

**Speaking Notes for the Deputy Chief Executive Strategy
of the European Defence Agency**

**Global Air Traffic Management Forum on
Civil/Military Cooperation**

Monday, 19 - 21 October 2009

Conference Topic: Global Air Traffic Management Forum on Civil/Military Cooperation

Forum theme of the 2nd day: *"Time to take it Global: Meeting each other's needs without compromising the Mission"*

Block C: Unmanned Aircraft Systems – Needs and Challenges

Time of the panel: 11H30 to 12H30

Time slot DCE: 7mins

Core Message EDA: *"A complementary civ/mil approach is needed. The EU COMMISSION and EDA are joining forces to integrate UAS into the European Airspace"*

Moderator of the Panel:

Mr. Peter van Blyenburgh, President — UVS International

Speakers:

- 1) Ms. **Leslie Cary**, Technical Officer, Air Traffic Management Section — ICAO
- 2.) Mr. **Luc Tytgat**, Head of Unit Single sky and modernization of air traffic control (ATC) — European Commission (EC) & and **Maj.Gen. Carlo Magrassi**, Deputy Chief Executive Strategy — European Defence Agency
- 3) **Mr. Eduard Y. Falkov**, Head of Department — State Research Institute of Aviation Systems/Russian Federation
- 4) **BrigGen Hans-Georg Schmidt**, Deputy Commander of 1st (GE) Air Division — Germany
- 5) **Ms. Ardyth Williams**, Air Traffic Manager, Unmanned Aircraft Systems Office, Air Traffic Organization — FAA/United States

Followed by a Round-table discussion

Bullet Points for Carlo Magrassi:

Moderator Peter van Blyenburgh hands over to Carlo Magrassi for his intervention together with the representation of the European Commission in Montreal, Mr. Peter BOMBAY

- Thank you very much Peter for your kind introduction.
- It is also a pleasure for me today to address this broad international Unmanned Aircraft Systems (UAS) audience on behalf of the European Defence Agency, and to complement the strategic view on UAS in a joint presentation with the European COMMISSION.
- As you can see, the fact that we are addressing you together here today, in a joint manner, is a visible sign of the good coordination between the European institutions in general and specifically concerning the UAS topic and the challenge of the seamless integration of unmanned aircraft systems.
- Allow me to give you a short introduction to EDA's view on UAS.
- Needless to say that UAS are becoming more and more important for Europe, including for the future ESDP operations. But you all know the problem we are facing in Europe today: in the absence of regulatory and procedural guidance in place for UAS and missing certified key-technologies, their operations within the general airspace are rather restricted.

- Today it is simply not possible to regularly fly an unmanned aircraft under safe and conflict free conditions despite the fact that there are numerous UAS already in service with our Armed Forces in Europe and the ongoing development programs and national purchases.
- **We are not exploiting the full potential of our Unmanned Aircraft Systems**, hence not providing our state or governmental user with the fully capability of this important tool.
- The European Defence Agency was tasked by the Minister Steering Board in early 2007 to investigate and **to initiate concrete activities to address this challenge on the basis of a stepped approach relative to integration**. The ultimate goal for Europe is seamless integration of civil as well as military UAS into the non segregated European Airspace.
- This common civil/military European initiative received strong support from various Stakeholders around Europe.
- We are actively preparing - together with the participating Member States - the needed business cases to support the decision in what areas we should start to invest and concentrate our further attention on. This is of course also done in close consultation with other European stakeholders, such as EUROCONTROL, EASA, EUROCAE WG 73 etc.

- The outlined projects will help maintain momentum and start some ground breaking projects in the interest of all European nations in this area, preparing the field for the final Road Map for Air Traffic Insertion, the ultimate goal to insert UAS in the Airspace on a “file and fly” basis until 2015.
- A major strategic technology development, which has been brought under the EDA umbrella, was signed and kicked off during the Le Bourget Air Show in Paris in June this year. It is the so called **MIDCAS project**. MIDCAS stands for *MIDair Collision Avoidance System*. The objective of this 50 million Euro technology demonstrator is to support the development of the critical Sense & Avoid technology and hereby, complementary with other activities, enable the operation of UAVs in non-segregated airspace.
- The MIDCAS industry consortium is composed of thirteen companies of the five participating nations. They have a large portion of the European knowledge on Sense & Avoid as well as all technologies relevant for the project.
- The project will make use of background from all parties of the consortium. A wide collaborative approach is proposed in the parts of the project where a shared view is important to support **the acceptance for standardization and solution proposals**. All is built around a safety case that is supporting standardization, design trade off's and finally flight test approvals.

- Fundamental to the creation of the safety case and the design in the project is the iterative build up of reliable simulations with frequent feedback loops between design-simulation and simulation- flight tests.
- The MIDCAS mission is to: **“demonstrate the baseline of solutions for the Unmanned Aircraft System Mid-air Collision Avoidance Function” acceptable by the manned aviation community and being compatible with UAS operations in non-segregated airspace by 2015.**
- The project addresses this in an iterative approach where requirements and standards are progressed in parallel with solutions development. Therefore the MIDCAS project is designed with tracks for functional design, demonstrator design and demonstration, and standardization. **All being integrated in iterative development logics with frequent feedback between them.**
- A few words regarding the standardisation. **The support to progress Standardization of Mid Air Collision Avoidance for UAS is a central activity throughout the project.** By providing standardization proposals, safety case contributions and participation in EUROCAE WG 73, it is aimed for a major impact on the European standardization.
- Participation in other groups will take place as deemed relevant and suitable. Finally, a number of work shops will be

arranged to support the acceptance of the results of the project; the first will be held in autumn this year.

- Currently we are looking into **a strategic standardisation approach for a common, transatlantic way forward**. I would like to use the opportunity here today, to highlight this point and to offer it for participation to other interested nations.
- Two further important UAS work strands under the EDA umbrella are worth mentioning, both initiated out of the Air4All Road Map development.
- The first, the so called SIGAT activity with the aim to support the preparation of the World Radio Conference in 2012 and subsequently in 2015: EDA participating Member States agreed in August 2008 on the business case to start a 'Study on Military Spectrum Requirements for the Insertion into the General Air Traffic for UAS'.
- The Air4All Frequency Group was tasked to work towards the identification of appropriate spectrum requirements to consolidate a common European position regarding regulatory and operational UAS requirements for the upcoming World Radio Conference.
- Another activity being coordinated with the European Space Agency is the common approach regarding Command and

Control (C2) of UAS and satellite services, as well as the Air Traffic Control (ATC) data link.

- Starting from a jointly organised workshop which we successfully concluded this summer, the activity will involve in the next steps two parallel feasibility studies, as well as a subsequent demonstration mission, tentatively in 2010/2011. This will pave the way to prepare an initial operational capability in the C2/ATC area for Europe by 2015.
- The tendering of both feasibility studies has been started and it is expected to award a contract to two competing consortia by the end of this year.
- EDA brings together expertise regarding capability development, research & technology, armaments, as well as industry & market, in view of ensuring a capability-driven output and incorporating technologies and industrial knowledge at an early stage of planning
- Let me assure you that the EDA is the right place in Europe to catalyse and to facilitate this kind of dual use technology projects, **and specifically the UAS activities**. We can provide the appropriate support and tools for the European Stakeholders to proceed commonly, and as a result invest more effectively together.
- It is the combined effort of all stakeholders that will make the routine operation of civilian, security and defence-related

UAS in general air traffic a reality. The road ahead of us up to 2015 will require additional efforts in fields such as standardisation, certification, continued airworthiness and air traffic management, as well as related technology developments.

- EDA will continue to provide support to its Member States on this important initiative and aim at responding to specific military needs in many of those fields, as UAS will increasingly contribute to meet EU's security objectives.
- The military market for UAS *per se*, however, will be too limited for industry to reach sufficient economies of scale and to be confident regarding its future competitiveness and return on investment. It is the development of common standards and solutions across the civilian, security and defence domain that will provide sufficient confidence to industry to invest and provide competitive products.
- I am therefore convinced that a fruitful and mutually beneficial dialogue between the defence, security and civilian sector will allow Europe to remain a major player in preparing the future of UAS.
- I am confident that our common European initiative will move successfully forward within this complementary approach, contributing to the urgently needed civil/military enabling capabilities, and using our European taxpayer's money the

best we can, to open the sky for Unmanned Aircraft Systems.

- Thank you very much for your attention.