

<p style="text-align: center;">NAFAG Proposal No 2 NATO Procurement and Fielding of Network Enabled Weapons (NEW) in the 2035 threat environment/timescale</p>

“The only thing harder than getting a new idea into the military mind is to get an old one out.”

Sir B. H. Liddell-Hart

1. **Title of Proposed Study:**

NATO procurement and fielding of Network Enabled Weapons (NEW) in the 2035 threat environment/timescale

2. **Brief Description of Proposed Study:**

The role of Aerospace Capability Group 2 (ACG2), which is a sub-group of the NATO Air Force Armaments Group (NAFAG), is to enable multi-national co-operation on delivery of interoperable military capabilities to improve NATO forces’ effectiveness in the area of Effective Engagement in the aerospace domain in support of current and future operations. Following the NAFAG Topical Meeting on Joint Precision Strike in June 2016 there were several tasks: Collateral Damage Assessment; Battle Damage Assessment; Weapons and Effects including NEW. ACG2 has been addressing these issues through a series of mini Topical Meetings conducted in conjunction with the normal biannual meetings. It is therefore proposed that instead of a ‘classic’ NIAG study, a NIAG Liaison team is included in future ACG2 meetings when NEW are to be discussed. This will serve to ensure maximum availability of national subject matter experts and allow broader discussions across related areas.

3. **Background:**

NEW differs from standard operational concepts by emphasizing post-launch command and control of weapons attacking fixed, moving, and time sensitive targets within moments of detection under any weather condition. Successful implementation of this concept will require establishing current and future weapons as a viable communications node within Alliance networks. The purpose of this study is to start to identify and address how to implement this new operational concept.

4. **Objectives of the Study:**

The overall objective of the study is to advise ACG2 members on what industry can contribute to ensuring a viable NEW capability for the Alliance.

Liaison Team members should have expertise in the following areas:

- a. Acquisition of targets at long-range using ISTAR assets
- b. Engagement of moving targets
- c. Battle Damage Indications
- d. Bandwidth and network design
- e. Rules of Engagement/Law of Armed Conflict considerations

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f. Emerging US NEW doctrine

As a starting point, Liaison Team members should consider the following questions:

- a. Legal and technological feasibility of whether or not Alliance nations could control each other's weapons in flight?
- b. What distance from the host platform or the controlling platform to the effector must be achieved to make NEW worthwhile?
- c. Are there practical/ pragmatic means by which NEW can be integrated into existing Combat Air platforms – either as launch platforms or controlling platforms?
- d. Could wide body aircraft and/or ISTAR platforms fulfill a role in NEW given the threat?
- e. What limitations are placed upon NEW in 'swarm' attacks by the well understood limitations of Link-16 net stacking?
- f. Is it permissible under the Laws of Armed Conflict (LOAC) to launch a weapon not knowing what the target is?

5. **NATO Priority:** High
6. **Intended Follow on to the Study:** Incorporate any recommendations into the Programme of Work of the NAFAG Air Capability Group 2 (ACG2).
7. **Other NATO Bodies Involved in the Related Area of Work:** STO, JAPCC and relevant NAAG/NNAG sub-groups.
8. **Current Industrial Involvement in the Area of Work:** Not known
9. **Proposed Start Date:** Spring 2019 meeting of ACG2
10. **Desired Completion Date:** Autumn 2020
11. **Study Classification:** NATO SECRET
12. **Study Open to Partners:** NATO Allies Only
13. **Sponsoring Group Point and IS Point of Contact:**

Lt Col Patrick Bryant FAF, Chairman of NAFAG ACG2
Mr Alexander DeFazio, IS-DI and Secretary of NAFAG ACG2

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