squadron Assistance/Risk Assessment (SARA), was a software program tailored for squadron operations.  SARA has become a valuable tool for squadron operations and safety programs, but is often mismanaged at the squadron level due to lack of training and higher than normal operational tempos.  In order to use the USMC mandated SARA software effectively, the squadron table of organization (T/O) must be restructured.

## Background

Historically, the US military has lost more battle assets to mishaps than to enemy action.[1]  As a result, in 1991 the US Army implemented a risk management program in order to reduce training and combat losses.  The program was successful, resulting in the Marine Corps' adoption of operational risk management (ORM) in April of 1997.  Marine Corps Order (MCO) 3500.27 makes ORM "an integral part of

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[1] Naval Safety Center Online, "Operational Risk Management,"
http://www.safetycenter.navy.mil/orm/generalorm/downloads/introtoorm.doc

|  | WWII 1942-45 | Korea 1950-53 | Vietnam 1965-72 | DS/DS 1990-91 |
|---|---|---|---|---|
| Mishaps | 56% | 44% | 54% | 75% |
| Friendly Fire | 1% | 1% | 1% | 5% |
| Enemy Action | 43% | 55% | 45% | 20% |

planning, training, and operations for Marine Corps units."[2]

Fundamentally, ORM creates standardized guidelines for

assessing risks during training and combat missions, then

either mitigates the risks to make them acceptable, or

eliminates the mission when predetermined criteria are not

met.

In the late 1990s, evaluation of SARA software was

initiated in Marine Corps' squadrons; however, SARA

implementation was not mandatory, and basic training was

minimal. As a result, most squadron's continued to write

their flight schedules on spreadsheets or other established

documents. In December of 2004, the Commandant of the

Marine Corps noted, "Trends during recent operations

department inspections reveal that a large number of units

are not using the full ORM capability of SARA."[3] He then

tasked Marine Air Wing commanding generals to ensure

subordinate units were in compliance with SARA directives.

## Capabilities

SARA is a Boeing product, designed to integrate

scheduling, training management, readiness analysis, and

ORM into an effective management tool. Essentially, SARA

conducts checks and balances of flight schedules before

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[2] Naval Safety Center Online, "Operational Risk Management,"
http://www.safetycenter.navy.mil/orm/generalorm/downloads/introtoorm.doc
[3] CMC Policy Directive 1-05 on Marine Corps Aviation Operational/Safety

they reach the commanding officer's desk for approval. SARA completes these complex checks and balances by ensuring the scheduled flight crew has met all requirements from the following sources:  administration manuals, training and readiness manuals, naval air training and operating procedures standardization manuals (NATOPS), general flight and operating instructions (OPNAVINST), standard operating procedures, local restrictions, and type/model/series (T/M/R) restraints/constraints.

The squadron safety department benefits from SARA because it is powerful risk analysis model that automatically calculates and quantifies risk factors as the flight schedule is written. In addition, the risk rating is color-coded for quick analysis. In a dynamic combat environment, even the best schedules change due to the uncertainties inherent in wartime operations.  SARA's real-time risk analysis provides the operation's schedule writer and senior officers with simple, updated information to mitigate potential risk.

**Implementation**

The aviation T&R program manual states "the use of automated training management systems greatly enhances the accuracy and relevance of training management information, which makes training management and operational risk

management more effective at the unit level."[4]  Aviation

flight units and detachments are required to utilize SARA

as the primary method of performing the following

functions:  (1) daily logging of NAVFLIR information using

the NALCOMIS interface, (2) writing, validating, and

printing a flight schedule, including simulator events and

duties, (3) maintaining data and producing reports for

individual proficiency, combat readiness percentage,

qualifications, designations, and flight time information

for all crewmembers in the unit.[5]

CMC policy directive 1-05 on Marine Corps aviation

operational/safety states, "[Marine Air Wing] MAW CG's

shall ensure all units are populating SARA with all

appropriate data for their respective T/M/S and that they

are taking full advantage of the ORM capabilities resident

in the SARA program."[6]  As a result, nine SARA criteria must

now be met on the operation's Commanding General inspection

tab.

## Tribulations

The critics of the SARA program often speak of its

negative qualities.  In general, they claim the SARA

program, even after several software upgrades, is user-

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[4] Aviation T&R Manual, Interim approve 3 Aug 05
[5] Aviation T&R Manual, Interim approve 3 Aug 05
[6] CMC Policy Directive 1-05 on Marine Corps Aviation Operational/Safety

unfriendly.  The current version, 5.0.3, is more intuitive than past versions, but has plenty of room for improvement.

Users also complain that SARA management is problematic because versions of SARA, T&R manuals, risk models, and operations/safety reports change frequently and must be downloaded into SARA.  Most importantly, SARA users say, data management at the squadron level is inadequate. All flight hours, proficiency data, qualifications, and designations must be accurately entered into the database for every crewmember.  In addition to inputting all baseline information for crewmembers, daily downloads from NALCOMIS must be completed in order to update crewmember changes.  All of these SARA data entry tasks are time consuming, even for a well-trained operations clerk or officer.  However, without this baseline data, SARA will not accurately perform the checks and balances it is meant to perform.  SARA products are only as good as the baseline data that is entered into the program.  Therefore, when the squadron mismanages SARA, the end result is a less capable planning and safety tool.

### Misuse

Often, inaccurate data is entered into SARA or a significant gap in data develops due to a lack of trained staff and/or an operational tempo that results in fewer

man-hours devoted to managing the SARA program. Unfortunately, both operation officers and enlisted operations clerks are often inadequately trained to use SARA.

Several factors contribute to a lack of proper training. Officers/enlisted who manage SARA learn on the job through trial and error. Even when Marines become proficient with SARA, the high turnover rate in operations (especially among officers) and frequent squadron detachments, adversely affect personnel availability.

Currently two options exist for SARA classroom training, but both are typically underutilized by squadrons. Once a month, Boeing gives a three-day SARA class in Saint Louis, Missouri, limited to eight Marines. Secondly, the Aviation Training Branch (ATB) of the Training and Education Command (TECOM) conducts occasional road shows to educate the operating forces on SARA software updates. ATB also maintains a SARA help desk and website to assist with version management and to answer general questions.

Unfortunately, neither of the classroom training options is mandatory for SARA users. Moreover, three days to learn a complex software program is insufficient. In three days, a user might learn the basic capabilities of

SARA but will not have time to conduct meaningful practical applications.

### Proposed Restructuring

Due to SARA's complexity and its mandated use by the CMC, a new enlisted military occupational specialty (MOS) should be created and trained to operate/manage SARA in squadron operations.  As a result, the T/O must be reorganized.  More robust schooling must also be created to include in-depth instruction of SARA capabilities and multiple real-world application exercises.  The end result would be a SARA user that understands SARA's potential and who can immediately manage the system upon checking into the operations department.

Currently, squadrons are manned with an operation's chief and two or three operations clerks, all of whom share a 7041 MOS.  While attending MOS school, a 7041 learns how to conduct daily/weekly/monthly administrative tasks within the operations department; SARA is not part of the syllabus.  Instead, operation clerks are expected to learn SARA on-the-job once they check into their squadron.

Creating a new SARA MOS does not need to have a large impact on a squadron's T/O.  By simply ensuring that one of the already existing operation's clerks attends a formal SARA class, a BMOS can be created.  In addition to learning

basic operational duties, this new SARA BMOS would complete

a two-week course, giving them a complete understanding of

the SARA software and its application in the operating

forces.  The course would follow the standard 7041 course

and result in a BMOS that identifies them as a SARA trained

operations clerk.

### Conclusion

While many of the negative aspects of SARA are valid,

it is not cause to end SARA's implementation in the Marine

Corps' aviation community.  The answer is to continue to

request more user-friendly versions of SARA from the Boeing

factory and better train operations clerks to effectively

utilize SARA.  Restructuring the squadron operation's T/O,

as a result of additional MOS schooling, will result in a

well-managed SARA program that improves the effectiveness

of flight scheduling and ORM.

Statistically, 2005 was the safest year in Marine

Corps aviation history, despite rapid-fire deployment

cycles and heavy flight hours in combat.  Surely, SARA

assists with safety and ORM and should be emphasized by

properly training Marines to use it.  The safest year in

Marine Corps aviation history could and should be 2006.

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