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23 July 2014

NOTICE
AC/225-N(2014)0013 (PFP)

Copy to MILENG WG Materiel Panel
NSA

NATO ARMY ARMAMENTS GROUP (NAAG)

HAND-HELD AND ROBOTIC DETECTOR TESTING STANDARDIZATION TASKING

NOTE BY NAAG STAFF ADVISOR

Reference: AC/225-D(2014)0004 (PFP) dated 1 April 2014

1. With NAAG approval (see reference) of the standardization proposal at annex 1, the Materiel Panel of the Military Engineering Working Group is tasked to develop the standardization documents in accordance with AAP-03(J).

2. The NAAG accepts that the final product take the form of a *STANREC covering an Allied Engineering Publication*.

3. NSA allocated the following study number, long and short titles to the STANREC and covered AEP:

Study 4587, Edition 2 – Hand-held and Robotic Detector Testing– AEP-4587 Edition A Version 1

4. The classification of the standardization document(s) will be *NATO Unclassified releasable to PFP, AUS, NZL*.

5. This standardization activity has been staffed with relevant and concerned stakeholders.

6. The custodianship for the standardization document(s) is given to: USA.

7. *Study 4587* has been allocated a *Medium priority*.

(Signed) S. HENZE

1 Annex

Action Officer: Sam HENZE, x3659
Email: henze.sam@hq.nato.int
Original: English

ANNEX 1
AC/225-N(2014)0013 (PFP)

STANDARDIZATION PROPOSAL

NATO UNCLASSIFIED RELEASABLE TO PFP, AUS, NZL

Originator: NATO MILENG Working Group, Materiel Panel

To: NAAG

Cc: NSO, MCLSB

STANDARDIZATION PROPOSAL

Subject: Hand-held and Robotic Detector Testing

Reference: STANAG 4587 Ed. 1, Close-In Landmine Detector Test Procedures, dated 25 April 2007.

A. DESCRIPTION OF PROPOSAL

Intent is to update STANAG 4587 Edition 1 Close-In Landmine Detector Test Procedures, dated 25 April 2007 to a STANREC entitled “Hand-held and Robotic Detector Testing.” The STANREC will cover the broader category of Explosive Hazard (EH) Threats, while also reducing the length of the document and merging information contained in the three referenced ITOP documents. This will provide Nations specific guidance on threat EH targets and testing procedures, to facilitate informed procurements of the best available materiel solutions for hand-held detection of these EH devices. Using common, up-to-date threat target sets and testing procedures increases the likelihood of procuring common hand-held detection devices and supports NATO Smart Defence objectives. Emerging threats over the past decade make it appropriate to update the existing STANAG quickly, to address threat devices beyond landmines alone. Finally, it is proposed to also include additional guidance to cover testing procedures for robotic platforms that might be used to replace a Soldier with a hand-held detector to perform lane/route/area clearance/point detection missions in future operations.

B. JUSTIFICATION

a. Requirement identified by NATO MILENG Working Group Materiel Panel based on lessons learned and threat devices encountered during operations in Iraq and Afghanistan. Improvised Explosive Devices and related threat devices are envisioned to continue as enduring threats well into the future.

b. Describe the detrimental effects of the identified shortfall in standardization, also assessing their significance. The identified shortfall is considered Major; today there is no standard threat target set or test procedures to guide nations in evaluating what hand-held detector to procure, or assist in determining capability shortfalls with existing detectors already in use. The emergence of Counter-IED jammers, pre-detonation devices and other electronic warfare capabilities also raises the issue of a lack of test guidance on interoperability in a friendly-force generated jamming environment, or a

determination on reasonable performance limitations for hand-held detectors when used in proximity to these devices.

c. This proposal will improve future operations by creating a reference document to guide nations on test targets, test procedures and issues for evaluation. It will also facilitate shared knowledge of each nation's equipment capabilities.

C. INTEROPERABILITY REQUIREMENT

This proposal falls into the materiel field of standardization. This falls within the operational domain of Land operations, and will affect Engineer, maneuver, and other formations/units authorized hand-held detectors. It falls within the Armaments capability area. The requirement for hand-held detectors among NATO nations and partners runs into the thousands of systems. At least four to six Nations are expected to make significant contribution to the development of this STANREC, with many other Nations expressing interest. There is no known military or civilian standard already in existence or being prepared which could be used instead of generating the proposed STANREC document.

D. TECHNICAL REQUIREMENTS

The primary technologies currently existing and used for hand-held detection are Metal Detection and Ground Penetrating Radar. Additional hand-held detectors exist for detection of wires, explosive vapors, etc. but are generally more specialized, niche-type capabilities. An emerging technology approach is to mount sensor payloads on robotic platforms, as a means to provide standoff, increase Soldier safety and reduce fatigue.

E. OPERATIONAL REQUIREMENTS

The proposal is to create a recommended threat target test set and testing procedures/standards to promote commonality of performance evaluation and procurement by Nations of the best detectors available.

F. PRIORITY

The proposal is viewed as having medium priority/urgency, which for some Nations might be high priority depending on how soon they may be planning to procure new hand-held detectors. The proposal is expected to have multi-national level interest, and will support decisions on equipment planned for acquisition by nations in the future while also aiding in identifying problems/limitations to be overcome with existing equipment. The proposal will provide guidance to any nation possessing or using hand-held or robotic detection systems in the future. The estimated time required to deal with the project is under a year and a half.

G. PROMULGATION CRITERIA

Approval by the Delegated Tasking Authority (NAAG).

H. INTENDED CLASSIFICATION OF STANDARD

NATO Unclassified releasable to PFP, AUS, NZL

I. RELATED DOCUMENTS

STANAG 4587 Ed. 1

J. NEED FOR PARTNER INVOLVMENT

TBD

NATO MILENG Working Group, Materiel Panel
Mr. Barrett Parker
Director, MSCoE JIIM-IA
14000 MSCoE Loop, Suite 236
Ft Leonard Wood, MO 65473
barrett.k.parker.civ@mail.mil
+001 573 563 7105

NATO IS
Sam Henze
+32(0)2-707-3659 | henze.sam@hq.nato.int