

1. Title of Proposed Study:

Development of a STANAG for standardized logical subsystem integration methods for sensors and weapons to existing fighter planes w/o modifying the existing mission suites.

2. Brief Description of Proposed Study:

Legacy interfaces and their modifications together with mission suites are expensive. Many NATO nations are developing their indigenous sensors and weapons (subsystems). Those subsystems are intended to be integrated with existing mission suites. All of these activities are similar in nature with distinct logical functions. They all require modifications of existing mission computers and their software.

We are proposing to develop a standard logical way of integrating relevant sensors and weapons into the mission suites of existing fighters.

Study will cover the standard logical interface descriptions, their integration methods, their V&V studies. Some specific implementation details may partly be shared with NIAG community and relevant NATO bodies depending on their contributions on the study.

3. Background:

Software Technologies are capable of developing standardized software components and mission systems based on OACE standards with CMMI Level 5 certification especially for Naval & Air Combatant Platforms.

There are many embedded and certified system and subsystem integration experience on fighter platforms specifically for data link systems and C2 systems.

In addition to legacy systems integration capacity, several companies are working on future air platform system architecture standards like FACE.

4. Objectives of the Study:

- Analysing the problem domain and documenting it
- Analysing the previous relevant studies
- Integrating the results of previous studies in a coherent manner
- Making a gap analysis for solution space
- Defining a cost effective, standard and logical way of subsystem integration method for air platforms
- Documenting the results in a newly developed STANAG
- Defining the way ahead

5. Please indicate whether you would like to be presented with alternative solution option, taking into consideration that exploring various options may reduce the depth of the study scope:

No, we are not interested in various options.

6. NATO Priority:

NATO Strategy Concept, prioritized fields number 13 (MKEK, 7 Oct 2019, 92396199-604.02-E.161572).

7. Intended Follow on to the Study:

Implementing the defined STANAG at least one national program and/or following international programs.

8. Other NATO Bodies In the Related Area of Work:

- Standardization of NATO Universal Armaments Interface
- Conference of National Armaments Directors (CNAD)

9. Current Industrial Involvement with the Sponsor Group:

None.

10. Proposed Start Date:

First quarter of 2021

11. Desired Completion Date:

First quarter of 2022

12. Study Classification:

NATO Unclassified

13. Study open to partner industries:

Yes.

14. Final report releasable to:

NIAG and CNAD Community.

15. Sponsoring Group Point and IS Point of Contact:

TBD. With MKEK.